IN THE SPACE OF REASONS

Selected Essays of Wilfrid Sellars

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Contents

Editors' Introduction vii
Editorial Notes xcvii

Part I LANGUAGE AND MEANING
1 Inference and Meaning 3
2 Some Reflections on Language Games 28
3 Language as Thought and as Communication 57
4 Meaning as Functional Classification: A Perspective on the Relation of Syntax to Semantics 81

Part II ABSTRACT ENTITIES
5 Naming and Saying 103
6 Grammar and Existence: A Preface to Ontology 126
7 Abstract Entities 163

Part III MIND, LANGUAGE, AND THE WORLD
8 Being and Being Known 209
9 The Lever of Archimedes 229
10 Some Reflections on Thoughts and Things 258
11 Mental Events 282
## Contents

### Part IV SCIENCE AND THE MIND

12 Phenomenalism  303  
13 The Identity Approach to the Mind-Body Problem  350  
14 Philosophy and the Scientific Image of Man  369  

### Part V KANT

15 “... this I or he or it (the thing) which thinks ...”  411  
16 Some Remarks on Kant’s Theory of Experience  437  
17 The Role of Imagination in Kant’s Theory of Experience  454  

Credits  469  
Index  473
Editors’ Introduction

Wilfrid Stalker Sellars (1912–1989) is the greatest American philosopher since Charles Sanders Peirce. He is unusual among Anglophone philosophers of the twentieth century in the profoundly systematic character of his thought. Until now, it has been very difficult for his readers to get a comprehensive view of his understanding of “how things, in the broadest possible sense of the term, hang together, in the broadest possible sense of the term,”1 because he never wrote a full-scale, book-length version of it. This volume for the first time collects in one place the papers most important for understanding the core of his synoptic philosophical vision.2

An ideal introduction to this collection would contain a comprehensive overview of Sellars’s system in which each of his doctrines and arguments is discussed with an eye to its role in the whole. That would take (at least) another book. Fortunately, we now have a good one: Willem A. deVries’s Wilfrid Sellars,3 which we recommend to our readers as thoughtful, reliable, and appropriately comprehensive in scope. In addition, the ideal introduction would have an account of the philosophers that most influenced Sellars, his philosophical heirs, and the place of his views in the contemporary landscape. Nobody has written that book yet, so far as we are aware, and we do not attempt

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Editors' Introduction

to substitute for it here. Instead, we confine ourselves to some comments on Sellars’s philosophical style and a short summary of each of the articles.

The standard problem confronting the editors of a collection like this one is exacerbated in the case of Sellars because of the way his essays fit together into a comprehensive picture. Rather than each paper functioning as an independent puzzle piece, one typically finds all of Sellars’s work reflected in some way in each paper. Although each one focuses on a particular topic, Sellars’s points invariably depend on claims and arguments presented elsewhere. In any given piece, arguments and doctrines that appear in detail in other papers often appear compressed almost to the point of unintelligibility. Thus, in a very real sense, one must read a great deal of Sellars’s work to understand any one text. The aim of this collection is to make that possible, by bringing together in one place the principal texts that articulate Sellars’s philosophical worldview and, along with his masterpiece, “Empiricism and the Philosophy of Mind” (EPM), constitute his best claim to our philosophical attention. That indispensable essay is not included here, because—unlike those we present here—it is readily and conveniently available, and because its length would have required omitting too many other important pieces. Harvard University Press has reprinted EPM as a monograph, and the present collection can be thought of as a companion volume to that one. The essays contained herein both provide important background for EPM and develop many of its themes in unexpected ways. We have organized them around a few central themes that recur throughout Sellars’s writings.

Before discussing the individual essays, it may be helpful for us to say something briefly about Sellars’s distinctive philosophical style. He rarely organizes his papers by first presenting a range of views on the topic in question, arguing against them, proposing an alternative theory, and demonstrating that it is better than any of the alternatives. Instead, his style is, for want of a better term, diagnostic. Sellars often addresses philosophical problems that are ignored by others because they are thought to be either too hard or unimportant. He not only offers penetrating analyses of these problems, but also shows that paying attention to them is worthwhile. In the following passage, Sellars sums up his method well.

There are two obvious ways in which a philosopher can attack a theory which he believes to be mistaken. He can seek to reduce it to absurdity by developing its implications and showing them to be either mutually inconsistent or incompatible with the incontrovertible. Or he can attempt to trace the error back to its roots, and show why those who defend it have been led to speak as they do.
Of these two methods, it is clear that only the latter is capable of definitive results. A mistaken theory can be compared to a symptom of a disease. By the use of inadequate medicaments one can often 'cure' the symptoms while leaving the disease untouched. And by exposing the absurdity of a theory, one can often prevent philosophers from espousing it, at least overtly, though only too often they react to a proof that their theory conflicts with 'obvious common sense' by piling a Pelion of paradox on the original Ossa. Even should the theory be abandoned, at least as an overt article of faith, the root confusion is left untouched by this method, and, like many a versatile disease, finds other ways of making its presence felt. Indeed, to change our metaphor, philosophers can often be observed to leap from the frying-pan of one absurdity into the fire of another, and from there into the well of a third, and da capo as long as a fundamental confusion remains uncovered.4

On Sellars's view what are often taken to be “knockdown” arguments against a position are all too often an invitation to transplant a philosophical mistake into a new context. For Sellars, philosophers are able to leave their confusions and mistakes behind only by understanding their sources. Often, his criticism of another position is simply that it fails to avoid the deep problem that he has identified.

Sellars’s positive views are often presented in the same diagnostic way. The following passage could very well describe most of Sellars’s positive proposals.

In short, I shall recommend the conceptual frame I am about to sketch on the ground that by adopting it, and only by adopting it, can we avoid the merry-go-round of confusions on which so much time and energy has been wasted. Not on this negative ground only, however, is it to be recommended, for though when first encountered this frame inevitably wears an air of paradox, a closer acquaintance reveals it to be a source of positive clarification and insight, with decisive implications for other problems in this neighbourhood.5

The positive portion of a Sellars paper does not consist of a sequence of theses combined with what purport to be conclusive arguments for each. Instead, his positive proposal typically consists in a novel description of the problem and an alternative way of conceiving of the subject matter that renders the original problem unrecognizable. Only by keeping these remarks on Sellars’s style (both negative and positive) in mind can one get the most out of reading these essays.

What follow are thumbnail sketches of the essays included here, which may

be helpful for general orientation and getting a sense of what is to be found in the body of this volume.

We begin with a cluster of papers setting out Sellars's distinctive approach to the nature of meaning and language, an approach that sits at the very center of his thought, organizing all his other reflections. The next section surveys one of the most important applications of those considerations from the philosophy of language: his subtle and original account of the metaphysics of universals and of abstract objects generally, elaborated in terms of his theory of predication. Together, the results of his investigations into the nature of language and semantics and this metaphysical apparatus provide the conceptual tools Sellars deploys in working out his views on other fundamental philosophical issues. The third section gathers together papers that are broadly epistemological in character. They articulate Sellars's theory of what it is to represent the world so as to make possible objective knowledge of it, along the way both summarizing and further developing the principal themes originally articulated in EPM. The fourth group of papers addresses the issue of how we should think about the mind's place in the natural world as construed by science. The final section presents three of Sellars's most important papers about his great philosophical hero, Kant. Although these are essays in the history of philosophy, they are of much more than historical interest. The whole of Sellars's thought is permeated by his ongoing philosophical engagement with Kant. Indeed, he once said that he hoped that one effect of his work would be to usher analytic philosophy from its Humean into its Kantian stage of development. Read against the sweep of the earlier ones, these essays offer a concrete sense of what he takes to be involved in such a conceptual sea-change.

Part I: Language and Meaning

"Inference and Meaning" (1953). Sellars's main point is to show that what he calls "material" inference rules are indispensable, do not owe their authority to formal inference rules, and contribute to the meanings of linguistic expressions. He uses Carnap's distinction between P-rules and L-rules to clarify the distinction between material and formal inference rules. Sellars argues that non-formal, material rules of inference are essential for explaining subjunctive conditionals. He then argues that a proper account of inference rules should treat them as claims about the conditional assertibility of sentences. Sellars argues that there is an intimate link between inference rules and claims
about necessity, a link summed up in his dark but suggestive slogan that "the language of modality is . . . a transposed language of norms" of inference. Finally, Sellars argues that the conceptual content of a linguistic expression is articulated by the material inferential rules that govern its use. In the course of this argument Sellars makes three provocative claims: (1) it is not the case that observation predicates have their content solely in virtue of the fact that they have been learned as responses to extralinguistic circumstances, (2) the meaning of a predicate cannot be the result of learning a rule specifying the circumstances in which it should be applied (semantic rules), and (3) meaning claims do not express relations between words and nonlinguistic objects. Each of these theses is defended in later essays and plays an important role in the extended argument of EPM.

"Some Reflections on Language Games" (1954). Sellars's main point is to defend an account of language in terms of rule following. He takes it that languages should be understood as collections of expressions and the rules for using them. Learning a language is in an important sense learning the rules for using its expressions. In this context, Sellars aims to offer a reply to the objection that this account is unacceptable because learning the rules for a language presupposes knowledge of the language in which the rules are expressed. If that were so, then the rule-following view involves a regress, and it would be unintelligible how anyone could learn a first language. Sellars responds to the dilemma of two unsatisfactory alternative characterizations of what one is doing in using language—merely *conforming* to a rule (acting regularly, that is, in a way that satisfies the rule) and *obeying* a rule (acting regularly because one is *following* the rule)—by introducing the intermediate notion of *pattern-governed* behavior. Such behavior is regular because of the rule—in the most sophisticated cases, because of *representations* of the rule ('ought-to-be's) consulted and obeyed by those who have already mastered the language, and who deliberately shape the behavior of language-learners accordingly. The diachronic structure of the linguistic community accordingly plays an essential role in moving beyond the threatening dilemma by properly characterizing the relations between rules that *say* what is appropriate, practices of *acting* appropriately, and matter-of-factual regularities.

In this essay, Sellars introduces the distinction between language entry transitions, language exit transitions, and intralinguistic transitions. He associates language entries with perceptions, language exits with actions, and intralinguistic transitions with inferences. In addition, he claims that there are rules governing each type of transition. This trio of concepts reappears
throughout Sellars’s work. Put in the language of this essay, a principal lesson of “Inference and Meaning” is that it is the language-language transitions in virtue of which language-entry and language-exit transitions are language-entries and language-exits.

In the course of defending his conception of language, Sellars provides an account of rule-obeying behavior on which one can formulate the rules for a particular language game in what he calls a “syntactical” metalanguage, which contains terms for the pieces, positions, and moves of the language game in question. These terms of the syntactical metalanguage must have observational roles in that language. That is, one must be able to use the terms for the pieces, positions, and moves of the language game in observation reports about that language game and those engaged in playing it.

Sellars contrasts this account of language as a rule-governed activity with what he takes to be an empiricist theory, on which coming to have a concept is learning to obey a semantic rule that stipulates that the concept is to be applied in such and such circumstances. In addition, he claims that sentences of the form ‘sentence $s$ in language $L$ means that $p$’ convey the information that $s$ plays a role in $L$ that is the same as (or relevantly similar to) the role the sentence that replaces ‘$p$’ plays in the language to which this meaning claim belongs. He also makes the points that there is no way to justify one’s choice of language game without appeal to another language game and that the distinction between observational and theoretical terms is methodological rather than ontological: a matter of how we can come to make claims (noninferentially, or only as the result of inference) rather than of what kind of thing we are talking about. A key consequence of this way of understanding the difference is that for Sellars, terms can change status over time. So what once was a purely theoretical term can later acquire an observational use. Each of these claims is developed in other essays.

“Language as Thought and as Communication” (1969). In this essay, Sellars presents an account of the relation between thought and language. This view, which in EPM he calls “verbal behaviorism,” depends on his account of languages as systems of rules and his notion of “thinking-out-loud.” In the first four sections of the essay, Sellars introduces into his account of language and language learning a distinction that is of considerable significance in the rest of his work: the distinction between rules of action (ought-to-dos) and rules of criticism (ought-to-bes). In “Some Reflections on Language Games,” he was primarily concerned with language use; here, he focuses on language acquisition. He claims that many linguistic rules, including language entry rules,
language exit rules, and intralinguistic rules, are ought-to-bes. When one learns a language, one graduates from being subject to the language's rules of criticism to obeying the language's rules of action (however, even once a language has been mastered, many of the rules one follows are rules of criticism).

Sellars then deploys this account of language in an explanation of the relation between thoughts and linguistic acts, and an account of what it is to express a belief. His central claim is that some instances of uttering that $p$ are instances of thinking that $p$. That is, some linguistic episodes are episodes of thinking-out-loud. When a person acquires his first language, he learns to think-out-loud. Later, a person can suppress the compulsion to think-out-loud so that he can think without uttering a sentence that expresses the thought in question. Again, Sellars ends the essay with the claim that to specify in a language $L$ what a word or sentence of a language $M$ means is to classify its role in $M$ by providing a word or sentence of $L$ that has the same or a relevantly similar role.

"Meaning as Functional Classification" (1974). Sellars's goal in this essay is to offer what Harman calls a level 1 theory of meaning—a theory that construes language as the medium in which we think. Sellars's theory is a version of the verbal behaviorism presented in "Language as Thought and as Communication": human thinking is what is described by the coarse-grained proto-psychological frame that equates thinking with verbal processes and characterizes linguistic episodes directly in semantic terms without reference to inner conceptual episodes. In other words, thinking that $p$ is saying that $p$ or having a short-term propensity to say that $p$. Sellars's more particular goal in this essay is to give an account of sentences of the form 's means that $p$: His central claim is one that surfaces in many of the essays in this collection: to specify the meaning of a word or sentence is to provide a functional classification of it rather than a referential characterization. The function of a linguistic expression depends on its role in the rules for the language to which it belongs. These include language entry and exit rules, and inference rules. Recall that, for Sellars, these rules are rules of criticism (ought-to-bes). Languages also contain rules of action (ought-to-dos). Essential to Sellars's account of language is the distinction between pattern-governed behavior and rule-obeying behavior (introduced in "Some Reflections on Language Games"). In "Meaning as Functional Classification" we get a more detailed account of the former and an account of the relation between pattern-governed behavior and ought-to-bes. Behavior is pattern-governed if it has been selectively reinforced, and the rules of criticism (ought-to-bes) specify that certain pattern-
Editors' Introduction

In order to spell out his theory of meaning, Sellars introduces the expressive device of *dot quotes*, which are used to construct linguistic expressions for functional roles (e.g., ‘elephant’ is the linguistic expression for the functional role of ‘elephant’). The account has three aspects: (1) ‘means’ is a type of copula, (2) the word that follows ‘means’ is a metalinguistic sortal, and (3) the word that precedes ‘means’ is a metalinguistic distributive singular term. Linguistic expressions formed with dot quotes fill in as metalinguistic sortals. Distributive singular terms are linguistic expressions with the syntactic form of definite descriptions, but they do not function as definite descriptions. For example, one might find the sentence ‘the lion is tawny’ in a children’s book on animals, where ‘the lion’ does not refer to a particular lion; instead, it, in some sense, picks out lionkind. To illustrate Sellars’s theory of meaning claims, consider the sentence “‘und’ means ‘and’.” For Sellars, it has the logical form of “the ‘und’ is an •and•,” which Sellars analyzes as “‘und’s are •and•s.” It should be obvious that Sellars rejects the claim that sentences like ‘s means p’ express a relation between a word and an abstract entity—its meaning. Sellars ends the essay with the ominous claim that talk about any abstract entity can be unfolded into talk about linguistic or conceptual tokens. His account of abstracta such as universals or properties is accordingly a consequence of his views about how language works, while his account of meaning claims is one application of his account of abstract entities. The next set of essays explores the connections between these *semantic* and *metaphysical* issues.

Part II: Abstract Entities

“Naming and Saying” (1962). In this essay, Sellars provides an interpretation of certain key passages of Wittgenstein’s *Tractatus*. Although the interpretation of Wittgenstein is interesting on its own, this essay is significant in Sellars’s corpus because in it he introduces Jumblese, constructed so as to be a language that is ideally perspicuous with respect to the very different roles played by *singular terms*, *predicates*, and *sentences*—and hence a prime tool for avoiding a deeply rooted constellation of philosophical confusions. His view is that predicative *expressions* are dispensable in the sense that basic sen-
tences containing names and predicates can be translated into sentences containing names in certain configurations. For example, ‘Clancy loves Sara’ could be written as ‘Clancy \textsubscript{Sara}’ where the graphical relationship between the names in the latter conveys the information that the thing named by the upper-left name loves the thing named by the bottom-right one. That is, it is the fact that names occur with certain properties or stand in certain relations to one another that says that things are thus and so. It is facts about sign-designs that express facts about how things are with the objects those sign-designs then count as representing, in virtue of the systematic contribution they make to such relations between facts of the two kinds. This view on the function of predicates in natural languages is one part of Sellars’s nominalism, which is developed in the next couple of essays.

“Grammar and Existence: A Preface to Ontology” (1960). Sellars presents several claims about abstract singular terms and abstract entities. His contention is that the use of abstract singular terms does not commit one to the existence of abstract entities. His first target is the view that second-order existential generalization (e.g., the move from ‘snow is white’ to ‘\(\exists f\) snow is f’) involves a move from an empirical claim to a claim about abstract entities. After criticizing several accounts of this move, Sellars claims that there is an important distinction between existentially quantified sentences and existence claims. He then turns to Frege’s views on concepts and Geach’s views on properties (which is a response to some of Quine’s claims about ontological commitment). Sellars presents a sequence of objections to these views before turning to his own account of abstract singular terms. He focuses on sentences of the form ‘there is a property such that . . . ’ or ‘triangularity is a property.’ He argues that if one treats “triangular”\textsuperscript{6} not as a name, but as a common noun, then one can interpret ‘triangularity is a property’ as a claim about the term ‘triangular’ rather than as a claim about an abstract entity. (It seems to us that Sellars could have made good use of his dot quotes in this essay to distinguish between the sign design ‘triangular’ and the role played by that sign design in English—i.e., ‘\textbullet\textit{triangular}’. We want to suggest that his claims in this part of the essay are best understood as about the roles of sign designs rather than about the sign designs themselves. He does a better job of clarifying his position in the next essay, “Abstract Entities.”)

One objection, according to Sellars, comes from common views about

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\textsuperscript{6} Note that this linguistic expression contains two pairs of single quotes, not one pair of double quotes.
meaning claims (i.e., sentences of the form ‘s means that p’). In response, Sellars presents his account of meaning claims, which is in essence the one he gives in “Meaning as Functional Classification,” but here Sellars’s aim is to show that such claims do not commit one to abstract entities, meanings, that linguistic expressions have. Sellars here (at the beginning of section 14) calls his general strategy for dealing with abstract singular terms “syntactical therapy.” His strategy is to argue that abstract singular terms are always used in “quasi-syntactical statements in the material mode of speech.” That is, what seem to be ontological categories are to be understood in terms of syntactical categories. For example, asserting ‘triangularity is a property’ is a covert way of asserting that ‘triangular’ in English is an adjective. He closes by expressing the hope that this strategy can be used for mental and nomological contexts as well.

“Abstract Entities” (1963). This essay is at the heart of Sellars’s nominalism. In it he develops the idea that talk of abstract entities can be explained in terms of talk of linguistic expressions. He first discusses what he calls distributive singular terms, which have the form ‘the X.’ Sellars proposes to relate distributive singular terms to physical objects. For example, ‘the lion is tawny’ is sense-equivalent to ‘all lions are necessarily tawny.’ His next move is to explain abstract singular terms (e.g., ‘triangularity’) in terms of certain distributive singular terms (e.g., ‘the •triangular•’). Here the dot quotes form a common noun that stands for the semantic role (which Sellars sometimes calls the linguistic type) played by the linguistic expression ‘triangular.’

One of Sellars’s points in this discussion is to elaborate on the roles played by linguistic expressions. To do so, he appeals to his account of languages as rule-governed games that have entry and exit transitions and inference rules, both material and logical (ideas introduced in “Inference and Meaning” and “Some Reflections on Language Games”). He also discusses what it is for two linguistic expressions in different languages to have the same or relevantly similar roles.

Sellars ends the essay with some suggestions for combining this account of abstract entities with his views on the roles of predicates and his example of Jumblese (from “Naming and Saying”). The issue is whether Jumblese can express triangularity given that it has no linguistic expressions for predicates (and hence no expression for ‘triangular’). Sellars argues that Jumblese can indeed express triangularity. The trick is to introduce nonillustrating common nouns by way of the terms ‘PRECON’ and ‘INDCON.’ One can reconstruct ‘that a is triangular’ as ‘the •a is triangular•,’ where ‘a’ is used as
a name and the dot-quoted expression is an illustrating common noun; however, when reconstructing 'that something is triangular,' one must resort to 'the (+triangular·INDCON).’ Here, ‘INDCON’ serves as a metalinguistic variable.

Part III: Mind, Language, and the World

"Being and Being Known" (1960). Sellars considers the Thomistic doctrine that knowledge requires some sort of isomorphism between the knower and the known. Sellars endorses one version of this doctrine, on which mental acts with different contents are intrinsically different. That is, the subject of a mental act determines, in part, the features of that act. Sellars argues that concepts that apply to sensations are derivative and are extensions of concepts that apply to physical objects. The place of a concept that applies to sensations (say, the concept of a sensation of whiteness) in a system of such concepts is analogous to the place of the corresponding concept that applies to objects (say, the concept of whiteness) in a system of such concepts. This view of the relation between sensation concepts and physical object concepts is analogous to the view found in the previous essay on the relation between mental act concepts and linguistic concepts. In both cases, a concept that applies to observable phenomena (physical objects and linguistic episodes) is extended so that it applies to entities that are correlated with those to which it primarily applies (sensations and mental acts, respectively). In both cases, we explain observable behavior by appeal to the inner episodes (sensations and mental acts), but we conceive of the inner episodes by analogy with observable phenomena (physical objects and linguistic episodes, respectively).

Sellars defends the doctrine that there are mental words, and he uses his dot-quote convention to form expressions that apply to mental words. However, Sellars argues that sensations are not part of the intentional order. That is, although sensation is a necessary condition for conceptual activity, sensations are not themselves conceptual. He contrasts this view with what he takes to be the orthodox theory of abstraction, on which sensation furnishes the mind with basic mental words and then the mind operates on these to arrive at more abstract ones. Sellars's position is that sensation does not provide any mental words to the mind because sensation is not a part of the conceptual order. In order to clarify this position, Sellars presents the distinction between the realm of the conceptual (which he sometimes calls the logical order or the
Editors' Introduction

order of signification) and the realm of the real. He introduces two relations, picturing and signifying. Picturing is a relation between two items from the real order, and signifying is a relation between two items from the conceptual order. To illustrate, he offers the example of a robot that accepts as input information about its environment. The physical states of the robot picture the states of its physical environment. The picturing relation is a matter of an isomorphism between the place of a physical state in the robot's system of states and the place of a state in the environment's system of states. In addition, the physical states of the robot signify concepts. Sellars explains signification claims in the same way that he explains meaning claims: as classifications that use metalinguistic sortals. Thus, when one asserts a sentence of the form 'x signifies y', where 'x' is replaced with a name of a physical state of the robot and 'y' is replaced with an English word, one is saying that the state of the robot, qua expression of the robot's language, plays the same role (i.e., has the same use) as that English word. The picturing relation between a physical state of the robot and a state of its environment is a necessary condition for the signifying relation between the expression of the robot's language and the English expression. Sellars closes the essay by suggesting that the physical correlates of mental acts are brain states. He develops this idea in later essays.

"The Lever of Archimedes" (1981). This essay is one of Sellars's last, and it contains both a discussion of his famous view on the "myth of the given" and an attempt to rework some epistemological reflections initially presented in "Givenness and Explanatory Coherence" and "More on Givenness and Explanatory Coherence." Sellars's topic is a defense of his claim that concepts that apply primarily to physical objects are used in an extended way to apply to sense impressions. One consequence of this thesis is Sellars's claim (prominent in EPM) that 'looks' talk is conceptually dependent on 'is' talk. That is, when someone says 'A looks red,' one is using the same concept of red that is expressed when one says 'A is red,' but in the former case, one is withholding one's endorsement of the claim that object A actually is red. Sellars discusses this view and contrasts it with those of Firth and Chisholm. Sellars agrees with Firth that, prior to being able to distinguish an object looking red from an object being red, children have an ur-concept of red. However, Firth claims that the ur-concept applies primarily to experiences, while Sellars argues that the ur-concept applies to (what the child will eventually be able to recognize as) physical objects. Sellars then provides a more detailed explanation of 'looks' talk and answers several objections.
Another of the themes in this paper is that there is no given element in experience. This is one of Sellars's most influential claims and it figured prominently in EPM. Here Sellars formulates what he claims is the most basic form of the myth of the given: if a person is directly aware of an item with categorial status C, then that person is aware of it as having categorial status C. Sellars draws out some of the mistakes that follow in the wake of this one and discusses the links between rejecting the myth of the given and accepting that sense impressions are nonconceptual.

"Some Reflections on Thoughts and Things" (1967). Sellars brings together many of the themes from his essays on language and on abstract entities (linguistic rules, dot quotes, distributive singular terms, the analysis of meaning claims, and verbal behaviorism) to present a detailed account of one step in his myth of Jones, which appeared first in EPM. Sellars's goal is to rationally reconstruct the process by which we acquired the conceptual frame pertaining to mental acts (representings, inferings, willings, etc.). His strategy is to postulate counterpart attributes that apply to mental acts alongside the attributes that apply to physical objects. He then sets out to give an account of these counterpart attributes. Just as he is committed to the claim that the predicates that primarily apply to physical objects were given (in the rationally reconstructed history) a new use so that they are used to categorize sense impressions, he claims that predicates that apply primarily to linguistic episodes were given a new use so that they are used to categorize mental acts. The conditions he sets for this program are that one must be able to describe a linguistic practice that is rich enough to introduce the framework of mental acts but does not presuppose this framework, and that the introduced framework of mental acts must be able to explain how we can have direct knowledge of our own mental acts. In this essay, Sellars focuses on the former condition. The rational reconstruction that results is an alternative to both logical behaviorism and the analogical theory.

Sellars extends his account of language by introducing the distinction between acts and actions, and he links this distinction to his distinction between rules of criticism and rules of action. Only rules of criticism govern acts, while actions are governed by rules of action. He also claims that linguistic expressions have their senses by virtue of the patterns they form with other linguistic expressions, actions, and physical objects. Given his rational reconstruction of mental episodes, the analogous claim holds for their contents. Another of Sellars's stage-setting moves is to explain truth-conditional semantics (what he calls Tarski-Carnap semantics) in terms of his intensional
semantics by introducing variables that take dot-quote-formed common nouns as substituends.

Sellars describes a linguistic community of "Ryleans" for whom the central linguistic concept is that of thinking-out-loud. The Ryleans perform only linguistic acts, not actions, and they do not have any concepts that apply to mental episodes. Sellars argues that one can introduce into such a community the hypothesis that its members are subject to inner episodes that are analogous to thinkings-out-loud and initiate processes that culminate in thinkings-out-loud. Using the dot-quote convention, we can classify these inner episodes and characterize the counterpart attributes that apply to them. For example, a person has a mental act that stands for triangularity by virtue of the fact that it has a certain counterpart attribute. Furthermore, triangularity is both the sense of that person's word 'triangular' and an attribute of triangular objects. That person's mental act stands for the •triangular•, and the counterpart attribute of that act by virtue of which it stands for the •triangular• is the ••triangular••. The Ryleans are then trained to think-out-loud 'I have a thought of triangularity' in the appropriate circumstances. Although Sellars ends the paper here, there is more to be done if he is to explain the entire myth of Jones by appeal to verbal behaviorism, his account of linguistic rules, and his theory of abstract entities.

"Mental Events" (1981). In this late essay, Sellars develops a general theory of representational systems. Such a theory should explain how language can be used to represent the world. Since Sellars claims that the basic concepts that apply to linguistic episodes are extended to apply to mental acts, the theory of representational systems serves to explain the sense in which minds display intentionality as well. Sellars begins by correcting a misconception about his verbal behaviorism: he does not claim that all mental events are linguistic; rather, he claims that the concept of thinking-out-loud is explanatorily primary (cf. "Language as Thought and as Communication"). Sellars then rehearses his views on meaning claims, arguing that none of the concepts pertaining to the intentionality of language describe relations between linguistic entities and reality. Instead, they are used to classify linguistic expressions by appeal to one's background language.

The core of Sellars's account of representational systems is his theory of predication, which specifies what it is for a linguistic expression to play a particular linguistic role. Sellars's theory of predication draws on his account of abstract entities and his views on the role of predicates. Recall that for Sellars, an ideally perspicuous language (e.g., Jumblese) does not contain predicates.
Their function would be taken care of by the manner in which the names of that language are written. Thus, for Sellars, it is not the case that a name/predicate sentence of English expresses the claim that the universal to which the predicate refers is exemplified by the object to which the name refers. Rather, the character of the name conveys that the object to which it refers has the corresponding property. For example, 'Doris is hungry' represents Doris as being hungry because the name 'Doris' is written in a certain way—for instance, 'Doris' is written to the left of an inscription of 'is hungry.' The property of the name 'Doris' that represents Doris as being hungry is the relational property of being inscribed to the left of an inscription of 'is hungry.' There is nothing to which 'hungry' or 'is hungry' refers. The role of 'is hungry' is to modify the character of the name 'Doris.' Indeed, for Sellars, any representational state involves a symbol that represents an object and represents that object as having a certain character by virtue of the fact that that symbol has a counterpart character. Sellars argues that a representational state of an animal involves a symbol whose counterpart character is its place in a system of such symbols, which includes the animal's perceptions and actions. Finally, he compares and contrasts linguistic and nonlinguistic representational systems and logical and nonlogical representational systems.

Part IV: Science and the Mind

"Phenomenalism" (1963). In this important, complex essay, Sellars addresses a myriad of options for explaining the relation between physical objects and our sensations of them. His first topic is classical phenomenalism, which states that physical objects are patterns of actual and possible sense contents. After discussing three theories of sense contents and arguing that classical phenomenalism is compatible with only two of these theories, Sellars argues that there is no way for the classical phenomenalist to explain what possible sense contents are in a noncircular way. Sellars is not interested in adding one more criticism of classical phenomenalism. Rather, he argues, classical phenomenalism has been rejected for the wrong reasons, and its truly problematic features remain in the theories that replaced it. In particular, these problems appear in what Sellars calls the new phenomenalism, which is the view that we infer the existence of physical objects from our acquaintance with sense contents—the framework of physical objects is a theory that is deduced from the observational base of sense contents. Sellars argues that if the frame of physical objects is a theory in this sense, then classical
phenomenalism must be true; that is, the new phenomenalism depends on the claim that the classical phenomenalist can provide a noncircular explanation of possible sense contents.

Sellars's alternative is a version of direct realism, where direct knowledge is explained in terms of a certain type of credibility. Sellars's direct realism rejects the abstractive theory of concept formation (which was criticized in "Being and Being Known") and uses in its place a roughly Kantian theory (which is discussed in more detail in the final three essays of this collection). Also, Sellars's version of direct realism includes the claim that perception is mediated by sense impressions, but the mediation is causal instead of epistemic. Sellars's theory also contains the now familiar theses that sense impressions are initially postulated by a theory that concepts appropriate for physical objects are extended to apply to sense impressions and that, with training, people can learn to have direct knowledge of their sense impressions.

In the final two sections of the paper, Sellars proposes one of his more radical theses and attempts to render his direct realism compatible with it. The radical thesis is that the world of macrophysical entities with which we are all familiar is analogous to Kant's phenomenal realm and that the world of microphysical entities postulated by theoretical science is analogous to Kant's noumenal realm. That is, strictly speaking, macrophysical entities do not exist. It is unclear to us how Sellars aims to reconcile this claim with his direct realism, but he seems to have in mind the idea that a fully worked out scientific theory will call for a successor concept to sense impressions (Sellars uses the term 'sensa'). In some sense, although there are no people or any other macrophysical objects, there are microphysical objects and sensa. Sellars touches on this topic in a number of other essays, but it is unclear to us whether he develops it into a coherent account.

"The Identity Approach to the Mind-Body Problem" (1965). Sellars presents and rejects several versions of the identity theory—here taken as addressing states and episodes characteristic of sentience, rather than sapience (one sense of 'consciousness')—before tentatively endorsing a weak version of it. On Sellars's take the identity theory is, roughly, that raw feel universals are identical to brain state universals. That might seem like an odd formulation for a nominalist, but Sellars makes clear that he explains universals in terms of the roles of linguistic expressions. The first version of the identity theory, which Sellars accepts, is that raw feels are properties of a person qua empirical nervous system. Sellars claims that only a Cartesian would reject this view. A
stronger version is that raw feel universals are identical to the brain state universals to which some future scientific theory of brains will appeal. After answering several objections to this theory, Sellars admits that there it must be incorrect because it implies that predicates defined in terms of neurological primitives could be synonymous with predicates that are not so defined. He considers a more complex version of the theory that holds that the universals to which a future theory of raw feels will appeal are identical to the universals to which some future scientific theory of brains will appeal. In the end, Sellars rejects this version as well. He concludes that although raw feels are states of people qua neurological systems, any future scientific theory that is adequate for explaining people qua neurological systems will have to include the "logical space" of raw feels.

"Philosophy and the Scientific Image of Man" (1962). This paper (perhaps Sellars's best-known, after EPM) opens with a memorable discussion of the nature of philosophy, but quickly moves to Sellars's central claim: contemporary philosophy contains two images of the place of humans in the physical world. The first, the manifest image, appeared in antiquity, while the second, the scientific image, is a relatively modern creation. The manifest image is the image of people who populate a world of macroscopic objects. Its primary mode of explanation is correlational, in the sense that explanation in the manifest image is a matter of correlating some observable phenomena with other observable phenomena. According to Sellars, explanation in the manifest image is a matter of treating nonhuman objects as if they are "truncated persons" that behave as they do entirely out of habit. By contrast, the scientific image is the image of a world consisting of microphysical entities behaving according to natural laws. The primary mode of explanation in the scientific image is the postulation of unobservable entities. According to Sellars, explanation in the scientific image is a matter of treating objects as if they are systems of basic unobservable entities that behave as they do because of the laws governing these systems of entities. On Sellars's account, the scientific image emerges from the manifest image only to set itself up as a rival to the manifest image. Given Sellars's rational reconstruction of sensations and conceptual events as initially theoretical entities and his claim that people (qua conceptual beings) are the primary objects in the manifest image, he is committed to the idea that the beginnings of the scientific image were present in the heart of the manifest image all along.

In the second half of the paper, Sellars discusses the relation between the two images. He initially proposes three alternatives: (1) the objects of the
manifest image are identical to systems of microphysical objects of the scientific image, (2) only the objects of the manifest image really exist, and (3) only the objects of the scientific image really exist. He rejects option (1) on the basis that it is impossible to account for every property of macrophysical objects in terms of properties of systems of microphysical objects. He rejects option (2) as well, but he does not spell out his reasons here (he defends a version of scientific realism in a host of other papers). Thus, he is left with option (3). One problem with option (3) is that the scientific image seems to have no place for mental phenomena like sensations and thoughts. Sellars argues that once one adopts a functional account of thoughts, treating thoughts as identical to neurological processes is acceptable. However, he finds problems (further elaborated in "The Identity Approach to the Mind-Body Problem") with this sort of identification for sensations. He ends the paper by considering another problem: because conceptual activity is essentially a product of social activity and the scientific image does not have the resources to explain social activity, the basic categories pertaining to the social aspect of conceptual thinking must be appended to the scientific image to create a new image of the place of humans in the world.

Part V: Kant

"... this I or he or it (the thing) which thinks..." (1972). In this essay, Sellars not only provides interesting interpretations of some of Kant's central claims, he also links these views to some of his own theories. In particular, we see that Sellars finds his claim that the scientific image of humans in the world cannot explain the social aspect of conceptual thought in Kant. Much of this essay is dedicated to an account of the transcendental unity of apperception and related issues. One of Sellars's central claims is that for Kant the categories are concepts of functional roles in conceptual activity. Another is that for Kant representational acts occur in objective time because the notion of temporality that applies to mental events is an extension of the concept of time that applies to physical events. This claim is similar to Sellars's views on both the relation between intentional properties of linguistic episodes and intentional properties of thinking and the relation between properties of physical objects and properties of sense impressions. However, Sellars does find some problems in Kant. In particular, he argues that Kant confuses determination by preceding states with passivity when it comes to inner perception.
Editors' Introduction

"Some Remarks on Kant's Theory of Experience" (1967). This essay continues Sellars's investigation into Kant's transcendental psychology, and it not only sheds light on Kant's text, but on Sellars's views as well. After discussing Kant's views on the phenomenal world and the role of representings in Kant's theory of perceptual experience, Sellars compares Kant's notion of the affection of receptivity with his own notion of language entry transitions. Sellars also elaborates on his claim that Kant's categories are concepts of functional roles found in conceptual activity. He links this interpretation to Kant's claim that space and time are forms of intuition and draws a number of provocative conclusions from the interpretation of intuitive representings that results. Sellars closes the essay with a discussion of the links between his account of language as a rule-governed activity and his interpretation of Kant's transcendental psychology. In particular, he suggests that his account of language belongs to what could be called transcendental linguistics: the theory of how language functions as a cognitive instrument.

"The Role of Imagination in Kant's Theory of Experience" (1978). Sellars expands his interpretation of Kant's account of perceptual experience and links this interpretation to his own views on perception, including his account of 'looks' talk, his claim that concepts that apply to sense impressions are extensions of concepts that apply to physical objects, and his diagnosis of the given as a myth. In particular, Sellars focuses on the sense in which perception is a blend of sense impressions and beliefs. His account involves a host of significant distinctions and the notion of an image-model appealed to in explaining the role of conceptual activity and nonconceptual sense impressions in creating a seamless perceptual experience.
Use and Mention Standards

In the various essays, Sellars sometimes uses single, and sometimes double, quotes to mention terms (in “Grammar and Existence” he goes so far as to mention mentions with repeated single quotes). Given the subtleties of Sellars’s thoughts about the use and mention of terms, quite apart from the problems of distinguishing technical mention of terms and phrases from the use of “scare quotes,” we have not standardized quotation devices between the essays. Each quotation standard found in each essay is consistent within the scope of that essay.

Logical Notation Standards

For reasons similar to those above, we have not tampered with Sellars’s original logical notation. Again, within each essay the standard for logical notation is consistent.

Corrections to the Text

We have corrected the text only in places where it seemed necessary in order to avoid confusion; errors and infelicities were otherwise left as they were. In several instances (on pages 15, 16, 132, 262, 269, 430, and 466) the change was philosophically significant and is described by an accompanying editorial note.
In the Space of Reasons
I

LANGUAGE
AND
MEANING
Inference and Meaning

Twenty or so years ago it was received dogma among the great majority of empirically-minded philosophers that the inference which finds its expression in “It is raining, therefore the streets will be wet” is an enthymeme. Explicitly formulated, it was claimed, the argument thus presented would read, “Whenever it rains the streets will be wet, it is raining; therefore the streets will be wet”. As the validity of this reasoning rests on purely formal principles, it was concluded that the same is true of the briefer argument above, it being in all respects save formulation, identically the same. Thus, when Metaphysicus rehearsed for their benefit the argument “I am releasing a piece of chalk, therefore of necessity it will fall”, adding by way of commentary, “Surely that was a reasonable argument. It is not, however, formally valid, so the necessity in question cannot be logical necessity. Must you not, therefore, admit that the inference is based on an appeal to a non-logical or material necessity?”, our empiricists replied with the above analysis, and dismissed the subject with the remark, “It is now obvious that the only necessity involved is the logical necessity with which ‘This chalk will fall’ follows from ‘All released pieces of chalk fall’ and ‘This piece of chalk is being released’.”

One need not be persuaded by this retort to feel its force. After all, are there not such things as enthymemes? And is not the rephrased argument valid on purely logical grounds? Convincing though the retort may be, however, it scarcely amounts to a disproof of the idea that there are material as well as
formal principles of inference, so that instead of merely being abridged edition of a formally valid argument, “It is raining, therefore the streets will be wet” might well be as it stands a valid argument, though warranted by a material principle of inference. On what grounds would our empirically minded philosophers have rejected this idea? At least a partial answer lies close at hand. A scrutiny of the above clash with Metaphysicus suggests that tacit use is being made of Ockham’s razor. The claim seems to be that even if it made sense to speak of non-logical principles of inference, there would be no need for them. For do not logical principles enable us to do all the arguing and inferring which these supposed material principles could warrant, provided we use the generalizations which correspond to these material principles as premises in our arguments? Thus, if we suppose \( x \) is an acid may be inferred from \( x \text{ turns litmus paper red} \) to be a material principle of inference, the corresponding generalization would be \((x) \ x \text{ turns litmus paper red} \supset x \text{ is an acid}\). The material rule would certify the argument, “This turns litmus paper red, therefore it is an acid”, while if we use the generalization corresponding to the rule as a premise, we get the logically valid argument, “\((x) \ x \text{ turns litmus paper red} \supset x \text{ is an acid}; this turns litmus paper red; therefore this is an acid\)”.

I think it is clear, however, that our empirically-minded friends would have gone much farther than this. They would have attacked the very notion of a material principle of inference. At the very least they would have claimed that if any principles do correspond to this description, they have a thoroughly second rate and/or derivative status as compared with purely formal principles. We can imagine that something like the following considerations would have governed their thinking on this matter.

‘Formal rules of inference are essential to the very possibility of language; indeed, of thought. Kant was on the right track when he insisted that just as concepts are essentially (and not accidentally) items which can occur in judgments, so judgments (and, therefore, indirectly concepts) are essentially (and not accidentally) items which can occur in reasonings or arguments. Without formal rules of inference there would be no terms, no concepts, no language, no thought. In this sense, our empiricists continue, one could say that logical rules of inference specify, at least partially, the very form of a term or concept. Were it not for these rules, we could not even conceive of the releasing or the falling of a piece of chalk, not to mention the piece of chalk itself. On the other hand, given these rules and given the course of our sense-experience, no other rules of inference (that is, no non-formal or material rules) are necessary conditions of concepts—though rules of inductive inference may be necessary to establish synthetic truths involving them.’
To bolster up this line of thought, they would appeal to the empiricist account of concept formation in one or other of the various forms in which it has been held, since Locke made it the cornerstone of his philosophy, and continue:

'The form of our concepts may depend on rules of inference, but their material content does not. Even if we were to acknowledge a material rule of inference whereby "This piece of chalk will fall" can legitimately be inferred from "This piece of chalk is being released", the rule could have nothing to do with our ability to conceive of either chalk, the releasing of chalk, or the falling of chalk. This fact alone would force us to put material principles of inference, should we acknowledge their existence, on a decidedly inferior plane.'

Can one, however, go this far in cutting material rules of inference down to size, without taking the more drastic step of denying that anything is really described by the phrase "material rule of inference"? Those who take this line claim that "It is raining, therefore the streets will be wet", when it isn't an enthymematic abridgment of a formally valid argument, is merely the manifestation of a tendency to expect to see wet streets when one finds it raining, a tendency which has been hammered into the speaker by past experience. In this latter case it is the manifestation of a process which at best can only simulate inference, since it is a habitual transition of the imagination, and as such is not governed by a principle or rule by reference to which it can be characterized as valid or invalid. That Hume dignified the activation of an association with the phrase "causal inference" is but a minor flaw, they continue, in an otherwise brilliant analysis. It should, however, be immediately pointed out that before one has a right to say that what Hume calls "causal inference" really isn't inference at all, but a mere habitual transition from one thought to another, one must pay the price of showing just how logical inference is something more than a mere habitual transition of the imagination. Empiricists in the Humean tradition have rarely paid this price, a fact which has proved most unfortunate for the following reason. An examination of the history of the subject shows that those who have held that "causal inference" only simulates inference proper have been led to do so as a result of the conviction that if it were genuine inference, the laws of nature would be discovered to us by pure reason. But an adequate account of logical inference might make it clear that even "causal inference" can be genuine inference, as it seems to be, without this unwelcome consequence.

A somewhat less drastic approach to material rules of inference differs from the above in admitting that there are such rules, and that they are indeed rules of inference, but insists that not only do they have second-class status in
that, unlike formal rules, they are not necessary conditions of the very existence of terms or concepts, but also that their authority as rules is purely derivative. It claims that recognition of a material rule to the effect that “x is B” may be inferred from “x is A” presupposes prior acceptance of what we have called the corresponding generalization, in this case “All A is B”, and owes its authority to the fact that “x is B” is logically derivable from “x is A” together with “All A is B”. Those who adopt this alternative concede to Metaphysicus that the inference from “It is raining” to “The streets will be wet” is immediately grounded in a material rather than formal rule of inference, but insist that as the authority of material principles is purely derivative, this entails none of the rationalistic consequences which he desiderates. While they might agree with proponents of a more drastic approach that in some cases utterances and inscriptions of “It is raining, therefore the streets will be wet” are functioning merely as abbreviated expressions of inferences governed by a formal rule of inference, they are more likely to insist (and I believe correctly) that in most cases, at least, these supposed abridgments of formally valid arguments are actually complete arguments as they stand which are validated by material rules of inference. They would add that it might not be inappropriate to say that these arguments are “abridgments” or “enthymemes” provided that these terms are taken to imply not that there are no material rules of inference, but rather that their status is purely derivative, and their contribution to thought a matter of convenience.

If neither of these two more drastic lines is taken, it would seem possible (at least at this early stage of our discussion) to take a different tack and combine the ascription of an inferior status to material rules of inference, as not being necessary conditions of the existence of terms or concepts, with the claim that their authority as rules is nevertheless original. This view in turn, would seem to admit of two variants. According to the first, material principles of inference, though not essential to meaning, are as indispensable as formal rules to thought about empirical matters. The second variant denies this, claiming that although the authority of material rules is not inherited from formal rules, but is equally original, they are nevertheless dispensable modes of thought, making no contribution to its penetration or scope which could not be duplicated by a combination of formal rules and factual premises.

Now, all the above possibilities in the way of empirically minded interpretations of material rules of inference have in common the idea that whereas formal rules are necessary conditions of the existence of concepts or the possession of meaning by terms, and, in this sense, are generic conditions of meaning—the specific content of a concept, or meaning of a term, is derived
from experience, and is prior to any material rules of inference in which this concept or term may come to play a role. But might it not be possible for an empiricist to hold that material rules of inference are as essential to meaning as formal rules? That the specific nature of a factual concept is determined by the material rules of inference governing it, as its generic nature is determined by formal rules of inference? That the meaning of a term lies in the materially and formally valid inferences it makes possible? In spite of the fact that a position of this kind is incompatible with the so-called "empiricist" theory of concept formation, and is universally relegated to the absolute idealisms and rationalisms of a bygone age, I mention it for the sake of completeness.

In effect, then, we have been led to distinguish the following six conceptions of the status of material rules of inference:

(1) Material rules are as essential to meaning (and hence to language and thought) as formal rules, contributing the architectural detail of its structure within the flying buttresses of logical form.

(2) While not essential to meaning, material rules of inference have an original authority not derived from formal rules, and play an indispensable role in our thinking on matters of fact.

(3) Same as (2) save that the acknowledgment of material rules of inference is held to be a dispensable feature of thought, at best a matter of convenience.

(4) Material rules of inference have a purely derivative authority, though they are genuinely rules of inference.

(5) The sentences which raise these puzzles about material rules of inference are merely abridged formulations of logically valid inferences. (Clearly the distinction between an inference and the formulation of an inference would have to be explored.)

(6) Trains of thought which are said to be governed by "material rules of inference" are actually not inferences at all, but rather activated associations which mimic inference, concealing their intellectual nudity with stolen "therefores".

II

In the above paragraphs we have been led to worry about the dispensability or indispensability of, and the relation to meaning of, material rules of inference. We have not yet, however, given an account of what a material rule of infer-
ence is, or pretends to be. We have relied on dangerously vague historical connotations of the terms “formal” and “logical”, as well as on the use of examples. Fortunately, help lies close at hand. Professor Rudolf Carnap, in his *Logical Syntax of Language*, draws a systematic contrast between two types of syntactical rule which if his syntactical conception of logic is sound, are exactly the formal and material rules of inference with which we are concerned.

It is to a brief exposition of his views on this matter that I now turn.

In Carnap’s terminology, a rule of inference, conceived to be a syntactical rule, is called a “transformation rule”. He emphasizes the central role played by the concept of a transformation rule in the definition of a language. Indeed (p. 168) he contends that once we know the circumstances under which one expression of a language, is the direct consequence of another, we have the key to the logical structure of the language. These circumstances are specified by the transformation rules, which are formulated in the syntactical metalanguage of the language to which they apply. Whether stated as rules of inference, or as a definition of “direct consequence in S”,

all that is necessary is that it be clear to what forms of expression the rules are in general applicable (which gives us the definition of “sentence”) and under what conditions a transformation or inference is permitted (which gives us the definition of “direct consequence”). (p. 170)

Transformation rules must carefully be distinguished from valid sentences in the object language. The latter are sentences which require nothing more than an appeal to the transformation rules of the language to justify their assertion. If an object-language sentence is valid, its contradictory is contra-valid. If either valid or contra-valid, it is said to be determinate, otherwise indeterminate. Carnap finds it to be a distinguishing feature of logical symbols and expressions that each sentence constructed solely from them is determinate (p. 177). On page 175 he defines the content of a sentence as the class of non-valid sentences which are its consequences (i.e. can be inferred from it).

We next note that Carnap draws a distinction between *logical* and *extra-logical* transformation rules. The essential difference, to put the matter in a way which is adequate for our purposes, is that whereas *logically* valid inferences do not, *extra-logically* valid inferences do depend for their validity on the fact that they contain a certain set of descriptive terms. The syllogism so fatal to Socrates remains valid if any three descriptive terms of appropriate category are systematically substituted for “men”, “mortal” and “Socrates”. In Quine’s useful terminology, descriptive terms occur *vacuously* in logically valid arguments; *essentially* in extra-logically valid arguments. Now, the most
obvious candidates for the position of extra-logical rule of inference are rules authorizing inferences which, to be logically valid would have to have as an additional premise a sentence formulating a law of nature. Carnap calls rules of this kind \(P\)-rules (Where the "P" is short for "physical" in a suitably broad sense), as contrasted with \(L\)-rules (logical rules). In his terminology, therefore, he distinguishes between \(L\)-valid and \(P\)-valid inferences. To illustrate: If we suppose \((x)(\phi x \implies \psi x)\) to state a law of nature,

I. \((x) \phi x \supset \psi x\), but \(\phi a\), therefore \(\psi a\)

would be an \(L\)-valid inference.

II. \(\phi a\), therefore \(\psi a\)

would be a \(P\)-valid inference. The \(P\)-rule authorizing it, whatever its most satisfactory formulation might turn out to be, would be to the effect that \(\text{"A sentence consisting of } \psi \text{ followed by an individual constant is validly inferred from a sentence} \quad \text{consisting of } \phi \text{ followed by that same individual constant".}\)

(That we cannot rest in this formulation is shown by the fact that when the phrase "may be inferred from" is correctly used in ordinary speech, it is preceded and followed not by the names of sentences, but by the sentences themselves—e.g. that it will rain can be inferred from the darkness of the clouds.)

Corresponding to this distinction between \(L\)-valid and \(P\)-valid inferences, we have the distinction between \(L\)-valid and \(P\)-valid sentences. Thus,

III. \((x) \phi x \supset \psi x\), \& \(\phi a \supset \psi a\)

would be an \(L\)-valid sentence. On the other hand, given the above \(P\)-rule,

IV. \(\phi a \supset \psi a\)

would be a \(P\)-valid sentence, while

V. \(\phi a \& \neg \psi a\)

would be \(P\)-contravalid.

Furthermore, in view of Carnap’s definition of the content of a sentence as the class of the non-valid sentences which are consequences of it, \(\psi a\) would be part of the content of \(\phi a\), though not of its \(L\)-content. Given a suitable definition of the content of expressions other than sentences, a corresponding distinction would have to be drawn between the content of an expression governed by \(P\)-rules, and its content in the narrower sense of \(L\)-content.

Let us now raise the question whether, granted that a language must have rules of inference, it must have both \(L\)-rules and \(P\)-rules. We might expect
Carnap to say that whereas a language without descriptive terms need not, 
and, indeed, cannot have other than logical rules of inference, a language with 
descriptive (extra-logical) terms must have extra-logical rules? Carnap, how-
ever, makes it clear that in his opinion a language containing descriptive terms 
need not be governed by extra-logical transformation rules. Indeed, he commits 
himself (p. 180) to the view that for every language with P-rules, a language 
with L-rules only can be constructed in which everything sayable in the for-
mer can be said. If we now turn back to our list of six possible accounts of 
the status of material rules of inference (above, p. 7), we see at once that 
Carnap’s account falls in neither the first nor the second category for accord-
ing to these, P-rules would be indispensable. Furthermore, since he clearly 
holds that P-rules are as genuinely rules of inference as are L-rules, it does not 
belong in the fifth or sixth category. Assuming the adequacy of our classifica-
tion, we are left with the third and fourth pigeon-holes in which to place his 
account.

To be sure, Carnap, in the above passage, is not discussing the syntax of 
natural languages, but rather the construction by logicians of artificial lan-
guages. Yet he is clearly conceiving of these artificial languages as candidates 
for adoption by language users. And presumably, an artificially constructed 
calculus with an appropriate syntactical structure, becomes a natural lan-
guage by virtue of (1) the adoption of its syntactical rules by a language 
speaking community; (2) the association of certain of its descriptive terms 
with sensory cues. Thus, in saying that “whether in the construction of a lan-
guage S, we formulate only L-rules, or include also P-rules ... is a question of 
expedience”, Carnap is implying that natural languages need have no P-rules, 
and that the presence or absence of P-rules in a natural language is a matter of 
some form of (presumably unconscious) social selection determined by con-
venience.

Notice that corresponding descriptive terms in two languages, one with 
and one without P-rules, though they have the same meaning in the sense 
that they enable the communication of the same information, need not have 
the same content, in Carnap’s syntactical sense of the term. For the content of 
a term ‘φ’ is, roughly speaking, the totality of what is entailed logically or phys-
ically by the function “φx”, and, clearly, a term governed by P-rules will have a 
greater content than one which is not.

Now, according to the fourth alternative, P-rules are not only dispensable, 
but have a purely derivative authority. Concretely this amounts to the sugges-
tion that the authority of P-rules derives from the fact that the inferences they 
certify can be reformulated as logically valid inferences, if the generalizations
which have been canonized into P-rules are brought down to earth as additional premises. The contribution made by P-rules would then be one of con-
venience only, and hey would be of little interest to the philosopher. They would permit us to argue "φa therefore ψa" provided we accepted the
generalization "(x) φx ⊃ ψx" and could, therefore, argue "(x) φx ⊃ ψx & φa, therefore ψa", a saving, perhaps, of some intellectual breath at the level of argu-
ment, but one which brings no basic enrichment to the language. Now, Carnap nowhere commits himself—at least in so many words—to this fourth conception of the status of P-rules. Might it not be the case that his views fall into the third category? Perhaps we can find him to hold that although dispensable, and adding nothing to the factual content that can be commu-
nicated by the language, P-rules enable a language to perform a function which could not be duplicated (even at the cost of great inconvenience) by a
language with L-rules alone. If there were any evidence to this effect, we
might attribute to him the view that at least part of the authority of P-rules, even though what it authorizes is dispensable, is not derivative from that of
L-rules. However, when one turns to Carnap's book with these questions in mind, one is startled to find no account whatsoever of the grounds on
which it might be expedient to adopt a language governed by P-rules as well as L-rules. What we do find is an emphasis on the disadvantage of adopt-
ing P-rules. He points out that to the extent that empirical generalizations are erected into P-rules, science is put into a strait-jacket. "If P-rules are stated, we
may frequently be placed in the position of having to alter the language" (p. 180). Now, although the phrase "alter the language" is perhaps a bit dras-
tic for the adding or subtracting of P-rules conceived as conveniences with purely derivative authority, there is nothing here which prohibits us from construing Carnap as holding that when the adoption of P-rules is expedien, it is merely because at that time and in these circumstances, the economy in the number of premises required for inferences which is obtained by building scientific generalizations into the very machinery of the language, more than compensates for the resulting tendency of this machinery to impede scientific progress. In any event, the passage from which we have just quoted contains no hint that the expediency of adopting P-rules rests on their ability to author-
ize something that would not be authorized in a language with L-rules alone.

At this point it is relevant to mention that according to Carnap, P-rules, like L-rules, may take either one of two forms: (1) They may be formulated as
rules of inference. This is the form we have supposed them to have in the above discussion. (2) They may be formulated as sentences to the effect that certain sentences in the object language are "primitive sentences", that is, priv-
illegal sentences in that their assertion is unconditionally authorized by the rules of the language. Notice, however, that each form may be established on the basis of the other provided that the language contains, as it must, at least one L-rule of the first form, i.e., formulated as a rule of inference, in short a rule of detachment or *modus ponens*. It is interesting, however, to note that although P-rules may be introduced in either form, Carnap prefers to state them in the second form as singling out certain object-language sentences (usually generalized material implications) to be primitive sentences. This inevitably suggests he is not thinking of the expediency of the adoption of P-rules as a matter of diminishing of the number of premises needed for inferences. For when P-rules are stated in the second form, the generalizations they characterize as primitive sentences must be used as premises in inferences, even though as being unconditionally assertable on the authority of the P-rules of the language, they are premises of a privileged kind.

III

Now, we may well imagine Metaphysicus to have been following the above exploration of Carnap's views with the most intense interest. He has read with approval Carnap's account of the formal distinction between L-rules and P-rules of inference, but shared our disappointment at Carnap's failure to explain either the status or the specific contribution of the latter. Metaphysicus notes that we have been asking whether Carnap's P-rules authorize any linguistic activity which, dispensable or not, is incapable of being authorized by L-rules alone. Pointing out that we have as yet failed to find any mention of such in the *Logical Syntax of Language*, he now seizes the initiative with the claim that there is indeed such an activity, and that it provides the key to an understanding of the status of material rules of inference.

What Metaphysicus has in mind, of course, are such subjunctive conditionals as "If I had released this piece of chalk, it would have fallen", and "If there were to be a flash of lightning, there would be thunder". But before Metaphysicus attempts an analysis of these statements, bringing out their relevance to our problem, he first turns his attention to those subjunctive conditionals which are clearly true on purely formal grounds. He points out that "If anything were red and square, it would be red" cannot plausibly be claimed to assert the same as "(In point of fact) all red and square things are red", and suggests that this subjunctive conditional conveys the same information as the logical rule permitting the inference of *x is red* from *x is red and x is square*. This rule is a derivative logical rule, a special case of the logical rule
proper, which latter, of course, does not single out the terms *red* and *square*. According to this line of thought, one who asserts “If this *were* red and square, then it *would* be red”, is committing himself to the falsity of “This is red and square”, while in some sense giving expression to a logical rule of inference. On the other hand, a person who says “Since this is both red and square, it is red”, is giving expression to the same rule of inference, while asserting both “This is red and square”, and “This is red”. Metaphysicus now argues that if we accept this analysis, we must interpret the subjunctive conditionals with which we began this paragraph as expressions of *material* rules of inference. “If there were to be a flash of lightning, there would be thunder”, giving expression to some such rule as “*There is thunder at time t-pluss-n* may be inferred from *there is lightning at time t*”, and this rule is not in any obvious way a specification of a purely logical rule of inference. He therefore claims to have shown beyond reasonable doubt not only that there are such things as material rules of inference, but, which is far more important, that they are essential to any conceptual frame which permits the formulation of such subjunctive conditionals as do not give expression to logical principles of inference. Since we are all conscious of the key role played in the sciences, both formal and empirical, in detective work and in the ordinary course of living by subjunctive conditionals, this claim, if substantiated, would indeed give a distinguished status to material rules of inference.

At this point, our empiricists are tempted to reply by claiming that even the latter subjunctive conditionals owe their force to purely logical principles and that if this does not appear to be the case it is because the content of these conditionals has not been made fully explicit. This is, of course, essentially the same claim as the one considered at the opening of this paper to the effect that “It is raining, therefore the streets will be wet”, is an enthymeme. It will prove quite rewarding, however, to explore this claim in its present guise.

What, then, would be the explicit formulation of this subjunctive conditional? Perhaps,

**A.** *Since every time it rains the streets are wet*, if it were to rain the streets would be wet,

the since clause dropping out to give the usual formulation. The logical principle of inference sanctioning this expanded version would presumably be “From \( \forall x (\phi x \text{ implies } \psi x) \) can be inferred ‘\( \phi a \text{ implies } \psi a \)’”, which is a special case of the principle authorizing the inference from “\( (x) fx \)” to “\( fa \)”. But we see right away that something is wrong. For the subjunctive conditionals which this principle authorizes would be of the form “If \( (x) fx \) were the case, then \( fa \)
would be the case'. Consequently, if "Every time it rains the streets are wet" expresses a material implication, as it must, if we are not to introduce a P-rule in the very attempt to dispense with such, we would get a subjunctive conditional of the form "If it were the case that $(x) \phi x \supset \psi x$, then it would be the case that $\phi a \supset \psi a$". But the "since" statement corresponding to this is "Since $(x) \phi x \supset \psi x, \phi a \supset \psi a". In other words, the logical principle would justify not $A$, but rather

$A'$. Since every time it rains the streets in point of fact are wet, it will rain $\supset$ the streets will be wet.

Here the subjunctive mood has disappeared from the consequence clause, and with a merely material implication, we are no longer asserting that a wetting of the streets can be inferred from the occurrence of rain. Nor is it an adequate reply that "it will rain $\supset$ the streets will be wet" is inferable from "all cases of rain are in point of fact cases of wet streets", and that it is this inferability which makes its presence felt in the original subjunctive conditional. For on this alternative, wherever we accept "all $A$'s are in point of fact $B$" we should be warranted in asserting "if $x$ were $A$, $x$ would be $B$"—whereas whenever we assert a subjunctive conditional of the latter form, we would deny that it was merely in point of fact that all $A$'s are $B$.

On the other hand, if "Every time it rains the streets are wet" is interpreted as the expression of an entailment, then the abovementioned logical principle of inference would warrant a subjunctive conditional of the form "If it were the case that $(x) \phi x \text{ entails } \psi x$ then it would be the case that $\phi a \text{ entails } \psi a". The corresponding "since" statement would be "Since $(x) \phi x \text{ entails } \psi x, \phi a \text{ entails } \psi a". Thus we would get,

$A'$. Since every time it rains the streets are wet (interpreted now as an entailment), it will rain entails the streets will be wet.

Since an entailment statement has the same force as a subjunctive conditional, $A'$ is equivalent to $A$, and our logical principle of inference has given us what we want. But a moment's reflection reminds us that to get $A'$ we have had to pay the price of introducing a material rule of inference. To say that rain entails wet streets is to convey exactly the same information as to say that a sentence asserting the existence of wet streets may be inferred from a sentence asserting the existence of rain. Thus our ultimate purpose of explaining the original subjunctive conditional without appealing to a material rule of inference would not have been achieved.
Let us try again. Perhaps the explicit formulation would be,

B. If it were the case both that *everytime it rains, the streets are wet* and that *it is raining*, then *the streets would be wet.*

The logical principle which finds expression in this statement is, schematically, "From \( (x) (\phi x \text{ implies } \psi x) \text{ and } \phi a \) can be inferred \( \psi a \)." Notice that on this interpretation the original subjunctive conditional would not be the implicit formulation of a 'since' sentence, as the 'since' clause would include the assertion of "It is raining", and this would be incompatible with the significance of contrary to fact subjunctive conditionals. Now it is at first sight not too implausible that the original subjunctive conditional is an abbreviated formulation of B. But to see that this won't do it is sufficient to point out that on this interpretation all such subjunctive conditionals would be true! Surely some sentences of the form "If a were \( \phi \), a would be \( \psi \)" are false, in other words some sentences of the form "Even though a were \( \phi \), it need not be \( \psi \)" are true. But on the theory under examination, the former, when explicated turns out to be a logical truth, and the latter a contradiction.

Now, unless some other way can be found of interpreting such subjunctive conditionals in terms of logical principles of inference, we have established not only that they are the expression of material rules of inference, but that the authority of these rules is not derivative from formal rules. In other words, we have shown that material rules of inference are essential to the language we speak, for we make constant use of subjunctive conditionals of the type we have been examining. It is very tempting to conclude that material rules of inference are essential to languages containing descriptive terms. Yet to draw this conclusion would be hasty, for the most we have shown is that if there are descriptive languages which are not governed by material rules, they do not permit the formulation of material subjunctive conditionals. We now notice that, as a matter of fact, most of the linguistic structures Carnap considers, being extensional, do not even permit the formulation of subjunctive conditionals, and that though they are not natural languages in actual use, he clearly thinks that they could be. Carnap, then, is clearly convinced that subjunctive* conditionals are dispensable.

Does this commit him to holding that P-rules are dispensable? Clearly not, no more than it follows from the dispensability of logically true subjunctive conditionals that a language need have no L-rules. Thus, even though material subjunctive conditionals may be dispensable, permitting the object lan-

*Correction of "subjective" in original printing.
language to be extensional, it may nevertheless be the case that the function performed in natural languages by material subjunctive conditionals is indispensable, so that if it is not performed in the object language by subjunctive conditionals, it must be performed by giving direct expression to material rules of inferences in the meta-language. In other words, where the object language does not permit us to say "If a were \( \phi \), it would be \( \psi \)" we can achieve the same purpose by saying "\( \phi a \) may be inferred from \( \phi a \)". Since it is the importance of the function served by material subjunctive conditionals on which we have been insisting, the fact that Carnap emphasizes the possibility of extensional descriptive object* languages by no means rules out the idea that material rules of inference might be indispensable to languages containing descriptive terms.

To sum up the results of the last few paragraphs: Alternative (4) has been shown, at least provisionally, to be untenable. This would leave Carnap with alternative (3)—(material rules of inference are dispensable but underived). However, in the process of disproving alternative (4) we have been led to notice the importance of the function played in natural languages by material subjunctive conditionals. Since these are object language expressions of material rules of inference, and since the same function can be performed by the formulation of a rule of inference in the metalanguage, it has occurred to us that alternative (2)—material rules of inference, though not essential to the meaning of descriptive terms, are indispensable features of languages containing descriptive terms, and have an authority underived from formal rules though rejected by Carnap, is worth reconsidering.

Now, if we were to accept the second alternative, it is clear that we should have to explore the relation of material rules of inference to the meaning of descriptive terms, to see if we could rest in alternative (2) without ultimately embracing alternative (1)—according to which material rules of inference are as essential as formal rules to the meaning of descriptive terms. It is also worth noting, at this stage, that the Humean suggestion that causal inferences are really not inferences at all, but rather habitual expectations masquerading as inferences, loses all plausibility when it is stretched to cover ostensible material subjunctive conditionals, particularly when contrary to fact. Yet if we are now in a position to insist that materially valid inferences are as much inferences as formally valid inferences, we must also recognize that we have as yet given no account of what a rule of inference is (whether formal or material). It is to this task that we now turn, in the hope of getting further light on our problem.

* [Correction of "objective" in original printing.]
We have already had occasion to remark on the central role played in Carnap's conception of a language by the notion of a rule of inference or "transformation rule". Indeed, he writes on occasion (e.g., p. 4) as though a language, formally considered, were identical with its syntactical rules, from which it would follow that the transformation rules of a language would be at least a part, and might—in the light of the passage we have quoted on the power of transformation rules to specify the syntactical structure of a language—be identical with the language. Now, I think we would all grant that there is a sense in which a calculus, or a game (e.g., chess) or even a language, is what it is as specified by certain rules. But surely there is a perplexing Hibernian ring to the statement that a calculus is identical with "its" rules. After all, the rules of a calculus belong in the syntactical metalanguage, so that in making this identification, one would be identifying a calculus with expressions in its metalanguage, and thus doing violence to a distinction which is the central theme of Carnap's book. Let me hasten to add that the identification of a calculus, or game or language, with its rules, though strictly a mistake, can be regarded as a paradoxical way of stating an important truth; and I have dwelt on the matter only because Carnap's statement is symptomatic of a carelessness with the term "rule" which pervades his otherwise admirably incisive and patiently meticulous argument.

Another prima facie puzzling feature of Carnap's treatment of transformation rules is his preference for formulating them as definitions of "direct consequence in S", where S is the language whose rules are under consideration. Thus, in a passage already quoted, Carnap writes, "In the following discussion we assume that the transformation rules of any language S, i.e. the definition of the term 'direct consequence in S', are given" (p. 168). Now, this term, like any other syntactical predicate, is for Carnap, a formal predicate. That is to say it is to be defined in terms of structural properties of the expressions belonging to language S. Thus, by telling us that transformation rules can be formulated as definitions of "direct consequence in S", Carnap gives the impression that the force of a rule to the effect that expressions of kind A can be "transformed" into expressions of kind B, relates solely to the existence of a structural relationship between these two kinds of expression. In ethics the corresponding thesis would be that moral rules can be formulated as definitions, in naturalistic terms, of the predicate "morally right"; thus, the rule "Happiness ought to be maximized" as the definition "x is morally right = or x maximizes human happiness". Here we should all know what to say. We would point out
that the definiendum is no mere synonym for the definiens, and that even if it
has the same components of descriptive meaning as the latter, it has a surplus
meaning over and above these which can be indicated by the word "ought". In
other words, the most that such a definiens can do is specify the type of cir-
cumstances in which a certain kind of action ought to be done; it cannot
specify that it ought to be done. If one is an emotivist in one's account of
ought, one will say that the "cognitive content" of a rule is indeed exhausted
by the definiens in such a definition; and that provided one does not over-
look the surplus pragmatic meaning of the definiendum, there need be noth-
ing mistaken about the enterprise of formulating moral rules as naturalistic
definitions of "morally right". Intuitionists, on the other hand, would hold, of
course, that such definitions are in principle mistaken.

Now, the basic moral of the above discussion is that if a definition is, with
any plausibility, to do the work of a rule, the definiendum must have the nor-
mative flavour characteristic of "ought", or "ought not" or "may" or "may
not". But when one turns to Carnap's thesis that transformation rules may be
formulated as definitions of "direct consequence in S", one finds no such
flavour. The term "direct consequence" has the same sort of feel as "next to"
or "between". This is not true of the predicate i.e. "derivable" in terms of
which he formulates certain transformation rules which are more restricted
in scope than those he associates with the predicate "direct consequence". The
term "derivable" is one of those "-able" words which connotes "may be done"
in the sense not of "can be done" but rather "is permissible", an expression
which obviously belongs in the context of rules. Now it is my impression that
when Carnap was looking for another word to share the burden of transfor-
mation rules formulated as definitions with "directly derivable", he failed to
bear in mind that what he needed was another word with this same rulish
force. If he could not find one in current use, it would have been better to
make one up (e.g., "directly extractable") than to choose a word with such
purely cognitive flavour.

The next point I wish to make is the closely related one that a rule is always
a rule for doing something. In other words, any sentence which is to be the
formulation of a rule must mention a doing or action. It is the performance
of this action (in specified circumstances) which is enjoined by the rule, and
which carries the flavour of ought. With this in mind, let us examine Carnap's
formulation of certain transformation rules as definitions of "directly deriv-
able in S". Here the interesting thing to note is that while the definiendum
seems clearly to mention a kind of action, namely, deriving something di-
rectly from something else, and to indicate that this deriving is permissible,
the definiens on the other hand specifies only a structural relationship between the \textit{terminus a quo} and the \textit{terminus ad quem} of the deriving. In short, Carnap's claim that he is giving a definition of "directly derivable in S" is a snare and a delusion. It is as though one offered the following "definition" as a formulation of a basic rule governing the activities of policemen: \( X \text{ is arrestable} =_{df} X \text{ has broken a law} \). It is obvious that such a definition would be a mistake not only because the definiendum "arrestable" has, as we saw, a normative force not shared by the definiens, but also, because it designates an act, the act of arresting, which is not designated by the definiens. I think we would all be inclined to say that a person who offered such a "definition" was really attempting, in a confused way, to do something quite different, namely, specify the circumstances in which a person is arrestable. "X is arrestable if and only if X has broken a law" reminds us of "X is a triangle if and only if X is a plane figure bounded by three straight lines", an analytic statement which is true by definition. In both cases an "if and only if" sentence is affirmed which is not an empirical assertion. Yet it would be a mistake in principle to take "X is arrestable if and only if X has broken a law" to be an analytic proposition which is true by definition. Compare, "I will shoot you if and only if you cross that line". In short, instead of defining "directly derivable in S" Carnap is at best specifying the circumstances in which it is permissible to derive one expression from another. The same considerations apply \textit{mutatis mutandis} to Carnap's formulation of less restricted transformation rules as definitions of "direct consequence in S". As the technical difference between the more and less restricted transformation rules considered by Carnap is irrelevant to our problem, and as we have found the term "derivable" to be more satisfactory than "consequence" we shall use the former in a broad sense which covers the ground of Carnap's two terms "derivable" and "consequence".

What, then does it mean to say of one sentence, \( B \), that it is derivable from another, \( A \)? Roughly, that it is permissible to assert \( B \), given that one has asserted \( A \), whereas it is not permissible to assert not-\( B \), given that one has asserted \( A \). In other words, we have here a rule of conditional assertion (which must not be confused with a rule for the assertion of a conditional). To be contrasted with rules of this type, e.g. \textit{modus ponens}, are rules which specify certain sentences as unconditionally assertable. Rules of this latter type are formulated by Carnap (with all the mistakes criticized above) as definitions of "primitive sentence of S". Thus, to say that \( \langle \phi \rangle : \phi x \rightarrow \psi x \) is a primitive sentence of \( S \), is to say that one is authorized by the rule of \( S \) to assert this sentence, \textit{without having to appeal to evidence or grounds}, in other words, to other sentences on whose prior assertion the authorization would depend. It should, of
course, be noticed that to say that a sentence is unconditionally assertable entails that its contradictory ought not to be asserted. In this respect an unconditionally assertable sentence differs from a contingently assertable sentence, e.g., "It is raining", whose contradictory is also contingently assertable.

Let us now pause to sum up the substance of the last few paragraphs. We have been pointing out that a syntactical rule, like any other rule, prescribes or permits a certain kind of action in a certain type of circumstance. In the case of syntactical rules, the relevant kind of action would seem to be asserting, a concept of which we have offered no analysis, but which is, we shall assume, to be understood in terms of the concept of a token, so that to assert a sentence is to bring about the existence of a token of that sentence. (Though after Ryle's painstaking analysis of mentalistic terms we must be prepared to find that even the "event" of asserting has a dispositional component.) Be this as it may, it follows from our analysis that a syntactical metalanguage cannot permit the formulation of syntactical rules, unless (1) it contains a term for the activity of asserting, and (2) it contains an expression having the force of "ought". To the extent that a so-called "syntactical metalanguage" falls short of these requirements, it is an abstraction from a syntactical metalanguage proper. It is undoubtedly convenient to study calculi by means of such truncated metalanguages as mention only the structural inter-relationships of the sign-designs of these calculi, but it is essential for our purposes to stress that these truncated metalanguages become capable of formulating rules only when supplemented by the equipment mentioned above.

V

We are now in a position to develop an account of the logical and physical modalities which, though based on Carnap's account in his *Logical Syntax of Language*, is an improvement in that it explicitly takes into account the rulishness of syntactical rules. It will be remembered that the central concept of Carnap's treatment is that of a quasi-syntactical sentence. As a simple example we may take the sentence "Red is a quality". This is a quasi-syntactical sentence in that it conveys the same information as the syntactical sentence "Red' is a one-place predicate". Furthermore, "red is a quality" is a quasi-syntactical sentence in the material mode of speech, as opposed to the autonomous mode of speech, in that "red" is a quality is not a syntactical sentence conveying the same information as "red is a quality". Carnap tells us that

The material mode of speech is a transposed mode of speech. In using it, in order to say something about a word (or a sentence) we say instead something
Consider, now, the sentence “If $a$ is red and square, then it is logically necessary that $a$ be red”. According to Carnap’s account, this is a quasi-syntactical sentence in the material mode of speech which conveys the same information as the syntactical sentence “$a$ is red’ is an L-consequence of ‘$a$ is red and $a$ is square’”. Now, as I see it, this account is essentially sound, and is vitiated only by the fact that Carnap’s account of the consequence relation makes it merely a matter of a structural relationship obtaining between two expression designs. If, in accordance with our earlier proposal, we reformulate the above in terms of the syntactical predicate “derivable”, then the claim becomes that the sentence “If $a$ is red and square, then it is logically necessary that $a$ be red” is a quasi-syntactical sentence conveying the same information as the syntactical sentence, “$a$ is red’ is L-derivable from ‘$a$ is red and $a$ is square’”.

To appreciate the significance of this claim, let us remember our previous conclusion that in thinking of one expression as derivable from another, we are thinking of one kind of activity as permissible and of another kind as not permissible, in a certain kind of circumstance, where, for syntactical purposes, the significant feature of both activities and circumstance is that they involve the exemplification of specified types of linguistic structure. Let us now notice that the contrast between the permissible and the non-permissible can be explicated in terms of ought to be done, to say of $x$ that it is permissible being to say that it is not the case that it ought not to be done. Let us assume, then, that consciousness of ought to do is the basic consciousness involved in recognizing a set of rules, whether they be moral rules or, as in the present case, rules of syntax; and that consciousness of may do is to be understood in terms of it.

Returning now to the problem of interpreting modal sentences, we notice that Carnap’s analysis has become the claim that sentences involving the phrase “logically necessary” convey the same information (the use of the vague expression “convey the same information” is deliberate) as syntactical rules to the effect that we may do thus and so, and ought not do this and that, in the way of manipulating expressions in a language. The language of modalities is interpreted as a “transposed” language of norms.

This theory, as it stands, is open to two related and rather obvious objections. (1) It might be objected that the thought of necessity is radically different from the thought of permission-cum-obligation. (2) It might be objected, that the sentence “If $a$ is red and square, then $a$ must, of logical necessity, be red”, mentions neither linguistic expressions nor language users, and conse-
quently cannot mention an obligation of language of language-users to use linguistic expressions in certain ways; whereas, as we have seen, the sentence "a is red" is L-derivable from 'a is red and a is square" does both.

To answer these objections, it is sufficient to remind ourselves that there are two senses in which an utterance can be said to convey information. There is the sense in which my early morning utterance, "The sky is clear", conveys meteorological information, and there is the sense in which it conveys information about my state of mind. Let us use the term "asserts" for the first sense of "conveys", and "conveys" for the second. Then it is clear that if Carnap's theory is to hold water, it must be reformulated as the claim either (1) that the utterance ""a is L-derivable from 'a" asserts what the utterance "a necessitates a" conveys, or (2) that the utterance ""a is L-derivable from 'a" conveys what the utterance "a necessitates a" conveys.

To choose between these alternatives, it suffices to ask What does the utterance "a necessitates a" convey? Clearly it conveys (and does not assert) that the speaker conforms to the rule "'a is L-derivable from 'a", and says what he says in some sense because of the rule. In other words, the utterance conveys the existence of a rule-governed mode of behaviour in the speaker. But it is equally clear that the utterance "'a is L-derivable from 'a", being a normative utterance, does not describe the psychological mechanisms of the speaker. Consequently, "'a is L-derivable from 'a" does not assert that which is conveyed by "a necessitates a", and we are left with the second of the above alternatives.

Moreover, it also follows from considerations like these that although utterances of the term "necessary" have psychological implications which overlap with those of utterances of "ought" in the context of linguistic rules, neither the term "necessary" nor the term "ought" designates a psychological property. In short, modal terms, normative terms and psychological terms are mutually irreducible. Note also that because utterances of "a necessitates a" convey but do not assert the existence of a linguistic rule governing the use of 'φ' and 'ψ', there is no contradiction in the sentence "φ necessitates ψ even though there were no language users". Opponents of the position we are developing should be wary of saying that according to it "necessities are created by linguistic rules".

Let us now agree, and in so doing we continue in the spirit of Carnap's philosophy, that everything which can properly be called a conceptual awareness of qualities, relations, particulars or states of affairs, can be identified with the occurrence (in human beings) of symbol-events, events of which it can correctly be said that they "mean such-and-such". Included in the class of symbol-
events are events which belong to languages as social phenomena. I shall, however, for present purposes, assume that the class of symbol-events coincides with the class of linguistic events in the narrower sense. Specifically, I shall assume that concepts are meaningfully used predicates. "Necessary" and "ought", as occurring in living English usage, then, are concepts. Indeed, they would seem to be as much concepts as "red" or "longer than". Yet there is an important difference between logical, modal and normative predicates, on the one hand, and such predicates as "red" on the other. In the case of the former, it is obvious that their conceptual meaning is entirely constituted by their logical grammar, that is, by the fact that they are used in accordance with certain syntactical rules. In the case of the latter, this is not obvious—though, as we are about to argue, it is equally true.

Why is it obvious (once we escape from the mental eye) that the conceptual meaning of a modal or normative term is constituted by its logical grammar? Because it is obvious that it cannot be constituted by the term's being a learned response to a class of extra-linguistic particulars. A modal or normative property (if we permit ourselves to speak of them as such) cannot significantly be said to be exemplified by a particular (or pair of particulars). On the other hand, it does make sense to speak of a particular as an instance of red, and of a pair of particulars as an instance of longer than. It does make sense to speak of "red" as a learned response to red objects. It would therefore seem open to us to hold that the conceptual meaning of "red" is constituted (apart from its purely formal properties) by this relationship.

Now, that at least some of the descriptive predicates of a language must be learned responses to extra-linguistic objects in order for the language to be applied, is obvious. But that not even these predicates ("observation predicates") owe their conceptual meaning to this association should be reasonably clear once the following considerations are taken into account:

(1) By no means all descriptive predicates which are not themselves observation predicates are explicitly definable in terms of observation predicates. The conceptual meaning of those which are not cannot consist in being learned responses to objects of the kind they are said to mean.

(2) To say of a predicate "$\phi$" that it is an observation predicate entails that it is a learned response to extra-linguistic situations of a certain kind $K$, where $K$ is the kind of which it is correct to say "$\phi$" means $K$. But, clearly, one can grant that the successful use of language requires, for certain predicates "$\phi$", a coincidence of the kind of object
evoking the verbal response "φ" with the kind of object which "φ" is 
(correctly) said to mean, without identifying "φ" is evoked by K" 
with ""φ" means K".

(3) "(In Schmidt's language) 'rot' means red" (S₁) appears to assert an 
empirical relationship between "rot" as used by Schmidt, and the 
class of red objects. Once this is taken for granted, it is natural to in-
fer that this relationship consists in Schmidt's having learned to re-
respond to red objects with "rot". If one should then notice that "(In 
Schmidt's language, 'und' means and" (S₂) can scarcely be given the 
same interpretation, one is likely to say that S₂ concerns a different 
species of meaning, and informs us that Schmidt uses "und" in ac-
cordance with rules which are analogous to our rules for "and". Now the 
truth of the matter is that neither S₁ nor S₂ makes an empirical asser-
tion, though both convey empirical information about Schmidt's use 
of language. The "means" of semantical statements (idealized as 
"Designates" in the Pure Semantics of Carnap and Tarski) is no more 
a psychological word than is the "ought" of ethical statements or the 
"must" of modal statements, even though it is correctly used, and 
gains application through being used, to convey psychological infor-
mation about the use of language. And once we cease to be hypno-
tized by the form "red' means red" into taking for granted that the 
psychological fact (conceptual meaning) corresponding to S₁, is a 
dyadic relation between Schmidt's "rot" and red, and realize that 
since the fact in which we are interested is conveyed rather than as-
serted by S₁, so that the logical form of the latter is no guide to the 
form of the fact for which we are looking, we see that "rot" might 
well owe its conceptual meaning to Schmidt's using "rot" in ac-
cordance with rules analogous to our rules for "red".

(4) That it is fruitful to distinguish those aspects of the use of an obser-
vation predicate which relate to its application from those which re-
late to its conceptual meaning, has been obscured by a careless use of 
the term "rule". There is at first sight some plausibility in saying that 
the rules to which the expressions of a language owe their meaning 
are of two kinds, (a) syntactical rules, relating symbols to other sym-
bols, and (b) semantical rules, whereby basic descriptive terms ac-
quire extra-linguistic meaning. It takes but a moment, however, to 
show that this widespread manner of speaking is radically mistaken.
Obeying a rule entails recognizing that a circumstance is one to which the rule applies. If there were such a thing as a “semantical rule” by the adoption of which a descriptive term acquires meaning, it would presumably be of the form “red objects are to be responded to by the noise red”. But to recognize the circumstances to which this rule applies, one would already have to have the concept of red, that is, a symbol of which it can correctly be said that it “means red”.

(5) A uniformity in behaviour is rule-governed not qua uniformity, for then all habitual responses would be obeyings of rules—which is clearly not the case—but qua occurring, in a sense by no means easy to define, because of the conception of the norm enjoined by the rule. Yet the fact that both rule-governed and merely associative uniformities are learned uniformities, and differ in this respect from, say, the uniformities studied in chemistry, has blinded many philosophers to the important respects in which they differ from one another, and has led to much of the nonsense peddled under the heading “ostensive definition”.

VI

It will be remembered that at the end of section III we had arrived at the conclusion that P-rules are indispensable to any language which permits the formulation of material subjunctive conditionals, though the use of the latter may be avoided by a direct statement of the rules themselves. This, in turn, inclined us to hold that P-rules are essential to any language which contains non-logical or descriptive terms. This would eliminate all but the first two interpretations of the status of material rules of inference listed at the end of section I. If, however, the argument of section V is sound, it is the first (or “rationalistic”) alternative to which we are committed. According to it, material transformation rules determine the descriptive meaning of the expressions of a language within the framework established by its logical transformation rules. In other words, where ‘ψa’ is P-derivable from ‘φa’ (in modal language, φa necessitates ψa), it is as correct to say that ‘φa ⊨ ψa’ is true by virtue of the meanings of ‘φ’ and ‘ψ’, as it is to say this where ‘ψa’ is L-derivable from ‘φa’. In traditional language, the “content” of concepts as well as their logical “form” is determined by rules of the Understanding. The familiar notion (Kantian in its origin, but present in various disguises in many contemporary
systems) that the form of a concept is determined by 'logical rules', while the content is 'derived from experience' embodies a radical misinterpretation of the manner in which the 'manifold of sense' contributes to the shaping of the conceptual apparatus 'applied' to the manifold in the process of cognition. The contribution does not consist in providing plums for Jack Horner. There is nothing to a conceptual apparatus that isn't determined by its rules, and there is no such thing as choosing these rules to conform with antecedently apprehended universals and connexions, for the "apprehension of universals and connexions" is already the use of a conceptual frame, and as such presupposes the rules in question. The role of the given is rather to be compared to the role of the environment in the evolution of species; though it would be misleading to say that the apparent teleology whereby men "shape their concepts to conform with reality" is as illusory as the teleology of the giraffe's lengthening neck. After all, it is characteristic of modern science to produce deliberately mutant conceptual structures with which to challenge the world. For primitive thought the analogy is much less misleading.

Our thesis, in short, turns out, as we have developed it, to be quite unlike the dogmatic rationalism of Metaphysicus. For whereas he speaks of the conceptual-frame, the system of formal and material rules of inference, we recognize that there are an indefinite number of possible conceptual structures (languages) or systems of formal and material rules, each one of which can be regarded as a candidate for adoption by the animal which recognizes rules, and no one of which has an intuitable hallmark of royalty. They must compete in the market place of practice for employment by language users, and be content to be adopted haltingly and schematically. In short, we have come out with C. I. Lewis at a "pragmatic conception of the a priori". Indeed, my only major complaint concerning his brilliant analysis in Mind and the World Order, is that he speaks of the a priori as analytic, and tends to limit it to propositions involving only the more generic elements of a conceptual structure (his "categories"). As far as I can gather, Lewis uses the term "analytic" as equivalent to "depending only on the meaning of the terms involved". In this sense, of course, our a priori also is analytic. But this terminology is most unfortunate, since in a perfectly familiar sense of "synthetic", some a priori propositions (including many that Lewis recognizes) are synthetic and hence not analytic (in the corresponding sense of "analytic"). That Lewis does not recognize this is in part attributable to his ill-chosen terminology. It is also undoubtedly due to the fact that in empirically-minded circles it is axiomatic that there is no synthetic a priori, while the very expression itself has a strong negative emotive meaning. Whether or not it is possible to rescue this
expression from its unfortunate associations I do not know. I am convinced, however, that much of the current nibbling at the distinction between analytic and synthetic propositions is motivated by what I can only interpret as a desire to recognize the existence of synthetic a priori propositions while avoiding the contumely which the language traditionally appropriate to such a position would provoke.
1. It seems plausible to say that a language is a system of expressions the use of which is subject to certain rules. It would seem, thus, that learning to use a language is learning to obey the rules for the use of its expressions. However, taken as it stands, this thesis is subject to an obvious and devastating refutation. After formulating this refutation, I shall turn to the constructive task of attempting to restate the thesis in a way which avoids it. In doing so, I shall draw certain distinctions the theoretical elaboration of which will, I believe, yield new insight into the psychology of language and of what might be called "norm conforming behavior" generally. The present paper contains an initial attempt along these lines.

2. The refutation runs as follows:

**Thesis.** Learning to use a language (L) is learning to obey the rules of L.

*But,* a rule which enjoins the doing of an action (A) is a sentence in a language which contains an expression for A.

Hence, a rule which enjoins the using of a linguistic expression (E) is a sentence in a language which contains an expression for E,—in other words a sentence in a metalanguage.

Consequently, learning to obey the rules for L presupposes the ability to use the metalanguage (ML) in which the rules for L are formulated.

So that learning to use a language (L) presupposes having learned to use a language (ML). And by the same token, having learned to use ML presupposes having learned to use a *meta*-metalanguage (MML) and so on.
But this is impossible (a vicious regress).

Therefore, the thesis is absurd and must be rejected.

3. Now, at first sight there is a simple and straightforward way of preserving the essential claim of the thesis while freeing it from the refutation. It consists in substituting the phrase ‘learning to conform to the rules . . . ’ for ‘learning to obey the rules . . . ’ where ‘conforming to a rule enjoining the doing of A in circumstances C’ is to be equated simply with ‘doing A when the circumstances are C’—regardless of how one comes to do it. (It is granted that ‘conforming to’ is often used in the sense of ‘obeying’ so that this distinction involves an element of stipulation.) A person who has the habit of doing A in C would then be conforming to the above rule even though the idea that he was to do A in C had never occurred to him, and even though he had no language for referring to either A or C.

4. The approach we are considering, after proposing the above definition of ‘conforming to a rule’, argues that whereas obeying rules involves using the language in which the rules are formulated, conforming to rules does not, so that whereas the thesis put in terms of obeying rules leads to a vicious regress, it ceases to do so once the above substitution is made. Learning to use a language (L) no longer entails having learned to use the metalanguage (ML) nor does learning ML entail having learned MML, and so on. Of course, once one has learned ML one may come to obey the rules for L to which one hitherto merely conformed, and similarly in the case of the rules for ML, and so on.

5. After all, it could be argued, there are many modes of human activity for which there are rules (let us stretch the word ‘game’ to cover them all) and yet in which people participate (play) without being able to formulate the rules to which they conform in so doing. Should we not conclude that playing these games is a matter of doing A when the circumstances are C, doing A’ when the circumstances are C’, etc., and that the ability to formulate and obey the rules, although it may be a necessary condition of playing “in a critical and self-conscious manner”, cannot be essential to playing tout court. It would be granted, of course, that the formulation and promulgation of rules for a game is often an indispensable factor in bringing it about that the game is played. What is denied is that playing a game logically involves obedience to the rules of the game, and hence the ability to use the language (play the language game) in which the rules are formulated. For it was this idea which led to the refutation of an otherwise convincing thesis with respect to the learning to use a language. One can suppose that the existence of Canasta players can be traced to the fact that certain people formulated and promulgated the
rules of this game. But one cannot suppose that the existence of language speakers can be traced to the fact that certain Urmenschen formulated and promulgated the rules of a language game.

6. What are we to make of this line of thought? The temptation is to say that while the proposed revision of the original thesis does, indeed, avoid the refutation, it does so at too great a cost. Is conforming to rules, in the sense defined, an adequate account of playing a game? Surely the rules of a game are not so "externally related" to the game that it is logically possible to play the game without "having the rules in mind!" Or, again, surely one is not making a move in a game (however uncritically and unselfconsciously) unless one is making it as a move in the game, and does this not involve that the game be somehow "present to mind" in each move? And what is the game but the rules? So must not the rules be present to mind when we play the game? These questions are both searching and inevitable, and yet an affirmative answer would seem to put us back where we started.

7. It may prove helpful, in our extremity, to note what Metaphysicus has to say. As a matter of fact, he promises a way out of our difficulty which combines the claim that one isn't playing a game—even a language game—even if he is obeying (not just conforming to) its rules, with the claim that one may obey a rule without being able to use the language—play the language game—in which its rules are formulated. To do this he distinguishes between the verbal formulation of a rule, and the rule itself as the meaning of the verbal formula. He compares the relation of rules to rule sentences with that of propositions to factual sentences. Whether as Platonist he gives rules an "objective" status, or as Conceptualist he makes their esse dependent on concepi, he argues that they are entities of which the mind can take account before it is able to give them a clothing. Thus, Metaphysicus distinguishes between the rule sentences, 'Faites A en C!' 'Tu A en C !' (and 'Do A in C!') and the common rule to which they give expression, Do A in C! (Rules need not be formulated as imperatives; they can also be phrased as indicative "ought"-sentences. But the former is more convenient for our present purposes.) He continues by proposing to represent these rules by the form D (doing A in C), where this indicates that the doing of A in C has the "demanded" character which makes it a rule to do A in C.

8. Having developed this account of rules, Metaphysicus proceeds to argue that to learn a game is to become aware of a structure of demands (which may or may not have found expression in a language) and to become able to realize these demands and motivated to do so. With respect to the latter point, he argues that to play a game is to be moved to do what one does, at least in part,
to satisfy these demands. A person whose motivation in “playing a game” is merely to realize some purpose external to the game (as when one “plays golf” with the company president) would correctly be said to be merely going through the motions! Thus as Metaphysicus sees it, to learn to play a game involves:

(a) becoming aware of a set of demands and permissions, \(D (A \text{ in } C), P (A' \text{ in } C')\) etc.,

(b) acquiring the ability to do A in C, A' in C', etc.,

(c) becoming intrinsically motivated to do them as demanded (for the reason that they are demanded) by the rules of the game.

9. Without pausing to follow Metaphysicus in his elaboration of this scheme, let us turn directly to its application to the problem at hand. To learn to use a language—play a language game—is, on this account, to become aware of a set of demands concerning the manipulation of symbols, to acquire the ability to perform these manipulations, and to become motivated to do them as being demanded. Since, Metaphysicus insists, the awareness of these demands does not presuppose the use of verbal formulae, one can learn to obey the set of demands for a language \(L\) without having had to learn the metalanguage (ML) in which these demands would properly be formulated. Thus, he concludes, our problem has been solved.

10. Unfortunately, a closer examination of this “solution” reveals it to be a sham. More precisely, it turns out, on analysis, to be in all respects identical with the original thesis, and to be subject to the same refutation. The issue turns on what is to be understood by the term ‘awareness’ in the phrase ‘becoming aware of a set of demands and permissions’. It is clear that if Metaphysicus is to succeed, becoming aware of something cannot be to make a move in a game; for then learning a game would involve playing a game, and we are off on our regress. Yet when we reflect on the notion of being aware of propositions, properties, relations, demands, etc., it strikes us at once that these awarenesses are exactly positions in the “game” of reasoning. It may be an over-simplification to identify reasoning, thinking, being aware of possibilities, connections, etc., with playing a language game (e.g. French, German), but that it is playing a game is indicated by the use of such terms as ‘correct’, ‘mistake’, etc., in commenting on them.

11. But while the attempt of Metaphysicus to solve our problem has proved to be a blind alley, it nevertheless points the way to a solution. To appreciate this it is necessary only to ask “What was it about the proposal of
Metaphysicus which seemed to promise a solution? and to answer in a way which separates the wheat from the chaff. Surely the answer is that Metaphysicus sought to offer us an account in which learning a game involves learning to do what one does because doing these things is making moves in the game (let us abbreviate this to 'because of the moves (of the game)') where doing what one does because of the moves need not involve using language about the moves. Where he went astray was in holding that while doing what one does because of the moves need not involve using language about the moves, it does involve being aware of the moves demanded and permitted by the game, for it was this which led to the regress.

12. But how could one come to make a series of moves because of the system of moves demanded and permitted by the rules of a game, unless by virtue of the fact that one made one's moves in the light of these demands and permissions, reasoned one's moves in terms of their place in the game as a whole? Is there then no way of denying that one is playing a game if one is merely conforming to its rules, of insisting that playing a game involves doing what one does because doing it is making a move in the game, which does not lead to paradox? Fortunately, no sooner is the matter thus bluntly put, then we begin to see what is wrong. For it becomes clear that we have tacitly accepted a dichotomy between

(a) merely conforming to rules: doing A in C, A' in C' etc. where these doings “just happen” to contribute to the realization of a complex pattern.

(b) obeying rules: doing A in C, A' in C' etc., with the intention of fulfilling the demands of an envisaged system of rules.

But surely this is a false dichotomy! For it required us to suppose that the only way in which a complex system of activity can be involved in the explanation of the occurrence of a particular act, is by the agent envisaging the system and intending its realization. This is as much as to say that unless the agent conceives of the system, the conformity of his behavior to the system must be “accidental”. Of course, in one sense of the term it would be accidental, for on one usage, ‘accidental’ means unintended. But in another sense, ‘accidental’ is the opposite of ‘necessary’, and there can surely be an unintended relation of an act to a system of acts, which is nevertheless a necessary relation—a relation of such a kind that it is appropriate to say that the act occurred because of the place of that kind of act in the system.

13. Let me use a familiar analogy to make my point. In interpreting the phenomena of evolution, it is quite proper to say that the sequence of species
living in the various environments on the earth's surface took the form it did
because this sequence maintained and improved a biological rapport between
species and environment. It is quite clear, however, that saying this does not
commit us to the idea that some mind or other envisaged this biological rap-
port and intended its realization. It is equally clear that to deny that the steps
in the process were intended to maintain and improve a biological rapport, is
not to commit oneself to the rejection of the idea that these steps occurred
because of the system of biological relations which they made possible. It
would be improper to say that the steps "just happened" to fit into a broad
scheme of continuous adaptation to the environment. Given the occurrence
of mutations and the facts of heredity, we can translate the statement that
evolutionary phenomena occur because of the biological rapport they make
possible—a statement which appears to attribute a causal force to an abstrac-
tion, and consequently tempts us to introduce a mind or minds to envisage
the abstraction and be the vehicle of its causality—into a statement concern-
ing the consequences to particular organisms and hence to their hereditary
lines, of standing or not standing in relations of these kinds to their environ-
ments.

14. Let me give another example somewhat more closely related to our
problem. What would it mean to say of a bee returning from a clover field
that its turnings and wiggings occur because they are part of a complex
dance? Would this commit us to the idea that the bee envisages the dance and
acts as it does by virtue of intending to realize the dance? If we reject this idea,
must we refuse to say that the dance pattern as a whole is involved in the oc-
currence of each wiggle and turn? Clearly not. It is open to us to give an evo-
lutionary account of the phenomena of the dance, and hence to interpret the
statement that this wiggle occurred because of the complex dance to which it
belongs—which appears, as before, to attribute causal force to an abstraction,
and hence tempts us to draw upon the mentalistic language of intention and
purpose—in terms of the survival value to groups of bees of these forms of
behavior. In this interpretation, the dance pattern comes in not as an abstrac-
tion, but as exemplified by the behavior of particular bees.

15. Roughly, the interpretation would contain such sentences as the fol-
lowing:

(a) The pattern (dance) is first exemplified by particular bees in a way
which is not appropriately described by saying that the successive acts
by which the pattern is realized occur because of the pattern.

(b) Having a "wiring diagram" which expresses itself in this pattern has
survival value.
(c) Through the mechanisms of heredity and natural selection it comes about that all bees have this "wiring diagram".

It is by a mention of these items that we would justify saying of the contemporary population of bees that each step in their dance behavior occurs because of its role in the dance as a whole.

16. Now, the phenomena of learning present interesting analogies to the evolution of species. (Indeed, it might be interesting to use evolutionary theory as a model, by regarding a single organism as a series of organisms of shorter temporal span, each inheriting disposition to behave from its predecessor, with new behavioral tendencies playing the role of mutations, and the "law of effect" the role of natural selection.) For our purposes it is sufficient to note that when the learning to use a language is viewed against the above background, we readily see the general lines of an account which permits us to say that learning to use a language is coming to do $A$ in $C$, $A'$ in $C'$, etc., because of a system of "moves" to which these acts belong, while yet denying that learning to use a language is coming to do $A$ in $C$, $A'$ in $C'$, etc., with the intention of realizing a system of moves. In short, what we need is a distinction between 'pattern governed' and 'rule obeying' behavior, the latter being a more complex phenomenon which involves, but is not to be identified with the former. Rule obeying behavior contains, in some sense, both a game and a metagame, the latter being the game in which belong the rules obeyed in playing the former game as a piece of rule obeying behavior.

17. To learn pattern governed behavior is to become conditioned to arrange perceptible elements into patterns and to form these, in turn, into more complex patterns and sequences of patterns. Presumably, such learning is capable of explanation in S-R-reinforcement terms, the organism coming to respond to patterns as wholes through being (among other things) rewarded when it completes gappy instances of these patterns. Pattern governed behavior of the kind we should call "linguistic" involves "positions" and "moves" of the sort that would be specified by "formation" and "transformation" rules in its meta-game if it were rule obeying behavior. Thus, learning to "infer", where this is purely a pattern governed phenomenon, would be a matter of learning to respond to a pattern of one kind by forming another pattern related to it in one of the characteristic ways specified (at the level of the rule obeying use of language) by a 'transformation rule'—that is, a formally stated rule of inference.

18. It is not my aim, even if I were able, to present a detailed psychological account of how an organism might come to learn pattern governed behavior.
I shall have achieved my present purpose if I have made plausible the idea than an organism might come to play a language game—that is, to move from position to position in a system of moves and positions, and to do it “because of the system” without having to obey rules, and hence without having to be playing a metalanguage game (and a meta-metalanguage game, and so on).

19. I pointed out above that the moves in a language game as pattern governed behavior are exactly the moves which, if the game were played in a rule obeying manner, would be made in the course of obeying formation and transformation rules formulated in a metalanguage game. If we now go on to ask “under what circumstances does an organism which has learned a language game come to behave in a way which constitutes being at a position in the game?” the answer is clearly that there are at least two such circumstances. In the first place, one can obviously be at a position by virtue of having moved there from another position (inference). Yet not all cases of being at a position can arise out of moving there from a prior position. A glance at chess will be instructive. Here we notice that the game involves an initial position, a position which one can be at without having moved to it. Shall we say that language games involve such positions? Indeed, it occurs to us, are not observation sentences exactly such positions? Surely they are positions in the language game which one occupies without having moved there from other positions in the language.

20. No sooner have we said this, however, than we note a significant difference between the observation sentences of a language and the initial position of chess. It does not belong to chess to specify the circumstances in which the initial position is to be “set up”. On the other hand, it does seem to belong to English that one set up the position “this is red” when one has a certain visual sensation. In short, the transition from the sensation to being at the position “This is red” seems to be a part of English in a sense in which no transition to the initial position of chess belongs to chess. For that matter, as we shall see, the transition from being at the position “Sellars, do A!” or “Sellars, you ought to do A!” to my doing A (given that certain other conditions obtain which I shall not attempt to specify), seems to be a part of English in a sense in which no transition from the final or “check mate” position belongs to chess.

21. Reflection on these facts might tempt us to say that the transition from having a certain visual sensation to occupying the position “This is red” is a move in English. Yet, no sooner do we try this than we see that it won’t do. For while the transition does indeed belong to English, it would be a mistake to classify it with moves in English, (and hence to classify the sensation itself as a
position in English) without explicitly recognizing the significant respects in which they differ from the moves and positions we have been considering under these names. To occupy a position in a language is to think, judge, assert that so-and-so; to make a move in a language is to infer from so-and-so, that so-and-so. And although sensations do have status in the English language game, their role in bringing about the occupation of an observation sentence position is not that of a thought serving as a premise in an inference.

22. Let us distinguish, therefore, between two kinds of learned transition which have status in a language game: (1) moves, (2) transitions involving a situation which is not a position in the game and a situation which is a position in the game. Moves are transitions (S-R connections) in which both the stimulus (S) and the response (R) are positions in the game functioning as such. Let us represent them by the schema '(S-R)s'. The second category subdivides into two subcategories: (2.1) language entry transitions, as we shall call those learned transitions (S-R connections) in which one comes to occupy a position in the game (R is a position in the game functioning as such) but the terminus a quo of the transition is not (S is not a position in the game functioning as such). Let us represent these by the schema 'S-(R)s'. The language entry transitions we have particularly in mind (observation sentences) are those which satisfy the additional requirement that S would be said to be "meant by" R.

Example: When Jacques' retina is stimulated by light coming from an orange pencil, he says 'ce crayon est orange'—from which he may move to 'ce crayon a une couleur entre rouge et jaune'.

23. Turning now to the second subcategory (2.2) we shall call language departure transitions these learned transitions (S-R connections) in which from occupying a position in the game (S is a position in the game functioning as such) we come to behave in a way which is not a position in the game (R is not a position in the game functioning as such). Let us represent these by the schema '(S)s-R'. The language departure transitions we have particularly in mind are those which involve the additional requirement that R would be said to be "meant by" S.

Example: When Jacques says to himself 'Je dois lever la main' he raises his hand.

24. Notice that an item of kind K may function in one kind of context as a position in a game, and in another kind of context not. Thus, in the usual context the noise red may be responded to as the word 'red', but a singing in-
structor may respond to the same noise as a badly produced note. It may indeed function for him as a language entry stimulus taking him to the position "This is a flat note". Thus we have

\[(\text{K-R})^8\]

\[(\text{K-}(\text{R}))^8\]

25. In 19 it was claimed that there are at least two ways of properly coming to be at a position in a language game. Two ways were thereupon discussed which can be indicated by the words 'observation' and 'inference'. There is, however, a third way of properly coming to be at a position. Here one comes to be at certain positions without having moved to them from other positions (in which position it resembles observation), and without having made a language entry transition (in which respect it resembles inference). The positions in question are "free" positions which can properly be occupied at any time if there is any point to doing so. Obviously what I have in mind are the sentences the status of which, when used in a rule obeying manner, is specified as that of "primitive sentence" (i.e. as unconditionally assertable) by a rule in the metalanguage. (Thus, 'All A is B' might be specified as a primitive sentence of language game L). Are such sentences properly called positions? Their "free" status and their "catalytic" function make them a class apart, yet it is less misleading to call them positions than it would be to call sensations functioning in observation positions. Let us call them "auxiliary positions".

26. We now notice that a language game which contains the auxiliary position 'All A is B' provides the move from 'This is A and All A is B' to 'It is B' as a special case of syllogistic move. An alternative way of going from 'This is A' to 'It is B' would exist if the game included a direct move from positions of the form '... is A' to positions of the form '... is B'. We thus notice a certain equivalence between auxiliary positions and moves. We also notice that while it is conceivable that a language game might dispense with auxiliary positions altogether, though at the expense of multiplying moves, it is not conceivable that moves be completely dispensed with in favor of auxiliary positions. A game without moves is *Hamlet* without the prince of Denmark indeed!

27. Now, if a language game contains the auxiliary position 'All A is B' we can imagine that the fact that this sentence is an auxiliary position might come to be signalized. Such a signal might be the pattern 'necessarily', thus 'All A is (necessarily) B'. And we can imagine that the same signal might come to be used where a sentence corresponds to a move as 'All C is D' corresponds to the move from positions of the form '... is C' to positions of the form '... is D'. Indeed, it is sufficient for my present purposes to suggest that these signals
might develop into the pieces, positions and moves characteristic of modal discourse, so that, in spite of the interesting relations which exist in sophisticated discourse between modal talk “in the object language” and rule talk “in the metalanguage,” modal talk might well exist at the level of pattern governed (as contrasted with rule obeying) linguistic behavior. Nevertheless, as we shall see, the full flavor of actual modal discourse involves the way in which sentences in the first level language game containing modal words parallel sentences containing rule words (‘may’, ‘ought’, ‘permitted’, etc.) in the syntactical metalanguage. This parallelism is quite intelligible once one notes that the moves which are signalized in the object language by sentences containing modal words, are enjoined (permitted, etc.) by sentences containing rule words in the syntactical metalanguage.

28. Now the moves (inferences) and the auxiliary positions (primitive sentences) of a language can be classified under two headings. They are either analytic or synthetic, or, as I prefer, in view of the ambiguity of these terms in contemporary philosophical discussion, either formal or material. This distinction is that which appears at the level of logical criticism as that between arguments and primitive sentences the validity of which does not depend on the particular predicates they contain (thus, perhaps, ‘This is red therefore it is not non-red’ and ‘All men are men’) on the one hand, and arguments and primitive sentences the validity of which does so depend (thus, perhaps, ‘Here is smoke therefore here is fire’ and ‘All colors are extended’) on the other.

29. Now to say that it is a law of nature that all A is B is, in effect, to say that we may infer ‘x is B’ from ‘x is A’ (a materially valid inference which is not to be confused with the formally valid inference from ‘All A is B and x is A’ to ‘x is B’). To this, however, we must at once add a most important qualification. Obviously, if I learn that in a certain language I may make a material move from ‘x is C’ to ‘x is D’, I do not properly conclude that all C is D. Clearly, the language in question must be the language I myself use, in order for me to assert ‘All C is D’. But with this qualification, we may say that it is by virtue of its material moves (or, which comes to the same thing, its material auxiliary positions) that a language embodies a consciousness of the lawfulness of things.1

30. It is high time we paused to pay our respects to a question the raising of which even the most friendly of readers has undoubtedly felt to be long overdue. It is all very well, the question has it, to speak of a language as a game

1. For a further discussion of the concept of a law of nature, with particular attention to the “problem of induction,” i.e. the problem of justifying the adoption of a material move or material auxiliary position into our language, see below, sections 57–72.
with pieces, positions and moves; this is doubtless both true and fruitful as far as it goes. But must we not at some stage recognize that the "positions" in a language have meaning, and differ in this key respect from positions we actually call games in a nonmetaphorical sense? Was it not claimed (in 22) that to say of a position of the form 'Das ist rot' in the German language that it is an observation position is to say that a language entry transition has been made to it from a situation of the kind meant by 'rot'? Must we not admit, then, that in describing a language game, we must not only mention its elements, positions and moves, but must also mention what its expressions mean?

31. A full discussion of this question is beyond the scope of this paper, but the main lines of the answer can be set down briefly. (For a more complete discussion, the reader is referred to my paper "A Semantical Solution of the Mind-Body Problem," Methodos, 1953.) It is, of course, quite correct to say of the German expression 'es regnet' that it means it is raining. And it is quite true that in saying this of 'es regnet', one is not saying that the pattern 'es regnet' plays a certain role in the pattern governed behavior to be found behind the Rhine. But it would be a mistake to infer from these facts that these-mentical statement "es regnet' means it is raining' gives information about the German use of 'Es regnet' which would supplement a description of the role it plays in the German language game, making a complete description of what could otherwise be a partial account of the properties and relations of 'Es regnet' as a meaningful German word. To say that "rot' means red' is not to describe 'rot' as standing "in the meaning relation" to an entity red; it is to use a recognized device (the semantical language game) for bringing home to a user of 'red' how Germans use 'rot'. It conveys no information which could not be formulated in terms of the pieces, positions, moves, and transitions (entry and departure) of the German language game.

32. But if the charge that our conception of language as a game is "overly syntactical" because it neglects the "semantical dimension of meaning" can be overcome by a proper analysis of the nature and function of the rubric "... means-"; there remains the more penetrating accusation of the pragmatist. He argues that to conceive of a language as a game in which linguistic counters are manipulated according to a certain syntax, is to run the danger of overlooking an essential feature of languages—that they enable language users to find their way around in the world, and satisfy their needs.

33. And if we were to point out that we had already made a gesture in this direction by recognizing language entry and language departure transitions as parts of the game, he would doubtless reply that it is not a sufficient account of the connection between language and living in a world to recognize that
people respond to red objects with ‘I see red’ and (given hunger) to ‘this is an edible object’ by eating. After all, we are not always in the presence of edible objects, and is not language (in our broad sense in which ‘language’ is equivalent to ‘conceptual structure’) the instrument which enables us to go from this which we see to that which we can eat? When all is said and done, should we not join the pragmatist in saying that in any nontrivial sense of this term, the “meaning” of a term lies in its role as an instrument in the organism’s transactions with its environment?

34. Now I would argue that Pragmatism, with its stress on language (or the conceptual) as an instrument, has had hold of a most important insight—an insight, however, which the pragmatist has tended to misconceive as an analysis of ‘means’ and ‘is true’. For it is a category mistake (in Ryle’s useful terminology) to offer a definition of ‘S means p’ or ‘S is true’ in terms of the role of S as an instrument in problem solving behavior. On the other hand, if the pragmatist’s claim is reformulated as the thesis that the language we use has a much more intimate connection with conduct than we have yet suggested, and that this connection is intrinsic to its structure as language, rather than a “use” to which it “happens” to be put, then Pragmatism assumes its proper stature as a revolutionary step in Western Philosophy.

35. One pillar on which the conduct guiding role of language rests is, of course, its character as embodying convictions as to the ways of things. It was pointed out above that our understanding of the laws of nature resides in what we have called the material moves (inferences) of our language, that is to say, those moves whereby we go from one sentence to another which is not a logically analytic consequence of it. It is by virtue of such a move that we go, let us suppose, from the sentence ‘Here is smoke’ to ‘Nearby is fire’. But the linguistic move from ‘Here is smoke’ to ‘Nearby is fire’ doesn’t get us from the smoke to the fire, and if such moves were all we had in the way of linguistic moves, language would not be an instrument for action. Putting the point bluntly, an organism which “knew the laws of nature” might be able to move around in the world, but it couldn’t move around in the light of its knowledge (i.e., act intelligently) unless it used a language relating to conduct, which tied in with its assertions and inferences relating to matters of fact. Action can be guided by language (thought) only in so far as language contains as an integral part a sublanguage built around action words, words for various kinds of doing.

36. This is not the occasion for a detailed discussion of the “logic” of action words. What is important for our present purposes is that the linguistic move from ‘Here is smoke’ to ‘Yonder is fire’ can guide conduct only because
there are also such moves as that from ‘Yonder is fire’ to ‘Going yonder is going to fire’. Of course, it is per accidens that going yonder is, on a particular occasion, going to fire. On the other hand, there are “essential” relations among actions. Thus, one action may be analytically a part of another action. And if we take both relationships into account, we see that one action may be per accidens a part of another action, by being per accidens an action which is a part of that action. Thus, actions which are motions of the agent’s body (e.g., waving the hand) can be per accidens parts of actions the successful accomplishment of which involves goings on which are not motions of the agent’s body (e.g., paying a debt). Indeed, there could be no performance of actions of the latter type unless there were “basic actions,” actions which are motions of the agent’s body to be, per accidens, parts of them.

37. We shall round off the above remarks on the relation of thinking to doing after we have further explored the doing involved in thinking. Let us get this exploration under way by turning our attention to rule obeying behavior.

38. Let us now turn our attention to rule obeying behavior. We have already noted that it involves a distinction between game and metagame, the former, or “object game” being played according to certain rules which themselves are positions in the metagame. Furthermore, we have emphasized that in an object game played as rule obeying behavior, not only do the moves exemplify positions specified by the rules (for this is also true of mere pattern governed behavior where even though a rule exists the playing organism has not learned to play it) but also the rules themselves are engaged in the genesis of the moves. The moves occur (in part, and in a sense demanding analysis) because of the rules.

39. Fortunately, our discussion of language games has put us in a position to clarify the manner in which rules are involved in rule obeying behavior. To begin with, we note that typically a rule sentence enjoins that such and such be done in such and such circumstances. (Of course, not all sentences in a rule language do this; ‘one may do A in C’ is also a sentence in the language of rules.) Thus, rules contain words for mentioning circumstances and for enjoining actions. In the latter respect they contain action words (‘hit’, ‘place’, ‘run’) in contexts such as ‘...!’ or ‘... ought to...’.

40. Now since the games in which rules occur are language games, it occurs to us that the categories of language entry and language departure transitions may throw light on the nature of rule obeying behavior. Thus, we might start by trying the following formulations. Words which mention the positions of a game (position words) are, we might say, the “observation words” of a rule language. In addition to their syntactical role in the rule language,
they occur in sentences which come to be occupied as the result of a language entry transition into the rule language, in which transition the stimulus is a situation of the kind meant by the position words. "Action enjoining contexts" on the other hand are the "motivating expressions" of the rule language. In addition to their syntactical role in the rule language, they occur in sentences the occupying of which is the stimulus for a language departure transition out of the rule language to a response which is (remember that both 'observation sentence' and 'motivating expression' are success words [Ryle]) an action of the kind mentioned in the motivating context. Thus we might give as an example:

Example: I am looking at a chessboard set up in a certain way. This acts as stimulus for the language entry transition into the rule language position '... and my king is checked by his bishop'. I then make the move in the rule language via the auxiliary position 'If one's king is checked by a bishop interpose a pawn!' (needless to say, I am taking liberties with the game) or '... one is to interpose a pawn' or '... one should interpose a pawn' to 'Sellars, interpose a pawn!' (or correspondingly on the alternative formulations of the auxiliary sentence). The latter is a motivating position in the rule language, and I make the language departure transition from the rule language to the action (in the chess game) of interposing a pawn.

41. Instead of commenting directly on the above line of thought, I shall beat about the neighboring bushes. In the first place attention must be called to the differences between

'bishop' and 'piece of wood of such and such shape'  
'My bishop is checking his king' and 'There is an open diagonal space between this white piece of wood and that red piece of wood'  
'Interpose a pawn!' and 'Place this piece of wood between those two!'  

Clearly the expressions on the left hand side belong to the rule language of chess. And clearly the ability to respond to an object of a certain size and shape as a bishop (note that to say of Jones that he responds to $x$ as a $\phi$, at least in this kind of context, implies that his response contains a mention of $\phi$, that is, an element which means $\phi$). Thus, when I say of Schmidt that he responds to this piece of wood as a bishop, I am implying that his response contains an
element which means bishop. This element is, presumably, the German word 'Bischof'.) presupposes the ability to respond to it as an object of that size and shape. But it should not be inferred that 'bishop' is "shorthand" for 'wood of such and such size and shape' or even for 'object of such and such size and shape used in chess'. 'Bishop' is a counter in the rule language game and participates in linguistic moves in which the first of the two longer expressions does not, while the second of the longer expressions is a description which, whatever its other shortcomings, presupposes the language of chess rules, and can scarcely be a definition of 'bishop' as a term belonging to it. Nor should it be supposed that to respond to a situation as a bishop checking a king, is to respond to it first by an observation sentence not belonging to the rule language—thus, 'this is such and such a piece of wood thus and so situated with respect to another piece of wood'—and then to respond to this sentence in turn by a language entry transition into the rule language. For this would make the word 'bishop' a metalinguistic word (it is, of course, a metagame word) which mentions the words 'such and such a piece of wood' and not the piece of wood itself. For the language entry transition category to be relevant at all, 'this is a bishop checking a king' must be a response to a chessboard arrangement, and not to words describing the arrangement.

42. If we are to use the "language entry transition" category, we must say that having acquired the ability to respond to a chessboard arrangement as objects of such and such shapes in such and such arrangements, we then learn to respond to the same situation by a game entry transition into the rule language of chess. Similarly in the case of the "move" words as well as the "piece" and "position" words. Thus I might learn to respond to the move-enjoining sentence 'Sellars, advance your king's pawn!' as I would to 'Sellars, shove this piece of wood two squares forward!'.

43. But while this might be the description of learning to apply the rule language game (given that I have learned the moves within the rule language game—its syntax) it would make the connection between expressions such as 'bishop', 'check', etc., in chess language and the expressions in everyday language which we use to describe pieces of wood, shapes, sizes and arrangements much more "external" than we think it to be. For surely it is more plausible to suppose that the piece, position, and move words of chess are, in the process of learning chess language, built onto everyday language by moves relating, for example, 'x is a bishop' to 'x is a  A-shaped piece of wood', or by means of auxiliary sentences, for example, 'x is a bishop if and only if x is a  A-shaped piece of wood'. In other words, chess words gain "descriptive meaning" by virtue of syntactical relations to "everyday" words.

44. Yet these syntactical relations do not give a complete interchange abil-
ity to, for example, ‘x is a bishop’ and ‘x is a 4-shaped piece of wood’ for the former has a syntax in chess language which the latter does not—a syntax by which it is related to action-enjoining contexts, and hence, it may be, to such normative words as ‘ought’, ‘permitted’, ‘may’, etc., with their characteristic grammar, or to imperative devices the logical syntax of which has been given less attention by philosophers (but see Hector Castaneda’s unpublished thesis on this subject). To be sure, we could say that non-chess words correlated with chess words acquire normative meaning by virtue of these syntactical relations with chess words having normative meaning. But one of the consequences of having a special chess language is that it is only when we are in the “chess playing frame of mind” that these syntactical connections become operative. Non-chess words do have a chess meaning, but only in chess playing contexts, when the system of learned habits with respect to chess moves and chess language moves is mobilized and called into play. Notice also that the language of chess, by virtue of its special vocabulary, has a certain autonomy with respect to the everyday language in which it becomes embedded. Thus, “piece” words might be syntactically related to expressions mentioning various shapes of wood in New York, and to expressions mentioning different makes of cars in Texas—pawns being Fords, the king a Cadillac, squares counties—and yet the game be “the same.”

45. If we apply these considerations to the case of those rule languages which are syntactical metalanguages, we get something like the following: A syntactical metalanguage (ML) is a rule language the entry into which is from situations which are positions in the game for which it is the rules (OL), and the departure from which is the being motivated (by motivating contexts in ML) to make moves in OL. Thus it contains expressions for situations and moves in the OL game, as well as rule sentences involving these expressions. Now, we might be inclined to represent this as in diagram (A). But this clearly won’t do as it stands. An arrow going from the expression meaning the word ‘red’ as a pattern in OL to the expression meaning the word “red” as a pattern in ML can scarcely have the same sense as an arrow going from the expression referring to a particular red patch to the expression meaning the word ‘red’ as a pattern in OL (where it stands for the language entry transition). Thus, even though there is a relationship between OL and ML which would properly be represented by something like the above diagram, some modifications must be introduced.

46. To build a more adequate representation, we must first note that just as chess language contains the word 'bishop' which is correlated (in different ways) with (a) \( \mathcal{A} \)-shaped pieces wood, and (b) the expression '\( \mathcal{A} \)-shaped piece of wood', without itself containing either wood of any shape or the word 'wood'—so a syntactical ML can contain an expression appropriately correlated with (a) the sound \( \text{redd} \) as used in OL game playing contexts, and (b) the expression 'the sound \( \text{redd} \)' without itself containing either the sound \( \text{redd} \) or the word 'redd'. Thus, the ML expression meaning the word 'red' might be '\( \alpha \)'. This expression would be a point of entry into ML, as 'bishop' is a point of entry into chess language.\(^3\)

\(^3\) Just as the term “bishop”, which occurs in the language of both Texas and ordinary chess, can be correctly said to have a common meaning—indeed, to mean the bishop role, embodied in the one case by pieces of wood, and in the other by, say, Chevrolets, and which Frenchmen would refer to as \( \text{le rôle de l'évêque} \)—so “\( \alpha \)" on the above assumptions, can correctly be said to mean a certain linguistic role, a role which is embodied in different linguistic materials,—in English by the sound \( \text{redd} \), and in German by the sound \( \text{roat} \). For a discussion of linguistic roles thus conceived, see my “Quotation Marks, Sentences and Propositions,” *Philosophy and Phenomenological Research*, 10, 1950, pp. 515–525; also “The Identity of Linguistic Expressions and the Paradox of Analysis,” *Philosophical Studies*, 1, 1950, pp. 24–31.
Non-chess Language

're-arrangement $R_a$ of pieces
of wood on 64-squared board'

'a shaped-and-colored piece of wood in structure $S_c$ of pieces of wood'

Chess

White Bishop in set-up $K_d$

Move $M_b$

White Bishop in set-up $K_c$

*a more realistically: 'Move $M_b$! or ... or Move $M_n$!'

Diagram B

Object-Language:

'following abra with dabra'

'dabra'

(the sound dabbra as a counter in OL meaning the sound ekstended)

'abra'

(the sound abbra as a counter in OL meaning the sound redd)

'extended'

(the sound ekstended as a counter in OL meaning spread-out-ness)

Metalanguage:

'Move $M_i$!'

'a'

World of Fact:

a case of the sound redd
in OL playing context

a case of the sound ekstended in OL playing context

Key

inter-game move

intra-game move

is exemplified by

language entry

language departure

Diagram C
tical move with the non-chess expression ‘a\textsuperscript{a}-shaped piece of wood’—though not in Texas—and is also correlated with a\textsuperscript{a}-shaped pieces of wood (in chess playing contexts) in a language entry transition (the a\textsuperscript{a}-shaped pieces of wood are seen as bishops). A parallel situation obtains in the case of the syntactical metalanguage we are considering. Suppose that the OL word for the sound red\textsuperscript{d} is ‘abra’, then we may diagram the chess language and metalanguage cases as in diagrams (B) and (C).

47. Notice that the non-rule language in which the positions and moves are specified by the rule language ML, is identical with (it need only be translatable into, as when Germans brood meta-linguistically about English) OL, the game for which ML is the rule game, whereas in the case of chess, the non-chess language in which pieces of wood are described is obviously not identical with the game of chess, the game for which chess language is the rule game. We must beware of putting this by saying that ML is part of the language game for which it is the rules. We can however say that just as chess language is built onto non-chess language to make a more inclusive language game, so syntactical language is built onto nonsyntactical language to make a more inclusive language game. That the inclusive game permits the effective formulation of rules the obedience to which is the playing of the less inclusive game, whereas the inclusive language game, in the case of chess, permits the effective formulation of rules the obeying of which is the playing, not of the less inclusive game, but the game of chess, loses its air of paradox, once it is remembered that when the rules of nonsyntactical English are formulated in German, the parallel with chess is restored. And it is scarcely cause for puzzle or paradox that nonsyntactical German (on which the German builds ML) is translatable into nonsyntactical English.

48. But it is not the purpose of this paper to follow up all the important and difficult topics involved in clarifying the status of metalanguages and the nature of the meta-meta-. . . -hierarchy. Our concern is with the most general implications of the conception of a language as a game. Let us therefore turn to a second comment on the analysis proposed in 38. Let us note that it must not be supposed that in order to play a game at the level of rule obeying behavior, one must first learn to play it at the level of mere pattern governed behavior. As we have pointed out before, not all learning to play games can be learning to obey rules, but given that one has learned a language adequate to the purpose, one can learn to play (e.g. chess or poker directly as a mode of rule obeying behavior). By “a language adequate to the purpose” I mean, for example that one must be able to respond to certain pieces of cardboard as having 10 diamond-shaped spots printed on it, before one can learn to apply the rule language of poker. Learning to play a game at the rule obeying level
does presuppose that the patterns and activities involved belong to the organ­
ism's repertoire of available discriminations and manipulations. Notice also
that the vocabulary and syntax of action enjoining contexts is, to a large ex­
tent, common to the rule languages of the many games we play, a fact which
facilitates the learning of new games.

49. In the third place, it should be emphasized that the phrase 'rule obey­
ing behavior' is not restricted in its application to behavior in which one
makes moves in a game via making moves in its rule metagame. There is a
sense in which it is quite legitimate to say that Jones is obeying the rules of
chess, even though he is not actually making moves in the rule language, and
yet deny that Smith, who has learned to play merely at the level of pattern
governed behavior and hence is also not making moves in the metagame, is
obeying rules. For there are many true subjunctive statements we could make
about Jones and the rule language which we could not make about Smith.
In this paper, however, I have limited my discussion of rule obeying to the
more pedestrian cases, oversimplifying in order to focus attention on funda­
mentals. For a sensitive and illuminating account of the complex logical de­
vices built into ordinary language about human behavior, the reader is re­
ferred to Gilbert Ryle's *The Concept of Mind*.

50. In concluding this paper, I shall make a few remarks about what we
have called 'action enjoining contexts'. In the first place, it should be empha­
sized that while action words occur in motivating contexts such as '... !' and
'... ought to ...', sentences containing action words may motivate without oc­
curring in a motivating context. Thus, given a certain organic state (hunger),
if I occupy the position 'There is an edible object within grasp' I may proceed
to grasp the object with my hand and eat it. In such cases we speak of act­
ing "on impulse". Or, in other cases, "from desire", "from pathological love"
(Kant), etc., as contrasted with "obeying a command", "following a rule", or
"acting conscientiously".

51. We have, in effect, distinguished between three ways in which the
thought of an action which I can perform here and now can be related to the
doing of it. I may do the action because I desire to do it (either for its own
sake, or for the sake of its consequences), or because I am commanded to
do it, or because I think I ought to do it. It is only in the latter two cases that
"action-tropic" mechanisms of language are involved. Learning the use of im­
peratives and normatives involves not only learning the intra-linguistic moves
or "logical grammar" of these expressions, but also (subject to qualifications
to be developed immediately below) acquiring the tendency to move from oc­
cupying the position 'Let me do A!' or 'I ought now to do A' to the doing of A.
As we have already pointed out, they are positions from which we have learned to make language departure transitions.

52. As for the qualifications, in the first place, it is clear that we can speak at most of a tendency. Even if I "assent to" or "concur in" the command 'Sellars, do A!', I may yet fail to do A because of an intense dislike of either A or its consequences. And the same is notoriously true where the position occupied is 'I ought to do A'. Furthermore, when Jones says to me 'You do A!' I may not even come to occupy the position 'Let me do A!'. I may "reject" his command. I may do this even though I actually go on to do A, say because I like doing A. To do an action which satisfies a command is not the same as to obey a command—though the term 'obey' is used with sufficient vagueness for the distinction between doing A which in point of fact fulfils a command and doing A because it was commanded to be easily overlooked.

53. But if 'I ought to do A now' and 'Let me do A!' are both action enjoining or "prescriptive" positions, having a common tendency to bring about my doing of A, is there any genuine—more than "merely verbal"—difference between them? Indeed, Carnap once claimed that ethical statements are disguised commands, and it is by no means unusual to find laymen and philosophers alike referring to certain normative statements as moral imperatives. Yet before one can find it plausible and illuminating to classify normatives not only with imperatives (constituting with them two species of action enjoining or prescriptive discourse) but as being themselves a species of imperative, one must first come to terms with the fact that normatives have an essential property which is not shared by what grammar recognizes as the category of imperatives. If normatives are to be a species of imperative in some "rationally reconstructed" sense, then presumably this property will be the "specific difference."

54. Singular normatives are "implicitly universal." As a rough approximation we may say that in some sense of 'implies', 'Jones ought to do A in C' implies 'Everybody ought to do A in C'. (As a parallel it may be noted that singular causal statements are also "implicitly universal" though it is even more difficult to tickle out the sense in which singular causal statements "imply" universal ones.) Certainly there seems to be something like a contradiction, or, in any event, some kind of logical absurdity, in saying 'Jones ought to do A in C but it is not the case that people (or chess players) generally ought to do A in C'. Of course, A (the action) and C (the circumstances) must be properly specified. 'Jones ought to fetch a glass of water when Cynthia cries' does not imply 'Everybody ought to fetch a glass of water when Cynthia cries'.

55. Now this seems to mean that in order for a language to contain sin-
gular normatives, it must contain universal normatives among its primitive sentences. These universal normatives will be of at least two kinds (a) unrestricted—which is at least part of what we mean by “moral” and is explained by its contrast with (b) restricted, e.g. ‘All chess-players ought to . . .' or ‘All users of ML ought to . . .', where the obligation is laid down for the context of a special game, rather than the general “game” of living. This suggests that the difference between normatives and imperatives is to be accounted for not by supposing that normatives are not imperatives, but by supposing that normatives are a special class of “imperatives”—imperatives which signalize a commitment to a corresponding universal imperative.

56. May we not compare ‘Jones ought to do A in C' to ‘Jones do thou A in C!’ where we are to suppose that the archaic ‘do thou!’ signalizes a commitment to ‘Everyman do ye A in C!’ and hence differs from ‘Jones, do A in C!’ which involves no such commitment. If after finding this comparison illuminating, one wishes to say that normatives are really implicitly universal imperatives, I would not object too strenuously.

57. We must now confront a challenge which has been dogging our heels since our brief discussion of material moves and the laws of nature in sections 25 to 29 above. “According to your account,” the challenge begins, “our consciousness of the ways of things is a matter of the ‘material moves’ of the language game in which we speak about the world. In other words, you claim that to know that all occasions of kind A are occasions of kind B is a matter of one’s language containing the move from ‘x is A' to ‘x is B'. It is along these lines that you account for the fact that we back up our assertion that an occasion is of kind B by giving a reason, namely that it is of kind A. On the other hand, when you describe the process whereby we come to adopt the language of which this move is a part, you give an anthropological, a (very schematic) causal account of how languages comes to be used, and, presumably changed, in which you stress evolutionary analogies and cite the language of the bee hive. Do you not imply that there is no such thing as giving a reason for (or against) the decision to include a certain material move in the syntactical structure of one’s language?” This challenge takes us to the very heart of an issue central to modern philosophy since Hume, namely, the reason-ability of our ‘beliefs' in (particular) laws of nature.

58. The mention of Hume inspires another critic to brandish quite a different cudgel. “By making the material moves in which an empirical predicate participates constitutive of its being the predicate it is, as the moves of a bishop constitute its being a bishop, are you not, in effect, joining the ranks of those long scattered legions who thought that to have (clear) concepts is to know causes? But in your nominalistic version, in which natural selec-
tion takes the place of divine *illuminatio* as reality's dominion over human concepts, different peoples with different languages would "know" different causes. There would be as many "truths" as languages . . . in short, no truth at all!"

59. Now it must be granted that as soon as an attempt is made to rephrase our discussion in terms of "understanding," and "knowing," not to mention "meaning" and "truth" one begins to feel acutely uncomfortable. Thus, suppose we sought to express what we have hitherto formulated as

(i) "All A is B" is unconditionally assertable (in L)

or

(ii) "All A is B" (in L) corresponds to the material move from 'x is A' to 'x is B' which holds in L.

by saying

(iii) "All A is B" (in L) is true *ex vi terminorum*.

Clearly, we would be on the threshold of paradox. For suppose that there are two groups of language users, G-1 and G-2, using languages L-1 and L-2 respectively. And suppose that L-1 and L-2 are radically different in that they involve two different systems of material moves—that is, they cannot be regarded as different embodiments of the same "pieces" and "positions", as automobiles and counties on the one hand, and pieces of ivory and wooden squares on the other, can be alternative embodiments of the pieces and positions of chess. In short, L-1 and L-2 are not mutually translatable. Now, if we were to adopt mode of formulation (iii), we should have to say that each of these languages contained a set of universal sentences which were not only "lawlike" but *true*, indeed, true *ex vi terminorum*. And if G-2 abandoned L-2, acquiring some other language in its place, we should have to say that it was abandoning a set of true law-like sentences about the world. And even though in doing so it was acquiring another set of true lawlike sentences, can it ever be *reasonable* to abandon true sentences?

60. But while we may legitimately conclude from this that it is often inappropriate to use mode of formulation (iii) where (i) and (ii) are appropriate, it would be a mistake to suppose that (iii) is never correct. In general, when I commit myself to

(iv) S is a true sentence (of L).

I am committing myself to asserting either S itself (if I am a user of L) or a translation of S into the language I do use. Thus, if the position sketched in this paper is sound, it is only if I myself use L, or a language which stands to L
as chess played with Cadillacs for *kings* and counties as *squares* stands to chess embodied in more usual materials, that I can make a correct use of (iii). Consequently, it could not be correct for me to say that G-2 switched from one set of *true* lawlike sentences to another, nor to say of my group that it has switched from one set of true lawlike sentences to another.

61. A closely related point concerns such expressions as "Jones knows that all A is B" or "They knew that All A is B". It should be clear in the light of the above (given the general epistemological orientation of this paper) that a correct use by me of either of these sentences presupposes that in the one case Jones, and in the other case 'they' use either the same language which I myself speak, or a language which is "another embodiment of the same game." Where this condition is not fulfilled, we must abandon indirect discourse and make explicit reference to the language used by the individual or group of which we are speaking.

62. We have already pointed out that statements of the form

"..." means ___ (in L)

are incorrectly assimilated to relation statements. They do not say of an expression (in L) and an entity that they stand in the "meaning relation." They belong to semantical discourse, which is no more describing discourse, than is prescriptive discourse. They convey, but do not assert, the information that "..." plays the role in L which "___" plays in the language in which the semantical statement occurs. Thus, if the argument of this paper is correct, it can only be correct to make statements of the form

(v) "β" means B (in L)

where the language (say L') which one is using as a metalanguage (and which therefore contains the appropriate semantical vocabulary) is, in its nonsemantical part, to which "B" belongs, another embodiment of the same game—i.e. the same system of formal and material moves—as L, to which "β" belongs. And a statement of this form is *true*, if and only if "β" stands to "B" as another embodiment of the same "piece".

63. Everyone would admit that the notion of a language which enables one to state matters of fact, but doesn't permit argument, explanation, in short *reason-giving*, in accordance with the principles of *formal logic*, is a chi-

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4. For a more elaborate discussion of semantical statements and the disastrous consequences to philosophy of assimilating them to relation statements, see my "Is there a Synthetic A Priori?" *Philosophy of Science*, 20, 1953, pp. 121-138, especially pp. 134ff.
mera. It is essential to the understanding of scientific reasoning to realize that the notion of a language which enables one to state empirical matters of fact, but contains no material moves is equally chimerical. The classical "fiction" of an inductive leap which takes its point of departure from an observation base undefiled by any notion as to how things hang together is not a fiction but an absurdity. The problem is not "is it reasonable to include material moves in our language?" but rather "Which material moves is it reasonable to include?"

64. Thus, there is no such thing as a problem of induction if one means by this a problem of how to justify the leap from the safe ground of the mere description of particular situations, to the problematical heights of asserting lawlike sentences and offering explanations. The skeptics' notion that any move beyond a language which provides only for the tautologous transformation of observation statements is a "venture of faith" is sheer nonsense. An understanding of the role of material moves in the working of a language is the key to the rationale of scientific method. And since, as we have seen, this role can be characterized both as constituting the concepts of the language, and as providing for inferences, explanations and reasons relating to statements formulated in terms of these concepts, it is clear that to be in a position to ask the question "Is it ever reasonable to assert one matter of fact on the basis of another matter of fact?" is to be in a position to answer with an unequivocal "yes!"

65. Thus, once we realize that the problem is not "Is it reasonable to include material moves in our language?" but rather "Which material moves is it reasonable to include?" we also see that the problem is not "Is it reasonable to give 'explanations' of matters of fact?" but "Which explanations of matters of fact is it reasonable to give?" It comes home to us that the problem concerns the grounds on which a decision to use—that is, to teach ourselves—this language rather than that, can be justified. And to play the language game in which we can be confronted by the need for such a decision, is to know what would constitute a good reason for making it in one way rather than another.

66. Viewed from within a used conceptual framework, with a sufficiently rich metalinguistic apparatus, observations belong to the ordo rerum. It is only when we reflect on the nature of a decision to change conceptual frames that it strikes us anew that the making of an observation is the impact of the non-conceptual on the conceptual. The metalinguistic position "U (meaning that p) was an observation utterance," which entails "p was the case," rests on no privileged access to the world. A sufficiently rich conceptual frame enables the one who uses it to recite the story of its achievements, and to support with reasons the claim that they are achievements. But reasons are always positions...
within a frame. We may conclude that x was an observation judgment; but observation judgments are not conclusions.

67. But this means, of course, that no giving of reasons for adopting a language game can appeal to premises outside all language games. The data of the positivist must join the illuminatio of Augustine. In other words, instead of justifying nomologicals by an appeal to observation statements the predicates of which would have conceptual meaning independently of any commitment to laws, the problem is rather that of deciding which conceptual meaning our observation vocabulary is to have, our aim being so to manipulate the three basic components of a world picture, (a) observed objects and events, (b) unobserved objects and events and (c) nomological connections; so as to achieve a world picture with a maximum of “explanatory coherence.” In this reshuffle, no item is sacred. On the other hand, it is obviously reasonable to preserve the achievement status of as many observation claims as possible, for the more we preserve, the more the world picture we select is “based on observational evidence.”

68. The difference between observation predicates and theoretical constructs is not that the former have a conceptual status independent of material moves (implicit definition) whereas the latter are implicitly defined predicates in a system which is ‘interpreted’ by a ‘dictionary’ which ties certain expressions in the theory with empirical constructs. Rather, the conceptual status of theoretical and non-theoretical expressions alike is a matter of material (as well as formal) moves.

69. When we adopt a theoretical sub-language, we characteristically hold it at arms length. That is to say, instead of simply enriching our non-theoretical (“background”) language with new material moves relating existing terms to a new vocabulary, as we should if we simply decided to take—and taught ourselves to take—“gas” and “congeries of molecules” as synonymous, we put

5. In a footnote to page 195 of a paper on “Particulars,” Philosophy and Phenomenological Research, 13, 1952, I wrote, “If, as I am claiming, the sentences which formulate what we regard as the laws of the world in which we live are true ex vi terminorum, then how can it be rational to abandon such a sentence? What role could observational evidence play in the “establishing” of sentences which are to be true ex vi terminorum? The inductive establishing of laws is misconceived if it is regarded as a process of supplementing observation sentences formulated in a language whose basic conceptual meanings are plucked from “data” and immune from revision (“Hume’s Principle”). The rationality of “induction” is, rather, the rationality of adopting that framework of inaterial rules of inference (meanings—even for observation predicates) and, within this framework, those (sketchy) statements of unobserved matters of fact (world picture) which together give maximum probability to our observation utterances interpreted as sentences in the system. Only if we do this do we adopt (and this is, of course, an analytic proposition) that world picture which is “most probable on the basis of our observations.”
raisable drawbridges "coordinating" (moves) between the theoretical and the non-theoretical vocabularies. We use these drawbridges when we play the scientific game—compare the move from "x is wood of such and such shape" to "x is a knight" in chess-playing contexts—and their status can only be understood in the light of the total rationale of the scientific enterprise. The coordinating moves (inferences) which connect an island of theory with the highways of non-theoretical discourse on the mainland (themselves by no means immune to revision) must not be confused with the language entry transitions (not inferences) which give observation words their observation status.

The boundary between "empirical constructs" and "theoretical constructs" is no iron curtain, fixed for all time. In principle, any theoretical sublanguage is a candidate for adoption into non-theoretical or background discourse, and we can imagine scientific contingencies which would make it reasonable to do so. The temptation to freeze this boundary arises from being convinced on (faulty) epistemological grounds that factual meaning is primarily the property of observation predicates, that "in the last analysis" there is (ought to be?) a fixed set of observation predicates ("sense data predicates"), and that any factual primitive which is not an observation term belongs (is?) on an island of theory connected by coordinating drawbridges with empirical constructs.

But philosophically more interesting are those cases where we decide to introduce new material moves into non-theoretical discourse. Thus, suppose that \( \phi \) and \( \psi \) are empirical constructs and that their conceptual meaning is constituted, as we have argued, by their role in a network of material (and formal) moves. Suppose that these moves do not include the move from 'x is \( \phi \)' to 'x is \( \psi \)'. Now suppose that we begin to discover (using this frame) that many \( \phi \)'s are \( \psi \) and that we discover no exceptions. At this stage the sentence 'All \( \phi \)'s are \( \psi \)' looms as an "hypothesis," by which is meant that it has a problematical status with respect to the categories of explanation. In terms of these categories we look to a resolution of this problematical situation along one of the following lines.

(a) We discover that we can derive "All \( \phi \)'s are \( \psi \)" from already accepted nomologicals. (Compare the development of early geometry.)

(b) We discover that we can derive "If \( C \), then all \( \phi \)'s are \( \psi \)" from already accepted nomologicals, where \( C \) is a circumstance we know to obtain.

(c) We decide to adopt—and teach ourselves—the material move from "x is \( \phi \)" to "x is \( \psi \)". In other words, we accept "All \( \phi \)'s are \( \psi \);" as an un-
conditionally assertable sentence of \( L \), and reflect this decision by using the modal sentence “\( \phi \)'s are necessarily \( \psi \)”. This constitutes, of course, an enrichment of the conceptual meanings of “\( \phi \)” and “\( \psi \)”. 

72. But it may be long before we arrive at a decision, and in the interim (always supposing that no exceptions turn up), we will say “it is probable that all \( \phi \) is \( \psi \)” The important thing is to realize that instead of “probable hypothesis” or “mere inductive generalization” being a terminal category, it is an interim category. And if we were to say (as it is often sensible to say) “It is probable that \( \phi \)'s are necessarily \( \psi \)”, we should be giving notice that we expected a resolution of the problematic situation along the lines of either (a) or (c) above.
My aim in this paper is to throw light from several directions on the intimate connections which exist between conceptual thinking and the linguistic behavior which is said to 'express' it. The position which I shall ultimately delineate and defend, though behavioristic in its methodological orientation is not, initial appearances to the contrary, behavioristic in its substantive contentions. It can, nevertheless, be characterized as an attempt to give a naturalistic interpretation of the intentionality of conceptual acts.

The early sections (I–IV) stress the essentially rule-governed character of linguistic behavior. I argue that a proper understanding of the nature and status of linguistic rules is a *sine qua non* of a correct interpretation of the sense in which linguistic behavior can be said to *be* (and not merely to *express*) conceptual activity. The second and larger part of the paper (Sections Vff.) is devoted to exploring the sense (or senses) in which language can be said to 'express' thought. A distinction is drawn between three different contexts in which the verb occurs. It is argued that they involve radically different meanings which, if confused, blur the distinction between language as conceptual act and language as means of communication, and preclude the possibility of an adequate philosophy of language.

I

There are many interesting questions about the exact meaning or meanings of the term 'rule' in non-philosophical contexts. What, for example, is the differ-
ence between a 'rule' and a 'principle'? Are principles simple 'first' rules in that they are not special applications of more general rules? Or is the primary difference that rules can be arbitrary? Or are principles rules for choosing rules? Is the principle of induction, for example, a higher order rule for choosing law-like statements, themselves construed as extra-logical rules of inference? Though these questions are intrinsically interesting and relevant to the general topic of this paper, I shall not discuss them. For however the domain of norms and standards is to be stratified and botanized, the term 'rule' has acquired over the years a technical and generic sense in which it applies to general statements concerning that which ought or ought not to be done or to be the case, or to be permissible or not permissible—distinctions which can be put in many different ways.

For our purposes, then, a rule is roughly a general 'ought' statement. Such statements have been traditionally divided into hypothetical and categorical 'oughts,' or, as it has often misleadingly been put, 'imperatives.' The distinction between hypothetical and categorical oughts is an important one, though I believe that they are far more intimately related than is ordinarily taken to be the case.¹

Hypothetical oughts have the form "if one wants X, one ought to do Y." They transpose a relation of implication between a state of affairs X and a doing of Y into an implication appropriate to practical reasoning. In spite of their crucial importance to a theory of normative discourse, I shall have nothing to say about them, save by implication.

As far as anything I have so far said is concerned, a categorical ought is simply one that is not, in the familiar Kantian sense, a hypothetical ought. I shall continue my division informally by calling attention to the most familiar variety of general categorical oughts, those, namely, of the form

If one is in C, one ought to do A.

Notice that although this proposition is conditional in form, it is not, in the Kantian sense, a hypothetical ought; and it is as contrasted with the latter that, even though it is conditional, it is called categorical. By application and the use of modus ponens one can derive conclusions of the form

S ought to do A

¹ For an exploration of this and related issues, see my Science and Metaphysics (London: Routledge and Kegan Paul, 1968), Chapter 6 (especially sections XIV-XVII).
which not only are not hypothetical oughts, but are categorical (non-iffy) statements. Notice, by contrast, that from "If one wants \( X \), one ought to do \( A \)," together with "\( S \) wants \( X \)" it is not correct to infer "\( S \) ought to do \( A \)."

The important feature, for our purposes, of general categorical oughts of the above form is that for actual existence to conform to these oughts is a matter of the agents to which they apply doing \( A \) when they are actually in the specified circumstance \( C \); and this, in turn, a matter of their setting about doing \( A \) when they believe that the circumstances are \( C \).

It follows that the 'subjects' to which these rules apply must have the concepts of doing \( A \) and being in \( C \). They must have, to use a current turn of phrase, the appropriate 'recognitional capacities.' Furthermore, for the rule itself to play a role in bringing about the conformity of 'is' to 'ought;' the agents in question must conceive of actions \( A \) as what ought to be done in circumstances \( C \). This requires that they have the concept of what it is for an action to be called for by a certain kind of circumstance.

II

Importantly different from rules of the above form—which may be called, in a straightforward sense, rules of action—are rules that specify not what someone ought to do, but how something ought to be. Of these an important subclass has the form

\[
X \text{ ought to be in state } \phi, \text{ whenever such and such is the case}
\]

The purpose of such a rule is achieved to the extent that it comes to be the case that \( X \)s are in state \( \phi \) when such and such is indeed the case. This time, however, the conformity of actual existence to the ought does not, in general, require that the \( X \)s which are, in a sense, the subjects of the rule, i.e. that to which it applies, have the concept of what it is to be in state \( \phi \) or of what it is for such and such to be the case. This is obvious when the \( X \)s in question are inanimate objects, as in the example,

Clock chimes ought to strike on the quarter hour.

Now ought-to-be's (or rules of criticism as I shall also call them), though categorical in form, point beyond themselves in two ways. In the first place they imply (in some sense of this protean term) a reason, a because clause. The exploration of this theme would seem to take us back to the excluded topic of hypothetical imperatives. In the second place, though ought-to-be's are care-
fully to be distinguished from ought-to-do's they have an essential connection
with them. The connection is, roughly, that ought-to-be's imply ought-to-
do's. Thus the ought-to-be about clock chimes implies, roughly,

(Other things being equal and where possible) one ought to bring it
about that clock chimes strike on the quarter hour.

This rule belongs in our previous category, and is a rule of action. As such
it requires that the item to which it applies (persons rather than chimes) have
the appropriate concepts or recognitional capacities.

The distinction between ought-to-do's (rules of action) and ought-to be's
(rules of criticism) stands out clearly when the examples are suitably chosen.
A possibility of confusion arises, however, when the ought-to-be's concern
persons rather than inanimate objects. Consider, for example,

One ought to feel sympathy for bereaved people

This example is interesting for two reasons: (1) It is a rule conformity to
which requires that the subjects to which it applies have the concept of what it
is to be bereaved. In this respect it is like a rule of action. (2) In the absence of
a clear theory of action one might think of feeling sympathy as an action. Thus
a casual and uninformed look might lead to the subsumption of the example
under the form

One ought to do A, if C.

It is clear on reflection, however, that feeling sympathy is an action only in
that broad sense in which anything expressed by a verb in the active voice is
an action.

Nor should it be assumed that all ought-to-be's which apply to persons
and concern their being in a certain state whenever a certain circumstance
obtains are such that the conformity to them of actual fact requires that the
persons in question have the concept of this circumstance. The point is of de-
cisive importance for our problem. To set the stage, consider ought-to-be's
pertaining to the training of animals.

These rats ought-to-be in state \( \phi \), whenever C.

The conformity of the rats in question to this rule does not require that they
have a concept of C, though it does require that they be able to respond differ-
entially to cues emanating from C. Since the term 'recognitional capacity' is
one of those accordion words which can be used now in one sense now in an-
other, it is a menace to sound philosophy.
On the other hand, the subjects of the ought-to-do’s corresponding to these ought-to-be’s, i.e. the trainers, must have the concept both of the desirable state \( \phi \) and of the circumstances in which the animals are to be in it.

If we now return to the sympathy example, we notice another interesting feature. If we compare the ought-to-be with the corresponding ought-to-do,

(Other things being equal and where possible) one ought to bring it about that people feel sympathy for the bereaved,

we see that the ‘subjects’ of the ought-to-be (i.e., those who ought to feel sympathy) coincide with the ‘subjects’ of the corresponding ought-to-do (i.e. those who ought to bring it about that people feel sympathy for the bereaved). It is the same items (people) who are the agent-subjects of the ought-to-do and the subject-matter subjects of the ought-to-be.

III

It is obvious, from the above considerations, that if all rules of language, were ought-to-do’s we would be precluded from explaining what it is to have concepts in terms of rules of language. Now many rules of language are ought-to-do’s thus,

(Other things being equal) one ought to say such and such, if in C and as such they can be efficacious in linguistic activity only to the extent that people have the relevant concepts. It is therefore of the utmost importance to note that many of the rules of language which are of special interest to the epistemologist are ought-to-be’s rather than ought-to-do’s. For only by taking this fact into account is it possible to carry out a program according to which (a) linguistic activity is, in a primary sense, conceptual activity; (b) linguistic activity is through and through rule-governed.

Much attention has been devoted of late to linguistic actions\(^2\) where the term ‘action’ is taken in the strict sense of what an agent does, a piece of conduct, a performance—the practical sense of action, as contrasted with the general metaphysical sense in which action is contrasted with passion. The topic of linguistic actions, whether performatory, locutionary, illocutionary, perlocutionary,\(^3\) or perhaps, elocutionary is an important one. Indeed, it is

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2. I have in mind particularly John Austin and his students. The best statement of this approach is to be found in Austin’s *How to Do Things with Words* (London: Oxford University Press, 1963).

3. For an explanation and defense of these distinctions see Austin’s *How to Do Things with Words*. 
important not only for a theory of communication, but for epistemology, for there are, indeed, linguistic actions which are of essential interest to the epistemologist: thus asking questions and seeking to answer them. On the other hand it can scarcely be over-emphasized that to approach language in terms of the paradigm of action is to make a commitment which, if the concept of action is taken seriously, and the concept of rule is taken seriously, leads to (a) the Cartesian idea of linguistic episodes as essentially the sort of thing brought about by an agent whose conceptualizing is not linguistic; (b) an inability to understand the rule-governed character of this conceptualizing itself, as contrasted with its overt expression. For if thought is analogous to linguistic activity to the extent implied by Plato's metaphor 'dialogue in the soul,' the idea that overt speech is action and its rules rules of action will generate the idea that all inner speech is action and its rules rules of action, which leads to paradox and absurdity without end.

I propose, instead that the epistemologist, while recognizing that language is an instrument of communication, should focus attention on language as the bearer of conceptual activity. This is not to say that the two aspects can be separated as with a knife. Indeed, by pointing out that ought-to-be's imply ought-to-do's we have already recognized that language users exist at the level of agents. Roughly, to be a being capable of conceptual activity, is to be a being which acts, which recognizes norms and standards and engages in practical reasoning. It is, as Kant pointed out, one and the same reason which is in some of its activities 'theoretical,' and in some of its activities 'practical.' Of course, if one gives to 'practical' the specific meaning ethical then a fairly sharp separation of these activities can be maintained. But if one means by 'practical' pertaining to norms, then so-called theoretical reason is as larded with the practical as is practical reasoning itself.

IV

Even if it be granted than many of the linguistic oughts which are of special interest to an epistemologist are ought-to-be's, the fact that ought-to-be's and ought-to-do's are conceptually inseparable might be thought to preclude a linguistic approach to conceptual abilities. Clearly primary epistemic ought-to-do's (and by calling them 'primary' I mean simply that they are not the unfolding of ought-to-be's, whether as primary they are categorical or hypothetical), pertaining to the systematic use of linguistic abilities and propensities to arrive at correct linguistic representations of the way things are, presuppose the possession of concepts by the agents to which they apply. And since all
ought to-be's unfold into ought-to-do's which, in their turn, presuppose con­cepts, the outlook for linguistic theory of concepts would seem to be dark indeed. Yet the fundamental clues for a resolution of the problem have already been given.

To fix our ideas, let us consider an example which, though simplified to its bare bones contains the essence of the matter:

\[(Ceteris paribus)\] one ought to respond to red objects in sunlight by utter­ing or being disposed to utter ‘this is red’.

This \textit{ought-to-be rule} must not be confused with the (fictitious) \textit{ought-to-do} rule,

\[(Ceteris paribus)\] one ought to say ‘this is red’ in the presence of red ob­jects in sunlight

The latter presupposes that those to whom it applies have the concepts of ‘red’, ‘objects’, ‘sunlight’, and, even more important, of what it is to \textit{say} ‘this is red.’ In other words, they must already have the conceptual framework of what it is to do something in a circumstance.

The distinction between \textit{saying} and \textit{uttering}, or being disposed to utter, is diagnostic of the difference between the ‘ought-to-do’ and the ‘ought-to-be.’ It might be objected that to use language meaningfully is to say rather than merely utter. But to merely utter is to parrot, and we need a concept which mediates between merely uttering and saying.

Notice that the ought-to-do which corresponds to the above ought-to-be, namely

One ought to bring it about (\textit{ceteris paribus}) that people respond to red objects in sunlight by uttering or being disposed to utter ‘this is red’. presupposes that its agent subjects have a conceptual framework which in­cludes the concepts of a red object, or sunlight, of uttering ‘this is red,’ of what it is to do or bring about something, and of what it is for an action to be called for by a circumstance.

On the other hand, this ought-to-do does \textit{not} presuppose that the subjects in which the disposition to utter ‘this is red’ in the presence of red objects in sunlight \textit{is to be brought about} have any of these concepts.

But what of the objection that the \textit{subject-matter} subjects of the ought-to­be coincide with the agent subjects of the ought-to-do and hence that they too must have the concepts in question? The answer should be obvious; the members of a linguistic community are \textit{first} language \textit{learners} and only po-
tentially 'people,' but subsequently language teachers, possessed of the rich conceptual framework this implies. They start out by being the subject-matter subjects of the ought-to-be's and graduate to the status of agent subjects of the ought-to-do's. Linguistic ought-to-be's are translated into uniformities by training. As Wittgenstein has stressed, it is the linguistic community as a self-perpetuating whole which is the minimum unit in terms of which conceptual activity can be understood.

Furthermore there are radically different kinds of linguistic ought-to-be's: not only word-object ought-to-be's (or, as I have called them elsewhere, language entry transitions), but also the ought-to-be's formulated by formation and transformation rules.

The oughts governing utterances, as perceptual responses to the environment are not ought-to-do's—though, as the pragmatists have emphasized, perception as an element in enquiry occurs in a context of actions, epistemic and otherwise. Similarly the oughts governing inference are not ought-to-do's. Inferring is not a doing in the conduct sense—which, however, by no means implies that it is not a process. Again, as the pragmatists have stressed, inference as an element in enquiry occurs in the context of action, epistemic and otherwise.

A language is a many-leveled structure. There are not only the ought-to-be's which connect linguistic responses to extra-linguistic objects, but also the equally essential ought-to-be's which connect linguistic responses to linguistic objects. There could be no training of language users unless this were the case. Finally, there would be no language training unless there were the uniformities pertaining to the use of practical language, the language of action, intention, of 'shall' and 'ought,' which, as embodying epistemic norms and standards, is but one small (but essential) part of the conceptual structure of human agency.

One isn't a full-fledged member of the linguistic community until one not only conforms to linguistic ought-to-be's (and may-be's) by exhibiting the required uniformities, but grasps these ought-to-be's and may-be's themselves (i.e., knows the rules of the language.) One must, therefore, have the concept of oneself as an agent, as not only the subject-matter subject of ought-to-be's but the agent-subject of ought-to-do's. Thus, even though conceptual activity

4. "Some Reflections on Language Games" [reprinted as Chapter 2 of this volume], Philosophy of Science, 21, no. 3, 1954 (reprinted as Chapter 11 in Science, Perception and Reality). It is important to note that a full discussion would refer to may-be's (or permitteds) as well as ought-to-be's—otherwise the concept of 'free' as opposed to 'tied' (stimulus bound) linguistic activity, essential to any account of the functioning of a conceptual system, would be left out of the picture.
rests on a foundation of \textit{conforming} to ought-to-be's of \textit{uniformities} in linguistic behavior, these uniformities exists in an ambience of action, epistemic or otherwise. To be a language user is to conceive of oneself as an agent subject to rules. My point has been that one can grant this without holding that all meaningful linguistic episodes are \textit{actions} in the conduct sense, and all linguistic rules, rules for doing.

A living language is a system of elements which play many different types of roles, and no one of these types of role make sense apart from the others. Thus, while the mere concept of a kind of vocalizing being a response by a human organism in specified circumstances to a certain kind of object does make sense in isolation, this concept is not as such the concept of the vocalizing as a \textit{linguistic response}. For to classify an item as linguistic involves relating it to just such a system as I have been sketching. ‘Word’ goes not only with ‘object’ but with ‘person’, ‘ought to-be’s’, ‘ought-to-do’s’ and much, much more.

\textbf{V}

Within the framework sketched above, I propose to explore the idea that insofar as it has conceptual meaning, language is essentially a means whereby one thinker can express his thoughts to others. Now the term ‘thought’ has a wide range of application, including such items as assumptions, the solving of problems, wishes, intentions, and perceptions. It is also ambiguous, sometimes referring to \textit{what} is thought, sometimes to the \textit{thinking} of it. To limit the range of my paper, I shall concentrate on thought as belief, and since the latter term shares the ambiguity indicated above, I note that for the time being at least, I shall be concerned with believings rather than things believed.

The following characterization of the state of believing something will serve to get the discussion under way

Jones believes that \( p = \) Jones has a settled disposition to think that \( p \).

It would be foolhardy—indeed downright mistaken—to claim that this formula captures ‘the’ meaning of believes, and even more so to put it by saying that ‘a belief is a settled disposition to think that something is the case.’ For, as with most, if not all, of the words in which philosophers are interested, we are confronted with a cluster of senses which resemble each other in the family way.

To say that the senses of cognate expressions bear a family resemblance to one another must not be taken to imply that they present themselves as a
family, nor even that they constitute a family. Aristotle seems to have thought
that philosophically interesting concepts present themselves to us as families
in which, with a little effort, we can discern the fathers, mothers, aunts, un­
cles, and cousins of various degrees. In some cases something like this may be
true. But the matter is rarely so simple, and there is more than a little truth to
the idea that the families are 'created' by reconstruction (hopefully rational)
or regimentation rather than found.5

If the above account of belief gets us started, it does so by confronting us
with the equally problematic concepts of disposition and thinking that-p. Be­
fore stepping into these quicksands, let us ostensibly make matters worse by
turning our attention from believing itself to the more complicated concept of
the expression of belief. For sound philosophical strategy calls for the exami­
nation of concepts as they function in larger contexts, rather than subjecting
them to scrutiny in splendid isolation. By taking elusive concepts together,
one may limit the degrees of freedom which enable them separately to elude
our grasp. If beliefs are to be construed as dispositions, this strategy would
have us seek to relate the sense in which beliefs are 'expressed' to the sense in
which the dispositions of things and persons are manifested by what they do.
This suggests the schema

\[ x \text{ expresses Jones' belief that-p} = x \text{ is a manifestation of Jones' settled dis­} \\
\text{position to think that-p.} \]

If the right hand side of this attempted explication were clearcut and un­
ambiguous, substantial progress would have been made. But it isn't; and our
only hope is that a spark of clarity may result from rubbing unclarities to­
gether.

A first unclarity concerns what it is for a disposition to be 'manifested' by a
doing, and how the class of doings by which a given disposition is manifested
is to be delimited. If the 'disposition' is of the familiar kind to which we refer
by such expressions as 'an angry disposition' or, perhaps, by such a term as
'humility', then it would seem that, depending on circumstances, any of a
wide range of episodes could be its manifestation. Indeed, there is a sense in
which, depending on circumstances, any of a wide range of episodes could
count as a 'manifestation' of Jones' belief that-p. But, to characterize belief
that-p as a settled disposition to think that-p, is, if sound, to narrow things

5. Equally dangerous are such metaphorical contrasts as those between 'paradigm' and 'border­
line,' 'shadow' and 'penumbra.' All suggest a sequential strategy according to which, once we find the
thread, we know how to begin and what kinds of difficulty to expect.
down in an interesting way. For to do so, is to introduce a conceptual tie between the designation of the disposition and the kind of episodes which can be said, at least in a primary sense, to ‘manifest’ it.

For if we ask what episodes manifest a disposition to \( V \), when ‘\( V \)’ represents a verb which stands for a doing (e.g. ‘laugh’) the answer must be, in the first instance, episodes of \( V \)-ing (e.g. laughing). We have consequently committed ourselves to the idea that it is episodes of thinking that-\( p \) which are, in a primary sense at least, manifestations of Jones’ disposition to think that-\( p \); and consequently that it is episodes of thinking that-\( p \) which are, in a primary sense, manifestations of Jones’ belief that-\( p \). This gives us the schema

\[
x \text{ is a primary manifestation of Jones' belief that-} p \implies x \text{ is a thinking that-} p.
\]

But now our troubles really begin. For there is a \textit{prima facie} tension between ‘being a thinking that-\( p \)’ and being a ‘manifestation’ of anything. The latter term carries with it the implication of ‘making something manifest,’ i.e., apparent, (roughly) perceptible, observable. But, we are tempted to expostulate, what need be less ‘manifest’ than an episode of thinking that-\( p \).

It might be thought that all we need do is replace ‘manifestation’ by a term which lacks this implication. And there are, indeed, such terms at hand—thus ‘realization’, ‘actualization’. The statements

episodes of thinking that-\( p \) are realizations of the settled disposition to think that-\( p \)

episodes of thinking that-\( p \) are actualizations of the settled disposition to think that-\( p \)

trip easily off the metaphysically trained tongue. But they are ruled out by our strategy. For the concept with which we are concerned is that of the expression of a belief, and ‘expression’ clearly has the same implication of ‘overtness’ or ‘perceptibility’ as does the ‘manifestation’, to which our initial intuitions have led us.

The boulder may have slipped, but perhaps it has not rolled to the bottom. Our task may ultimately prove to be like that of Sisyphus, but perhaps we are not yet forced to make a new beginning. To continue is to look for a way of making coherent the idea that episodes of thinking that-\( p \) are the primary expressions (with all that this implies) of the belief that \( p \).

To do so within the allotted space however, I must abandon the leisurely dialectic which consults intuition at each stage of the argument, and instead
must draw upon the familiarity of standard philosophical moves. In terms of this new strategy, the obvious move is to espouse a form of logical behaviorism according to which, in first approximation, 'thinking that-p' is, in its most episodic sense, to be equated with 'candidly and spontaneously uttering “p”6 where the person, call him Jones, who utters ‘p’ is doing so as one who knows the language to which ‘p’ belongs. I need not remind you of all the troubles which beset this move. Some of them will be taken into account as the argument moves along. But since, in any case, my strategy remains in a broad sense dialectical, the fact that the above equation suffers from serious inadequacies need not prevent it from playing an essential role in the argument.

The phrase ‘candidly and spontaneously’ is intended to sum up an open-ended set of conditions without which the suggestion can’t get off the ground. Jones’ thinking that-p obviously cannot be a quoting of ‘p’ or uttering it on the stage in the course of acting. The qualifying phrase also clearly rules out the case where Jones is lying, i.e. using words to deceive. Somewhat less obviously it is intended to imply that Jones is not choosing his words to express his convictions. He is neither lying nor speaking truthfully. In a sense, as we shall see, he is not using the words at all.

According to the behavioristic position we are now considering, thinking that-p is, in its primary episodic sense, thinking-out-loud that-p. As thinking-out-loud, an utterance of ‘p’ is not directed to an audience. It is not, as such, a social act. Explicit performatives (e.g. ‘I promise’) are clearly out of place in utterances which are, in the desired sense, to be thinkings-out-loud. Nor is it appropriate to characterize thinkings-out-loud in terms of the categories of illocutionary performance—at least those which require an audience (e.g. ‘statement,’ ‘avowal,’ ‘argument’)7—even though exactly similar utterances would, in a context of ‘communication,’ be appropriately so characterized.

VI

It is important to realize that the ways in which we classify linguistic expressions are not only bound up with the jobs they do, but with the purposes for which the classification is made. Since these purposes tend, for obvious reasons, to concern the role of language as a means of communication, i.e., as


7. We can grant that a thinking-out-loud that-p might be a constituent of a reasoning-out-loud or a deliberating-out-loud on a certain topic.
that by which we give information, warn, make statements, predict, describe, etc., we should not be surprised, our behaviorist will tell us, if expressions which, as candidly uttered in non-communicative contexts, are thinking-out-loud, are classified in a way which is conceptually tied to communication, and, hence, to functions of quite a different order of complexity. One needs only think of the difference between the purely logical characterization of ‘it is not raining’ as the ‘negation’ of ‘it is raining’, and characterizing it as the ‘denial’ of the latter, or note the social implications of classifying a word as a referring expression.

Thus the ways in which common sense, and not only common sense, classifies linguistic expressions, and the verbs which it uses to describe what people do with them, are heavily weighted in the direction of linguistic performances in a context of communication. That it is legitimate to view language in this way is not to be doubted. Indeed, it is philosophically important to be clear about the categories in terms of which the variety of ways in which language functions in inter-personal exchange are to be understood. But there is a danger that exclusive concern with this perspective will obscure those connections between thought and language where the latter is not functioning as a means of communication.

The point is not that there are failures of communication, e.g. the supposed hearer may be an inanimate object mistaken for a man or a foreigner. It is not even that there are soliloquies, if by this is meant cases of ‘talking to oneself.’ It is the more radical point that thinking-out-loud is a form of meaningful speech which doesn’t consist in talking to anyone at all, even oneself, and hence is not, in any ordinary sense, talking.

VII

But before I develop this point let me return to the formula we were considering before this digression on the orientation toward contexts of communication of the categories in terms of which common sense, linguistics, and many philosophies of language approach linguistic behavior. The formula was

\[ x \text{ is a primary expression of Jones' belief that-}p = x \text{ is a primary manifestation of his settled disposition to think that-}p \text{ (i.e. is a thinking that-}p). \]

The implications of the term ‘manifestation’ (and, for that matter, of ‘expression’) led us in the direction of a logical behaviorism according to which the relevant sense of ‘thinking that-\(p\)’ is ‘thinking-out-loud that-\(p\)’. Thus reinterpreted, the formula becomes
x is a primary expression of Jones' belief that-p = x is a primary manifestation of Jones' settled disposition to think-out-loud that-p (i.e., is a thinking out-loud that-p).

It will be remembered that the point of this behavioristic move was to assimilate the sense in which an episode is a primary expression (implying overtness) of a belief to the sense in which an episode of, for example, a piece of litmus paper turning red is a manifestation (implying overtness) of its disposition to turn red.

It should be noted in passing that in the case of the litmus paper we seem required to expand the characterization of the disposition into disposition to turn red, if put in acid.

This generates the suspicion that if we are to continue with our strategy, we must similarly expand our analysis of 'Jones believes that-p' into

Jones has a settled disposition to think-out-loud that p, if . . .

If what? There many pitfalls here, though we can, perhaps, cover them up temporarily with something like 'if the question whether-p arises.' To do so, however, would immediately confront us with a more serious difficulty. For it simply isn't the case that if a person believes that-p, he utters 'p' let alone thinks-out-loud that-p, whenever the question whether-p arises.

Confronted by this fact, we are strongly tempted to abandon our strategy and say that if a person believes that-p, then (other things being equal) whenever the question whether-p arises, he tends to think (not think-out-loud) that-p; to which we might add that if the circumstances are appropriate he may express his thought by uttering (saying?) 'p'.

VIII

On the other hand, if, however, we are to continue with our original strategy, we must resolutely put aside the temptation to draw the kind of distinction between thought and its expression which this formulation implies, and continue with the intriguing idea that an uttering of 'p' which is a primary expression of a belief that-p is not merely an expression of a thinking that-p, but is itself a thinking, i.e., a thinking-out-loud that-p.

Yet the preceding remarks do remind us that we must take into account the fact that there is a sense of 'express' in which we can be said to express our thoughts by using language for this purpose. Thus, we express our thought
that-p by saying ‘p.’ Can we sophisticate our logical behaviorism to do justice to this fact?

Let us take a closer look at the words ‘thought’ and ‘express’. First the latter: it will be noticed that the reference to observability implied by the term ‘manifestation’ in the context ‘manifestation of the disposition to think that-p’ was absorbed by the behaviorist into the phrase which describes the disposition. Thus, ‘manifestation of the disposition to think that-p’, became, in effect ‘actualization of the disposition to think-out-loud that-p’.

Thus the behaviorist’s formula becomes, in effect,

\[ x \text{ is a primary expression of Jones’ belief that-} p = x \text{ is a manifestation of Jones’ settled disposition to think that-} p = x \text{ is an actualization of Jones’ settled disposition to think-out-loud that-} p (\text{i.e., } x \text{ is a thinking-out-loud that-} p). \]

It is only too clear that by pushing this analysis of the context ‘expression of belief’ in this direction the behaviorist has lost contact with the idea that people express their beliefs by using language. The point can be put simply—indeed bluntly—by saying that the concept of the actualization of a disposition is not, as such, the concept of an action, whereas expressing their beliefs is something people do.

The statement

Jones, by saying ‘p’, expressed his belief that-p

requires an interpretation of saying p as an action which is undertaken by Jones in order to express (to someone) his belief that-p. If we suspect that Jones is lying, we could equally describe him as saying ‘p’, but we would then go on to say something like

Jones, by saying ‘p’, pretended to believe that-p.

In neither case could Jones’ saying ‘p’ be construed as a case of thinking (even ‘out loud’) that-p. Thus were Jones speaking truthfully, the thinking immediately involved, if any, would be of the sort described by such formulas as

Jones thought that saying ‘...’ would express his belief that-p

Jones intended to express his belief that-p by saying ‘...’

or, in the case of lying

Jones intended to pretend to believe that-p by saying ‘...’
Thus, granted the validity of the concept of thinking-out-loud, the thinking-out-loud which, were it to occur, would be immediately involved in the situation formulated by

Jones, by uttering ‘. . .’, expressed his belief that-p

would be not

Jones thought-out-loud that-p

but rather

Jones thought-out-loud that saying ‘. . .’ would express his belief that-p

or, where Jones is lying,

Jones thought-out-loud that he would pretend to believe that-p by saying ‘. . .’

Needless to say, the latter thinking-out-loud would be self-frustrating in the presence of the audience he intends to deceive.

IX

If we leave behaviorism aside for a moment, we can add a new dimension to the discussion by noting that the term ‘express’ in contexts pertaining to thought has two radically different senses. The difference can be brought out by relating these senses to two different contexts, namely,

(1) Jones expressed his thought (belief) that-p by saying . . .

(2) Jones' utterance of ‘p' expressed his thought that-p

I shall call the former the ‘action’ sense of express, and the latter, for want of a better term, the ‘causal’ sense. Both, as we shall see, are to be distinguished from a third sense illustrated by the context

Jones' utterance of 'p' expressed the thought that-p

where the phrase ‘the thought that-p' stands for an abstract entity, a thought in Frege's sense (i.e., in one sense of this term, a 'proposition'). I shall call this the logical (or semantical) sense of 'express'.

Although my ultimate aim is to show how a logical behaviorist might draw these distinctions, my initial move will be to discuss them in more traditional terms. I shall, therefore, construct a regimented (I dare not say idealized)
model according to which, in the course of learning to speak a language, a child acquires the capacity to be in mental states which are *counterparts*, in a sense to be analyzed, of the utterances which come to belong to his repertory of linguistic behavior. The idea can be blocked out in two steps:

(a) A mental episode which is a thinking that-\( p \) is correlated, in a certain linguistic community, with a piece of linguistic behavior which stands for (expresses in the logical or semantical sense) the thought (proposition) that-\( p \)

(b) In the initial stages of the child's mastery of the language, whenever it has a thought that-\( p \), this thought is manifested in a purely involuntary way by the corresponding verbal behavior.

As our model for understanding the sense in which the uttering of '\( p \)' is the involuntary manifestation of a thinking that-\( p \), let us take the instinctive connection between a pain and a piece of unlearned pain behavior. The fact that a connection between states \( A \) and \( B \) of a child is, in some sense, *learned* rather than *instinctive*, *acquired* rather than *part of its initial equipment*, by no means entails that either \( A \) or \( B \) is under the child's voluntary control. Not all learning to *do* something in a broad sense of 'do' consists in the addition of new behaviors to the stock of things that are under one's voluntary control.

The **key feature** of our model is that the acquired connection between the mental act and the verbal behavior is not to be construed on the action model of 'using the behavior to express one's thought.' Thus, verbal behavior is not in our child's voluntary control in that, although, *once the language is learned*, a necessary and sufficient condition of the child saying '\( p \)' is that it thinks that-\( p \), the saying is the involuntary manifestation of the thinking.

Notice that the model allows the child a rich vocabulary, including the language of intention and resolve as well as the language in which matters-of-fact are stated. It also allows that the child learns to verbalize about verbal behavior and even about the mental acts of which its verbal behavior is the involuntary manifestation.

---

We are now in a position to weaken our model and still make our point. We need not suppose that the child remains a chatterbox. We can suppose it to acquire the ability to keep its thoughts to itself in the sense that it can effectively tell itself to keep quiet, without ceasing to think. We can grant that
to this limited extent its verbal behavior becomes under its voluntary control. When it is thinking without speaking, we shall say that it is in a keeping-its-thoughts-to-itself frame of mind. When not in this frame of mind, it thinks out loud. Thus, "Thinking out loud" remains the primary form in which thinking occurs. The child's keeping its thoughts to itself can be compared to the opening of a general switch which breaks (or, to mix metaphors) short circuits the initial acquired connection between thoughts and verbal behavior.

At this stage, the child has no conception of locutionary acts (e.g. predicting, telling) as verbal behavior which can be engaged in whether or not one is thinking the corresponding thoughts. It has no concept of saying 'p' without thinking that-\(p\).

On the other hand, it is perfectly capable of having concepts of actions involving thinking out loud. Thus, wondering out loud about the weather; "I shall wonder out loud about the likelihood of rain." It is important to see that this by no means entails that there is such a thing as an action of thinking out loud that-\(p\). Even in our more sophisticated framework there is no such thing as an action of thinking that-\(p\), though there is the action of deliberating (i.e., deliberating out loud) what to do. By granting, as we must, that it can conceive of actions consisting of thinkings out loud, we admit a further sense in which its verbal behavior (as thinkings out loud) would be under its voluntary control.

The child's verbal behavior would express its thoughts, but, to put it paradoxically, the child could not express them.

Notice, also, that although its linguistic behavior would be meaningful, and we could say of each of its utterances what, specifically it meant, e.g.

*Jones' utterance meant 'it is raining'*

It would, on our assumptions, be incorrect to say, for example

*Jones, by uttering '...' meant (to convey) ...*

For the latter supposes that Jones has the concept of an action of uttering '...' as a piece of linguistic behavior which could exist independently of its being the "spontaneous verbal expression" of the corresponding mental act. There

---

8. The concept of 'thinking out loud' appropriate to this model should not be equated with thinking-out-loud as construed by the behavioristic position we have been considering. The latter does not recognize 'mental episodes' in the sense required by the present model.
being no such action as bringing about a specific mental act, there could be no such thing as bringing about a thinking out loud for the purpose of conveying a thought.

In other words, just as our regimenting fiction enables us to draw a distinction between a sense in which a mode of verbal behavior can express thoughts without being used to express them, so it enables us to distinguish between the context

utterance of E (in L) means - - -

and the sense of 'means', closely related to 'intends', which involves the context

Jones, by uttering E, means (to convey) . . .

The familiar saw that words have meaning only because people mean things by them is harmless if it tells us that words have no meaning in abstraction from their involvement in the verbal behavior of language users. It is downright mistaken if it tells us that for an expression to have a certain sense or reference is for it to be used by people to convey the corresponding thought. Rather, we should say, it is because the expression has a certain meaning that it can be effectively used to convey the corresponding thought.

XI

Let us now return to the initial accounts we gave of belief and its expression. The first thing to note is that if we were to reformulate them in terms of our model we would get something like the following schema

Jones believes that-p = Jones has a settled disposition to think that-p, if the question occurs to him whether-p, and, indeed, to think out loud that-p, unless he is in a keeping-his-thoughts-to-himself frame of mind.9

We also get the following formulae with respect to 'expression of belief':

x is a primary actualization of Jones' belief that-p \(\Rightarrow\) x is a thinking that-p (and, indeed, a thinking out loud that-p unless he is in a keeping-his-thoughts-to-himself frame of mind.)

9. The 'if the question occurs to him whether-p' condition can be taken to cover all cases in which, where the alternatives 'p' and 'not p' are relevant to his course of thought, he thinks that-p, even if the question whether-p is not actually raised.
x is a primary expression of Jones' belief that-p → x is a thinking out loud that-p.

Thus, where Jones is in a thinking out loud frame of mind, the verbal behavior is both an actualization of and, in the 'causal' sense, an expression of his belief, both a thinking and an expression of thought.

XII

But what will our logical behaviorist say to all this? Clearly he will be unhappy about our uncritical acceptance of mental acts as covert inner episodes. What moves might he make? He may well accept our initial formula

\[
\text{Jones believes that-p = Jones has a settled disposition to think that-p.}
\]

But he will emphasize the 'settled,' which we have not yet done, and will call attention to the fact that it presumably contrasts with something. It is not obvious what the contrasting adjective should be, but it, too, should apply to dispositions. Let us, he suggests, try 'proximate;' drawing on the contrast between 'settled' and 'near the surface'. Another appropriate contrast would be provided by 'short term'.

Objects, as is well known, can have causal properties which are not so to speak, immediately available. Thus iron attracts filings, if it has been treated in a certain way. A proximate disposition can roughly be characterized as one which is immediately available.

Our logical behaviorist, consequently, suggests that

\[
\text{Jones believes that-p = Jones has the settled disposition to have short term, proximate dispositions to think-out-loud that-p, if the question whether-p arises, and he is in a thinking-out-loud frame of mind.}
\]

In other words, our logical behaviorist construes the contrast between fleeting thought episodes and settled beliefs as falling within the broad category of dispositions, and hence construes the 'covertness' of thoughts as simply a special case of the covertness of dispositions. Flammability, he reminds us, is not a covert flame.

Many features of our previous discussion can be fitted into this framework, once its distinctive character is understood. Thus, the behaviorist substitutes for the previous account of the child's candid and spontaneous verbal
behavior as the expression (in the 'causal' sense) of classically conceived episodes of thought, an account according to which a

thinking-out-loud that-p

is simply an 'actualization' of a

short term proximate, disposition to think-out-loud that-p.

In the non-behavioristic model we stipulated that the child be unable to verbalize without thinking the appropriate thought, in other words, that only if it has the mental act of thinking that-p does it utter 'p'. In the behavioristic reconstruction framework, the corresponding stipulation would be that all utterances of 'p' be thinking-out-loud that-p.

Both stipulations could be formulated in the same words, thus 'the child utters "p" only in the course of thinking out loud that-p'. But the two concepts of thinking out loud are radically different. In the non-behavioristic model, the phrase 'thinking-out-loud' referred to thoughts together with their verbal expression. In the behavioristic reconstruction it is to be taken as an unanalyzed expression which means roughly the same as 'candid, spontaneous verbal behavior,' but serves, by its hyphenated mode of composition, to emphasize that the basic meaningfulness of candid, spontaneous verbal behavior is not to be construed in terms of its being the reverberation at the tip of the tongue of covert episodes which are thoughts properly speaking, in accordance with the schema

\[ x \text{ is candid, spontaneous verbal behavior} = \text{is an expression}^{10} \text{ of thought} \]

XIII

It is important not to confuse logical behaviorism with what might be called logical physicalism. I mean by the latter the view which denies that, to quote Chisholm, "when we analyze the kind of meaning that is involved in natural language we need some concepts we do not need in physics or behavioristics."\(^{11}\) Chisholm thinks that to deny the need for such an irreducible concept is tantamount to trying to "analyze the semantics ... of natural language

10. 'Expression' in the causal sense, i.e., a manifestation at the 'surface' of a covert process which is its cause.
in a physicalistic vocabulary of a behavioristic psychology with no undefined semantical term and no reference to thoughts.” 12

In the essay which led to the correspondence from which I am quoting, I had argued that the concept of meaning which belongs in the context

\[ E \text{ (in L) means } - - - \]

is not to be analyzed in terms of a reference to ‘thoughts’. Thus I rejected any analysis along either of the following lines

\[ E \text{ (in L) means } - - - = \textit{candid and spontaneous} \text{ utterances of F causally express thoughts pertaining to } - - - \]

\[ E \text{ (in L) means } - - - = \textit{speakers of L use E} \text{ to express their thoughts pertaining to } - - - \]

where ‘thought’ is to be taken as referring to classically conceived inner episodes or mental acts.

On the other hand, though I denied that ‘means’ in the sense appropriate to the context ‘E (in L) means - - - ’ is to be analyzed (defined) in terms of a reference to thoughts, I also argued that it cannot be analyzed in physicalistic terms. From Chisholm’s point of view this was a blatant attempt to have my cake and eat it. As he saw it, to admit that “to analyze the kind of meaning that is involved in natural language” we need a distinctively semantical term (‘means’) which \textit{cannot} be analyzed in physicalistic terms, but deny that the explication of this distinctively semantical term requires a reference to \textit{thoughts} has all the appearance of paradox.

The correspondence went on at some length, and although some progress was made, the issue was never really joined. As I now diagnose the situation some ten years later, the cause of this failure was my inability to clarify adequately two, points:

(a) The exact nature of statements of the form ‘E (in L) means - - - ’
(b) The exact relation of the concept of meaning to that of thought.

The space which remains is too short to do anything more than indicate the moves I should have made.

My basic move should have been to clarify along the lines of the present paper the distinction between the contexts

12. Ibid.
person expresses
and
utterance expresses.

My second move should have been to give a more adequate clarification of the concept of meaning as it occurs in the context 'expression (in L) means - -' (as contrasted with the context 'person, by uttering E, means - -'). At the time of the correspondence I was unable to do much more than offer the rather cryptic suggestion that statements of this form are (a) sui generis, (b) convey (rather than describe) how the subject expression is used, by exhibiting an expression in the hearer's active vocabulary which has the same job—the idea being that by rehearsing his use of the latter, he will be able to grasp the use of the former. As I have since argued, to say what an expression means is to classify it by the use of a sortal predicate the application of which implies that the expression in question does the job in its language which is done in the speaker's language by an expression from which the predicate is formed. Thus, roughly

'und' (in German) means and

has the form

'und's (in German) are *and*s

where '*'and*' is a sortal predicate of the kind in question.

But above all I should have made it clear that in my view the fundamental concept pertaining to thinking is thinking-out-loud as conceived by our logical behaviorists. This is not to say that I agree with him in rejecting the classical conception of thoughts as inner episodes in a non-dispositional sense. Rather I accept mental acts in something like the classical sense, but argue that the concept of such acts is, in a sense I have attempted to clarify, a derivative concept.

Finally, I should have emphasized my total commitment to the thesis that the concept of thought essentially involves that of intentionality in the follow-


14. The priority in question, to use Aristotle's distinction, is in the order of knowing as contrasted with the order of being. As an analogy, notice that concepts pertaining to things as perceived by the senses are prior in the order of knowing to concepts of micro-physical particles, whereas, (for the Scientific Realist) micro-physical particles are prior in the order of being to objects as perceived by the senses.
ing sense. To say of a piece of verbal behavior that it is a thinking-out-loud, is to commit oneself to say of it that it *means something*, while to say of it specifically that it is a thinking-out-loud that-p, is to commit oneself to say of it that it is a piece of verbal behavior which means p.

Thus, at the primary level, instead of analyzing the intentionality or aboutness of verbal behavior in terms of its expressing or being used to express classically conceived thoughts or beliefs, we should recognize that this verbal behavior is *already thinking in its own right*, and its intentionality or aboutness is simply the appropriateness of classifying it in terms which relate to the linguistic behavior of the group to which one belongs.
Gilbert Harman, in his admirable paper “Three Levels of Meaning,”¹ distinguishes three approaches which different groups of philosophers have taken in attempting to clarify what it is for linguistic expression to have meaning. Each of these approaches finds the Ariadne thread to guide us through the labyrinth of semantics in a different function of language. One group takes as its central theme the idea that language is, so to speak, the very medium in which we think, at least at the distinctively human level. Another finds its clue in the fact of communication. Still another focuses its attention on the kinship between such linguistic acts as stating and promising and a broad spectrum of social practices. Harman correctly, in my opinion, points out that viewed as three attempts to answer one and the same question, these strategies involve serious confusions, and that those who take them to be such have inevitably become entangled in fruitless controversies. He also, somewhat generously, I think, recommends that we view them as attempts to answer three different questions and suggests, accordingly, that we refrain from criticizing any one of them “for failing to do what can be done only by a theory of meaning of another level.”²

². Ibid., p. 71.
Harman calls approaches to meaning of these three types "theories of meaning of level 1, 2 and 3, respectively." Thus, he correctly, I think, considers the approach to meaning which construes language as the medium in which we think to be fundamental, and, accordingly, of "level 1." He argues that "a theory of level 2", i.e. a theory of communication (of thoughts) presupposes a theory of level 1 that would say what various thoughts are. Similarly, a theory of level 3 (e.g., an account of promising) must almost always presuppose a theory of level 2 (since in promising one must communicate what it is one has promised to do). He argues that "a theory of one level does not provide a good theory of another level. A theory of the meaning of thoughts does not provide a good account of communication. A theory of meaning and communication does not provide a good account of speech acts."

Now one need not agree that even distinctively human thinking is literally done 'in words', in order to appreciate the importance of Harman's threelayered approach to theories of meaning. For even if, as I do, one finds a reference to 'inner conceptual episodes' which are only in an analogical sense 'verbal' to be an indispensable feature of what might be called fine-grained psychological explanations, it is nevertheless possible to construe this 'fine-grained' framework as a theoretical enrichment of a 'coarse grained' behavioristic explanatory framework which, from the former point of view, simply *equates* thinking with states which are 'verbal'—if I may so put it—in the literal sense. To be interesting for our purposes this 'coarse grained' framework would have to be methodologically autonomous in the sense that it would contain categories of sense and reference, meaning and truth which could be fully explicated without any reference to non-verbal 'inner conceptual episodes'. Thus, in this behavioristic framework linguistic episodes would be characterized *directly* in semantical terms, i.e. without a reference to the 'inner conceptual episodes' which, from the standpoint of the enriched framework, are involved in a finer grained explanation of their occurrence.

Just as micro-physical theories have typically made use of conceptually independent models at the perceptual level, so, I shall argue, the explanatory function of 'inner conceptual episodes' can be construed as resting upon an autonomous proto-psychological framework in which linguistic activity is described, explained and evaluated without reference to the framework of 'mental acts' which it supports.

With these qualifications, then, the enterprise in which I am engaged is the construction of a 'level 1 theory of meaning' in Harman's sense of this phrase.
I shall refer to what he calls 'thinking in words' as thinking-out-loud. On the assumption that such a proto-psychological framework can be isolated, I shall present it in the guise of a claim that thinking at the characteristically human level simply is what is described by this framework. I shall refer to this claim as Verbal Behaviorism. It is not intended to be an adequate account of thinking; it is, indeed, radically oversimplified. But I believe that it will provide a useful means of clarifying certain key issues in the philosophy of language.

According to VB, thinking 'that-p,' where this means 'having the thought occur to one that-p,' has as its primary sense saying 'p'; and a secondary sense in which it stands for a short term proximate propensity to say 'p'. Propensities tend to be actualized (a logical point about the term); when they are not, we speak of them as, for example, 'blocked'. The VB I am constructing sees the relevant inhibiting factor which blocks a saying that-p as that of not being in a thinking-out-loud frame of mind. If one were theorizing about it, one might use the model of a general 'on-off' switch which gets into the child's 'wiring diagram' when he learns to keep his thoughts to himself.

Again, a thinking-out-loud that-fa is to be construed as a candid utterance (by one who speaks a regimented PMese language) of 'fa' which realizes a fragment of the conceptual functions of 'f' and 'a'; and is related to their other conceptual functions, as a placing of a pawn on a chess board in the course of a game realizes a fragment of the function of a pawn and is related to its other chess functions.

Notice that I have been treating that-clauses as quoted expressions, thus, in the above account

the thought that $2 + 2 = 4$ occurred to Jones

becomes

Jones said (or had a short term proximate disposition to say) $'2 + 2 = 4'$. For, as the verbal behaviorist sees it, if thinking is verbal activity, then ascribing a certain thought to a person by the use of 'indirect discourse' is not simply analogous to, but identical with, telling what someone has said (or was disposed to say).

The above equation of quoting with indirect discourse is, of course, not only parochial, in that it views the latter in the context of only one language—the speaker's. It also fails to take into account the fact that even with respect to one and the same language people can make non-trivially different utterances '$p', '$q', '$r' and nevertheless be correctly described as saying that-p. The clari-
fication of this fact requires an account of similarity of meaning and its relation to indirect discourse.

In any ordinary sense, of course, saying 'p' is an action or performance. From the point of view of this paper, to characterize an utterance as a 'saying', as the verb 'to say' is ordinarily used, permits it to be either a spontaneous thinking-out-loud that-p or a deliberate use of words to achieve a purpose. Here, on the other hand, the verb 'to say' is being used in a contrived sense in which these options are closed, and the utterance specifically construed as a spontaneous or candid thinking out loud. Mental acts in the Cartesian or Aristotelian sense are, of course, not actions, but rather actualities, and consequently the thinkings-out-loud which I am offering as a model for classical mental acts construed as elements in a finer grained explanatory framework must not be thought of as linguistic actions. More accurately, they must not be construed as other-directed or social actions. For, even if individual mental acts, thus the act of thinking that-fa is not itself an action, it may well occur in a sequence of mental acts which as sequence constitutes a mental action, e.g. the action of pondering whether or not to undertake a certain course of action. Correspondingly, the act of thinking-out-loud that-fa may well occur in a sequence of thinkings-out-loud which constitutes the action of pondering-out-loud whether or not to engage in that course of action, even though that pondering-out-loud is not an other-directed or social action. Thus the Verbal Behaviorist can construe actions of pondering-out-loud as the model for the theoretical conception of what it is to ponder in foro interno.

If all full-fledged linguistic episodes were actions, then learning a language would be learning a repertoire of actions. This way of looking at language gives comfort to Cartesians in the following way. Obviously not all thoughts are actions. Indeed such central kinds of thought as perceptual takings, inferences, and volitions are not actions for the simple reason that they are not the sort of thing which can be done intentionally or that one can decide to do. One can decide to look in the next room, but not to take there to be a burglar in the next room. Of course there are mental actions, thus, working on a mathematical problem or pondering what to wear. But as pointed out above, they consist of chains of thoughts which are not themselves actions.

Now if all linguistic episodes were actions, then all conceptually meaningful non-actions would have to be non-linguistic and, hence, thoughts in something like the Cartesian sense. It would be at this non-linguistic level that the thinking would occur by virtue of which linguistic activity could realize intentions and constitute a domain of actions. It is but a step from this to construing language as essentially an instrument for 'expressing thoughts'—
when one is being candid—and, in general, for leading others to believe that one believes that- \( p \) (or intends that- \( p \)), and perhaps intends that they believe that one intends that they so believe, etc. All linguistic episodes would be actions; not just those which are statings, promisings, warnings, etc.

II

One can imagine a child to learn a rudimentary language in terms of which he can perceive, draw inferences, and act. In doing so, he begins by uttering noises which *sound like* words and sentences and ends by uttering noises which *are* words and sentences. We might use quoted words to describe what he is doing at both stages, but in the earlier stage we are classifying his utterances as *sounds* and only by courtesy and anticipation as *words*. Only when the child has got the hang of how his utterances function in the language can he be properly characterized as saying ‘This is a book’ or ‘It is not raining’ or ‘Lightning, so shortly thunder’.

I offer the following as an initial or working description of the thesis I wish to defend. To say *what* a person says, or, more generally, to say *what* a kind of utterance says, is to give a functional classification of the utterance. This functional classification involves a special (illustrating) use of expressions with which the addressee is presumed to be familiar, i.e. which are, so to speak, in his background language. Some of the functions with respect to which utterances are classified are purely intra-linguistic (syntactical), and, in simple cases, are correlated with formation and transformation rules as described in classical logical syntax. Others concern language as a response to sensory stimulation by environmental objects—thus, candidly saying, or having the short term propensity to say, ‘Here is a penny’, or ‘This table is red’. Still others concern the connection of practical thinking with behavior. All these dimensions of functioning recur at the metalinguistic level in the language in which we respond to verbal behavior, draw inferences about verbal behavior and engage in practical thinking about verbal behavior—i.e. practical thinking-out-loud (or propensities to think-out-loud) about thinking-out-loud (or propensities to think-out-loud).

Thus when we characterize a person’s utterances by using a quoted expression, we imply that the utterance is an instance of certain specific ways of functioning. For example, *it* would be absurd to say

Tom *said* (as contrasted with ‘uttered the noises’) ‘It is *not* raining’, but, even in serious frames of mind, and in contexts in which the state of the
weather is of great practical importance, can be disposed to think-out-loud 'It is raining and it is not raining'.

Thus, to characterize a person's utterance by the use of quoted sentences containing logical words is to imply that the corresponding sounds function properly in the verbal behavior in question; and hence to imply that the uniformities characteristic of these ways of functioning are present in his thinkings-out-loud and proximate propensities to think-out-loud.

It should be stressed that the uniformities involved in meaningful verbal behavior include negative uniformities, i.e. the avoidance of certain combinations, as well as positive uniformities, i.e. uniformities of concomitance. Indeed, negative uniformities play by far the more important role, and the rules which govern them are to be construed as constraints rather than incentives.

The functioning which gives the utterances of one who has learned a language their meaning can exist merely at the level of uniformities as in the case of the fledgling speaker. Those who train him, thus his parents, think about these functionings and attempts to ensure that his verbal behavior exemplifies them. In this respect, the trainer operates not only at the level of the trainee, thinking thoughts about things, but also at that higher level which is thinking thoughts about the functions by virtue of which first level language has the meanings it does. In traditional terms, the trainer knows the rules which govern the correct functioning of the language. The language learner begins by conforming to these rules without grasping them himself.

Only subsequently does the language learner become a full-fledged member of the linguistic community, who thinks thoughts (theoretical and practical) not only about non-linguistic items, but also about linguistic items, i.e., from the point of view of VB, about first level thoughts. He has then developed from being the object of training and criticism by others to the stage at which he can train and criticize other language users and even himself. Indeed he has now reached the level at which he can formulate new and sophisticated standards in terms of which to reshape his language and develop new modes of thought.

The key to the concept of a linguistic rule is its complex relation to pattern governed linguistic behavior. The general concept of pattern governed behavior is a familiar one. Roughly it is the concept of behavior which exhibits a pattern, not because it is brought about by the intention that it exhibit this pattern, but because the propensity to emit behavior of the pattern has been selectively reinforced, and the propensity to emit behavior which does not
conform to this pattern selectively extinguished. A useful analogy is the natural selection which results in the patterns of behavior which constitutes the so-called language of bees.4

If patterned governed behavior can arise by 'natural' selection, it can also arise by purposive selection on the part of trainers. They can be construed as reasoning.

Patterned-behavior of such and such a kind ought to be exhibited by trainees, hence we, the trainers, ought to do this and that, as likely to bring it about that it is exhibited.

The basic point to bear in mind is that a piece of patterned governed behavior is as such not an action (though actions can consist of sequences of pattern governed behavior), and is correct or incorrect not as actions are correct or incorrect, but as events which are not actions are correct or incorrect. An obvious example of the latter would be the correctness of feeling sorrow for someone who is bereaved.

'This is red', as a patterned governed response to red objects, is not an action. Yet it is covered by a rule and, indeed, a rule which is involved in the explanation of its occurrence. The rule which directly covers it is, however, an ought-to-be, and it is involved in the explanation by virtue of the fact that it was envisaged by the trainers who assisted the speaker in acquiring his linguistic ability. Trainees conform to ought-to-be's because trainers obey corresponding ought-to-do's.

Essential to any language are three types of pattern governed linguistic behavior.

(1) Language Entry Transitions: The speaker responds to objects in perceptual situations, and in certain states of himself, with appropriate linguistic activity.

(2) Intra-linguistic Moves: The speaker's linguistic conceptual episodes tend to occur in patterns of valid inference (theoretical and practical), and tend not to occur in patterns which violate logical principles.5


5. Note the stress on negative uniformities on page 86.
(3) Language Departure Transitions: The speaker responds to such linguistic conceptual episodes as 'I will now raise my hand' with an upward motion of the hand, etc.

It is essential to note that not only are the abilities to engage in such thinkings-out-loud acquired as pattern governed activity, they remain pattern governed activity. The linguistic activities which are perceptual takings, inferences and volitions never become obeyings of ought-to-do rules. Thus, compare

(A) Jones
All men are mortal
So, no non-mortals are men

(B) Smith
If I am entitled to 'All men are mortal', I am entitled to 'No non-mortals are men'.
I am entitled to the former, I state it thus: All men are mortal
So, I am entitled to the latter, I state it thus: No non-mortals are men

In each case the upshot contains the sequence: 'All men are mortal', 'No non-mortals are men'. But only Jones is inferring the latter from the former. Smith exhibits a piece of practical reasoning about linguistic entitlements which he proceeds to exercise.

It must also be stressed that the concept of pattern should not be interpreted narrowly. Thus, one must include in one's paradigm not only acquiring a propensity to exhibit uniformities of the kind illustrated by the pattern

All - - - is . . .
This is - - -
So, this is . . .

but also propensities of the kind which Wittgenstein describes as 'knowing how to go on'. There are many dimensions of knowing how to go on; and the patterns of recursiveness stressed by structural linguistics are essential to the workings of language. They can, however, and, indeed, must be included in an adequate conception of pattern-governed behavior. Pattern-governed behavior may involve a routine, but it need not be routine.

It is the pattern-governed activities of perception, inference and volition, themselves essentially non-actions, which underlie and make possible the domain of actions, linguistic and non-linguistic. Thus the trainee acquires not only the repertoire of pattern-governed linguistic behavior which is language
about non-linguistic items, but also that extended repertoire which is lan-
guage about linguistic as well as non-linguistic items. He is able to classify
items in the linguistic kinds, and to engage in theoretical and practical rea-
soning about his linguistic behavior. Language entry transitions now include
'This is a "2 + 2 = 4"', as well as 'This is a table'. Language departure transi-
tions include, 'I will say "2 + 2 = 4"', followed by a saying of '2 + 2 = 4', as
well as 'I will raise my hand' followed by a raising of the hand. The trainee
acquires the ability to language about languagings, to criticize languagings,
including his own; he can become one who trains himself.

It would be a mistake to suppose that a language is learned as a layer cake is
constructed: first the object language, then a meta-language, then a meta-meta-
language, etc., or, first, descriptive expressions, then logical words, then ex-
pressions of intention, etc. The language learner gropes in all these dimen-
sions simultaneously. And each level of achievement is more accurately pic-
tured as a falling of things belonging to different dimensions into place, rather
than an addition of a new story to a building.

III

Notice that according to the VB conception of thinking, we can distinguish
clearly between the functional role of utterances and the phonemic description
of the linguistic materials which embody or are the 'vehicles' of these func-
tions. It is a most significant fact that the classical conception of thought as
'inner speech' (Mentalese) draws no such clear distinction between the con-
ceptual functions of Mentalese symbols, and the materials which serve as
the vehicle of these functions. Yet, if the analogy between thinking, classi-
cally construed, and overt linguistic behavior is to be a reasonably positive
one, the idea that there must be inner-linguistic vehicles (materials) would
seem to be a reasonable one. It is often thought that imagery is the vehicle of
Mentalese—but there doesn't seem to be enough imagery to go around. And,
indeed, the idea of imageless thought is by no means incoherent. What might
the vehicle be?

From the point of view of this paper, the classical conception of thoughts

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6. A raising of the hand can be construed, roughly, as a rising of the hand qua something which
can be brought about by a volition to have one's hand rise. By absorption, the latter becomes a voli-
tion to raise one's hand. According to the Verbal Behaviorist, of course, a volition is a thinking out
loud or a proxinate propensity to think out loud, 'I shall . . .'

7. It is perhaps worth noting that the concept of pattern governed linguistic behavior must be
extended to include the recursive know-how involved in 'going up the meta-language hierarchy'.
as pure occurrents is motivated by the familiar attempt to relate changes in *dispositional properties* to changes in *underlying non-dispositional* states. The emptiness of the classical account of thought episodes can be explained by the fact that it uses as its model for the description of the *intrinsic* nature of mental acts (i.e. what they ‘consist of’) aspects of linguistic activity which are largely functional in character.⁸ Thus by and large, it is the *non-functional* aspects of the linguistic model which are, save in their most generic aspects, disregarded. After all, leaving aside functional considerations, thoughts are neurophysiological processes; and this is an idea which no arm-chair philosophizing could turn into cash.

IV

How does ‘that-*fa*’ function in ‘Jones says that-*fa*’ (where ‘says’ is used in the sense of ‘thinks-out-loud’)? To answer this question, we must ask a prior question:

How does “‘*fa*’” function in “Jones says ‘*fa*’”? The answer is that “‘*fa*’” functions as an adverbial modifier of the verb ‘says’. Language can be written, spoken, gesticulated, etc., and ‘says’ serves to pin down the modality of a languaging to utterances. If speech were the only modality, or if we abstract from a difference of modality, we could replace

\[ \text{Jones says } \textit{fa} \]

by

\[ \text{Jones } \textit{fa}s \]

i.e., use the expression-cum-quotes as a verb. Roughly, to ‘*fa*’ would be first to ‘f’ and then to ‘a’.

It is because there is a range of verbal activities involving the uttering of ‘*fa*’ (e.g. asserting, repeating, etc.) that we give it the status of an adverb, and hence, in effect, require that even in the case of sheer thinking-out-loud there be a verb which it modifies. This is one source of the illusion that the concept of uttering ‘2 + 2 = 4’ *assertively* (where the latter does not connote the illocutionary act of asserting) requires the neustic-phrastic distinction.

Although our immediate model for mental acts is thinking-out-loud, and consists, therefore, of linguistic activities of persons, rather than of such lin-

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guistic objects produced by persons as inscriptions or recordings, it will enable us to by-pass central issues in the ontology of substances, acts (events, states) and manners (adverbial entities) if we use as our primary model linguistic objects which are the direct by-products of thinking-in-writing, i.e. inscriptions.

What is it, then, to characterize an inscription as an ‘fa’? Clearly, it is to characterize it as a linear concatenation of an ‘f’ with an ‘a’. Thus the following inscription

\[ fa \]

is an ‘f’ concatenated to the right with an ‘a’. Representing this mode of concatenation by \( \cdot \), the above inscription is an \( f\cdot a \). Thus

\[ An \ fa = an \ f\cdot a = f\cdot a \]

The expressions “‘f’; ‘a’; ‘fa’; ‘f’a’”, are sortal predicates which classify linguistic tokens. The classification is partly descriptive, thus in terms of shape (or sound) and arrangement. It is also and, for our purposes, more importantly functional. Above all, the sortal predicates are ‘illustrating’. Thus

\[ t \]

tells us that \( t \), belonging to a certain language \( L \), is of a descriptive character falling within a certain range of which the design of the item within the single quotes is a representative sample,\(^9\) and also tells us that (if \( t \) is in a primary sense an ‘f’, i.e. is produced by a thinking-in-writing), it is functioning as do items having such designs in language \( L \).

Now it is clearly possible to envisage illustrating sortals which apply to items in any language which (vis-à-vis other expressions in the language to which they belong) function as do the illustrated items in a certain base language, the ability to use which is presupposed. This language, for purposes of philosophical reconstruction, can be equated with our language here and now.

As far as descriptive criteria are concerned, such sortals would require only those most generic features which must be present, in some determinate form or other, in order for expressions to perform the relevant functions. Thus,

\[ (1) \quad 'Oder's (in G) are •or•s \]

9. Cf. ‘a (cat on a mat)’, which has the form ‘a K’.
10. Cf. ‘a (cat) on a (mat)’ which has the form ‘a \( K_1 \) on a \( K_2 \)’.
11. I.e., as Davidson points out, an essential part of the ‘sense’ of the single quotes is to say ‘this item’.
would say of ‘oder’s that they function along with other expressions in German as do •or•s. The criteria which an item must satisfy to be an •or• are a matter of its functioning, in respects deemed relevant as do ‘or’ s in the illustrating language, in the present case a professional dialect of English. Again,

\[ (2) \text{ 'Sokrates's (in German) are •Socrates•s} \]

would say of proper tokens of the name ‘Sokrates’ in German that they are •Socrates•s, where the criterion for being a •Socrates• is to function in thinking-out-loud contexts as do ‘Socrates’s in the illustrating language to which the quoting device is applied. Obviously the sense of ‘name’ relevant to this context is not that of ‘name candidate,’ i.e. the sense in which ‘Sokrates’ might be found in a list of eligible names for race horses. One is tempted to say that the function in question is that of being used to refer to a certain Greek philosopher. But it is a mistake to tie the semantical concept of reference too closely to referring as an illocutionary act.

It would seem a natural extension of the above to apply the above strategy first to predicates

\[ (3) \text{ 'rot's (in G) are •red•s} \]

and then to propositional expressions

\[ (4) \text{ 'a ist rot's (in G) are •a is red•s.} \]

Omitting the copula, as more essential to tense indication than predication, and turning to schematic forms, we might commit ourselves to the idea that

\[ (5) \text{ t is an •fa•} \]

tells us, by the use of the illustrating functional classification, ‘•fa•’, that token \( t \) is functioning in some language as would an ‘f’ concatenated with an ‘a’ in our language.

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12. Note that the criteria for these sortals are flexible, and context dependent. What counts as an •or• in one classificatory context may be classified as like an •or• in another. If Germans were to use ‘oder’ only in the inclusive sense, and we were to use ‘or’ only in the exclusive sense, we might, nevertheless, for some purposes, classify ‘oder’s as •or•s, taking as our criteria what the two functions of ‘or’ as it is actually used have in common. In this case ‘or’ would be a generic functional classification, and we would distinguish its inclusive and exclusive species, though the only species for which we had an illustrating classification would be the latter. In other contexts the criteria for being an •or• might be more specific, thus to function exactly as do the exclusive ‘or’s of the background language. In this case ‘oder’s would not be •or•s, though they would, of course be functionally similar.
V

The above remarks have been based on the idea of an illustrating-functional classification of linguistic objects (inscriptions and the like) which are the products of—as I put it—thinking-in-writing. Before pressing the strategy, it is time to pay a fleeting respect to the fact that the primary mode of being of the linguistic is in the linguistic activity of persons.

Now

(1) Jones said ‘2 + 2 = 4’

is obviously not to be identified with

(2) Jones uttered ‘2 + 2 = 4’

where this simply tells us that Jones produced sounds of a kind conventionally associated with the shape of which those (the ones between the quotes) are samples. What is the difference? The answer clearly has something to do with ‘meaning’. We are tempted to say that (1) = Jones uttered ‘2 + 2 = 4’ as meaning 2 + 2 = 4. This is not incorrect but also not illuminating. Thus consider the following objection of VB:

Surely, it will be said, thinking that-p isn’t just saying that-p—even candidly saying that-p as you have characterized it. For thinking-out-loud that-p involves knowing the meaning of what one says, and surely this is no matter of producing sound!

To this the obvious answer is that there is all the difference in the world between parroting words and thinking-out-loud in terms of words. The difference however, is not that the latter involves a non-linguistic ‘knowing the meaning’ of what one utters. It is rather that the utterances one makes cohere with each other and with the context in which they occur in a way which is absent in mere parroting. Furthermore, the relevant sense of ‘knowing the meaning of words’ (which is a form of what Ryle has called knowing how), must be carefully distinguished from knowing the meaning of words in the sense of being able to talk about them as a lexicographer might—thus, defining them. Mastery of the language involves the latter as well as the former ability. Indeed they are both forms of know how, but at different levels—one at the ‘object language’ level, the other at the ‘meta-language’ level.

To put our finger on what is involved, it will be useful once again to turn our attention away from language as activity to language as product, thus inscriptions, recordings and the like. If we can understand the meaning of
'meaning' in the context, say, of inscriptions, we shall not be far from understanding what it is to speak of the meaning of verbal activity.

Thus, consider the old chestnut,

(3) 'Und' (in German) means and

Two things are to be noted: (a) The subject of this sentence is a singular term. (b) The word with which it ends is an unusual use of the word 'and', for it is not serving as a sentential connective. Let me take up these two points in order.

Many philosophers have succumbed to the temptation to construe the subject of (3) as the name of a linguistic abstract entity, the German word 'und' as a universal which can (and does) have many instances. Yet this is a mistake which can (and does) cause irreparable damage. There are, indeed, many 'und's, and they are, indeed, instances of a certain kind—'und'-kind, we may call it. There are also many lions and they are instances of lion-kind. But it is important to distinguish between two singular terms which are in the neighborhood of the sortal predicate 'lion'. There is, in the first place, the singular term which belongs in the context

... is a non-empty class.

Ordinary language has no neat expression which does this job. The phrase 'the class of lions' will do. But there are also such terms as 'the lion' or 'a lion' or 'any lion'

The lion (or a lion, or any lion) is tawny

where these are roughly equivalent in meaning to

All lions are tawny

Each of these expressions in its standard use in such sentences has 'conversational implicatures,' some of which are relevant to the linguistic examples which I shall shortly be giving. I call such singular terms 'distributive terms' (DSTs).

Thus the correct interpretation of the subject of (3) treats it not as an ab-

13. See my 'Abstract Entities' [reprinted as Chapter 7 of this volume], Review of Metaphysics, 1963, 627–671, reprinted as Chapter 5 in my Philosophical Perspectives (Springfield, Ill.: Charles Thomas, 1968). Notice that I am not saying that all expressions of the form 'the K' which are not definite descriptions of an individual K are DSTs. Thus in 'The lion once roamed the western plains', the subject is not a DST, for, though its sense is roughly equivalent to 'Lions once roamed the western plains', it is not even remotely equivalent to 'All lions once roamed the western plain'.
An abstract singular term which designates an abstract entity, but as a distributive singular term. In other words (3) is, for our purposes, identical in sense with

\[(31) \text{ The (or an, or any) 'und' (in German) means and}\]

or, equivalently, with

\[(32) \text{ 'Und's (in German) mean and.}\]

The second point to be noted about (3) was that it involved an atypical use of the word 'and', for it is clearly not functioning as a sentential connective. A natural move is to construe the context as a quoting one. This idea may tempt one to rewrite (3) as

\[(33) \text{ 'Und' (in German) means 'and'}\]

but quoting contexts are often such that to leave them unchanged while adding quotes to the quoted item changes the sense. And it is clear that (3) doesn't merely tell us that 'und' and 'and' have the same meaning, it in some sense gives the meaning. I have argued that the correct analysis of (3) is

\[(34) \text{ 'und's (in German) are •and•s}\]

where to be an •and• is to be an item in any language which functions as 'and' does in our language. Roughly to say what an expression means is to classify it functionally by means of an illustrating sortal.\(^{14}\)

According to this analysis, meaning is not a relation for the very simple reason that 'means' is a specialized form of the copula.\(^{15}\) Again, the meaning of an

\(^{14}\) It is, of course, an over-simplification to speak of 'the' function of a certain expression in a given language. Classifications are always relative to a purpose. Various devices can be used to make it clear which functions of the word which is used to form an illustrating sortal are serving as criteria for its application. As was pointed out in note 12, the use of illustrating sortals is flexible, criteria of application shifting with context and purpose. Thus the mere fact that a token is classified as a 'simultaneous' (means simultaneous) need not pin it down to either the function of 'simultaneous' in a relativistic corpus or its function in a classical corpus. On the other hand the context of classification may so pin it down. In the former case, 'simultaneous' (means simultaneous) is a generic functional classification and would have as its species 'relativistic •simultaneous•' (means simultaneous [relativistic]) and 'classical •simultaneous•' (means simultaneous [classical]).

\(^{15}\) I am assuming, of course, without argument, that the copula 'is' does not stand for an 'ontological nexus' (exemplification). The theory of predication is the crux of ontology. I have posed the issues in "Naming and Saying" [reprinted as Chapter 5 of this volume], Chapter 7 of Science, Perception and Reality (London, 1963). Notice that from my point of view Bergmann is (mis-)perceptive but consistent when he treats meaning as a nexus. See his "Intentionality," in Semantica (Rome, 1955), reprinted in Meaning and Existence (Madison, 1960), pp. 3–38.
expression is its ‘use’ (in the sense of function), in that to say what an expression means is to classify it by means of an illustrating functional sortal.

Notice that instead of ‘giving’ the complex function of ‘und’ (in German) by using an illustrating functional sortal, we could, instead, have listed the syntactical rules which govern the word ‘und’ in the German language. In general the rule governed uniformities which constitute a language (including our own) can be exhaustively described without the use of meaning statements, including those to be discussed below. In practice, the use of meaning statements (translation) is indispensable, for it provides a way of mobilizing our linguistic intuitions to classify expressions in terms of functions which we would find it difficult if not (practically) impossible to spell out in terms of explicit rules.

The above discussion of ‘means’ is but the entering wedge for the resolution of our problem. It provides the essential clues, but its significance is not yet manifest. For there are other ways of making meaning statements than by the use of ‘means’. And it is these other ways which have generated much of the confusion and perplexity which are characteristic of the controversy over conceptual change.

Thus consider

(4) ‘Dreieckig’ (in German) stands for triangularity

According to appearances (surface grammar) the following seem to be the case: (a) ‘Triangularity’ is a name. (b) It refers to a nonlinguistic entity. (c) Stands for is a relation which, given the truth of (4), holds between a linguistic and a nonlinguistic entity. I shall argue that (a), (b) and (c) merely seem to be the case, and that, contrary to the general opinion, to ‘countenance’ statements like (4) is not to commit oneself to a Platonistic ontology.

The point grows directly out of our previous account of ‘means’ sentences. For there we encountered two ideas which can be put to good use; (a) ‘Means’ is a specialized form of the copula; (b) What follows ‘means’ is to be construed as a metalinguistic sortal. (c) The subject of a ‘means’ statement is a metalinguistic distributive singular term. To put these ideas to work all we need to do is to construe ‘triangularity’ as a metalinguistic distributive singular term, and ‘stands for’ as another (and more interesting) specialized copula.

Consider the following sentence, which is of a kind to which logicians have paid little attention

(5) The pub is the poor man’s club

How are we to understand the copula ‘is’. Only a most superficial reading would take (5) to be a statement of identity. Surely we have here a statement
involving two distributive singular terms formed, respectively, from the sortals 'pub' and 'club'. It has the form

\[(6) \text{ the } K_1 \text{ is the } \phi K_2\]

and is roughly equivalent to

\[(5^1) \text{ Pubs are poor men's clubs}\]

I propose, therefore, that we read (4) as

\[(4^1) \text{ The 'dreieckig' is the German •triangular•}\]

which transforms into

\[(4^2) \text{ 'Dreieckig's are German •triangular•s}\]

or, which is the same thing,

\[(4^3) \text{ 'Dreieckig's (in German) are •triangular•s}\]

According to this interpretation, (4) is simply another way of doing what is done by (3) i.e. giving a functional classification of certain inscriptions belonging to the German language. What is the point of having this second way? The answer is simple: because this way of doing the job relates the classification to the truth context

\[(7) \text{ Triangularity is true of a}\]

which tells us, in first approximation, that

\[(8) \text{ Expressions consisting of a •triangular• appropriately concatenated with an •a• are true.}\]

In general, I suggest that so-called nominalizing devices which, when added to expressions, form corresponding abstract singular terms, thus 'ity', 'hood', 'ness', 'tion', 'that ...' etc., are to be construed as quoting contexts which (a) form metalinguistic functional sortals, and (b) turns them into distributive singular terms.

Thus 'triangularity' merely looks (to the eye bewitched by a certain picture) to be a name. It merely looks as though it referred to something non-linguistic. Applying to expressions in any language which do a certain job, its interlinguistic reference is confused with a non-linguistic reference. Again 'stands for' merely seems to stand for a relation. It is, as 'means' proved to be, a specialized form of the copula.
VI

Clearly the present occasion does not permit a systematic development of the semantical theory to which the preceding is but the preface. Yet it is not difficult to see its outlines, and enough has been said above to prepare the way for its application to specific problems.

Notice, for example, the new look of the problem of 'identity conditions for attributes'. Since talk about attributes is talk about linguistic 'pieces', and not about platonic objects, identity means sameness of function, and belongs in a continuum with similarity of function.

Thus, after studying two games which use physically different materials and motions, we might decide that the two games are the 'same' i.e. that we can find an abstract specification of correct and incorrect moves and positions such that it picks out for both games the moves and positions which are correct or incorrect according to their less abstractly formulated rules.

And by virtue of this fact, we could say, for example, that the Dame of one game is the Queen of the other. By parity of reasoning, we can say that

\[ f\text{-ness} = g\text{-ness} \text{ if and only if the rules for } \cdot f\cdot \text{s are the same as the rules for } \cdot g\cdot \text{s} \]

One can also make sense of the idea that bishops are more like castles than they are like knights. Indeed, we are all accustomed to making judgements of this kind. 'The bowler in cricket is like the pitcher in baseball'. We decide similarity of 'pieces' with reference to the roles they are given by the rules.

Let us now look at likeness of meaning from a somewhat different direction. Consider the familiar fact that isosceles triangularity and scalene triangularity are species of triangularity. In our framework this is spelled out as the fact that

\[ \cdot \text{isosceles triangular}\cdot \text{s} \]

and

\[ \cdot \text{scalene triangular}\cdot \text{s} \]

consist of a common predicate (a 'triangular•') concatenated with a modifier (an 'isosceles•', a 'scalene•') in such a way that 'triangular•', 'isosceles triangular•', and 'scalene triangular•' constitute a fragment of a system of geometrical classification.¹⁶

¹⁶. The questions, 'what is a predicate? a predicate modifier? concatenation?' are of the greatest importance. On the present occasion, there is nothing to do but rely on intuitive considerations.
The important point is that isosceles triangularity is to be construed as (isosceles triangular)-ity, the scope of the quoting context ‘-ity’ being indicated by the parentheses. Contrast this with the contrast between Euclidean triangularity and Riemannian triangularity. Here the scope of ‘-ity’ is simply ‘triangular’. Thus to talk about Euclidean triangularity is to talk not about

•Euclidian triangular•s

but about

Euclidian •triangular•s

i.e. inscriptions which function as does our word ‘triangular’ when it is governed by specifically Euclidian principles.

Thus it is important to note that the use of the illustrating device to form functional sortals involves an important flexibility. Not all aspects of the functioning of the illustrating expression need be mobilized to serve as criteria for its application. Thus consider

Euclidian triangularity and Riemannian triangularity are varieties of triangularity

This becomes

Euclidian •triangular•s and Riemannian •triangular•s are varieties of •triangular•

It is clear that the functioning of the illustrating word ‘triangular’ which is relevant to something’s being a •triangular• is a generic functioning which abstracts from the specific differences between Euclidian and Riemannian geometries.

Compare

Classical negation and intuitionistic negation are varieties of negation.

Here again the context makes clear just what aspects of the functioning of the illustrating term is being mobilized by the abstract singular term into which it is built. It is our intuitive appraisal of the functional similarity of expressions in different linguistic structures which grounds our willingness to make statements of this form.

I have often been asked, what does one gain by abandoning such standard platonic entities as triangularity or that $2 + 2 = 4$ only to countenance such exotic abstract entities as functions, roles, rules and pieces. The answer is, of course, that the above strategy abandons nothing but a picture. Triangularity is
not abandoned; rather 'triangularity' is seen for what it is, a metalinguistic dis-
tributive singular term.

And once the general point has been made that abstract singular terms are
metalinguistic distributive singular terms, rather than labels of irreducible
eternal objects, there is no reason why one should not use abstract singular
terms and categories of abstract singular terms in explicating specific prob-
lems about language and meaning. For just as talk about triangularity can be
unfolded into talk about •triangular• inscriptions, so talk about any abstract
entity can be unfolded into talk about linguistic or conceptual tokens.
II

ABSTRACT
ENTITIES
The essay adopts the Tractarian view that configurations of objects are expressed by configurations of names. Two alternatives are considered: The objects in atomic facts are (1) without exception particulars; (2) one or more particulars plus a universal (Gustav Bergmann). On (1) a mode of configuration is always an empirical relation: on (2) it is the logical nexus of 'exemplification'. It is argued that (1) is both Wittgenstein's view in the Tractatus and correct. It is also argued that exemplification is a 'quasi-semantical' relation, and that it (and universals) are "in the world" only in that broad sense in which the 'world' includes linguistic norms and roles viewed (thus in translating) from the standpoint of a fellow participant.

I

The topics I am about to discuss have their roots in Wittgenstein's Tractatus. My point of departure will be Professor Irving Copi's paper on "Objects, Properties and Relations in the Tractatus" in which, after a decisive critique of certain misinterpretations of Wittgenstein's so-called picture theory of meaning with particular reference to relational statements, he proceeds to attribute to Wittgenstein, on the basis of a by no means implausible interpretation of certain texts, a puzzling construction of Wittgenstein's objects as 'bare particulars'.

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2. Ibid., p. 16.
I shall not waste time by formulating the misinterpretations in question and summarizing Copi's admirably lucid critique. For my concern is with the theory of relational statements as pictures which, in my opinion, he correctly attributes to Wittgenstein, and, specifically, with the power of this theory to illuminate traditional philosophical puzzles concerning predication generally.

The crucial passage, of course, is 3.1432, "We must not say: 'The complex sign "aRb" says "a stands in the relation R to b"'; but we must say, 'That "a" stands in a certain relation to "b" says that aRb.'" Part of Wittgenstein's point is that though names and statements are both complex in their empirical character as instances of sign designs, and hence, from his point of view, are equally facts, the fact that a name consists (in various ways) of related parts is not relevant to its character as name in the way in which the division of such a statement as (schematically)

\[ aRb \]

into just the parts 'a', 'R' and 'b' is to its character as making the statement it does. The latter parts are themselves functioning (though not in the same way) as signs, whereas no part of a name is functioning as a sign. But the crucial point that Wittgenstein is making emerges when we ask 'What are the parts of the statement in question the relation of which to one another is essential to its character as statement?' For in spite of the fact that the obvious answer would seem to be 'the three expressions "a", "R" and "b";' this answer is incorrect. 'R' is, indeed, functioning in a broad sense as a sign, and is certainly involved in the statement's saying what it does, but it is involved, according to Wittgenstein, in quite a different way than the signs 'a' and 'b'. To say that 'R' is functioning as a predicate, whereas 'a' and 'b' are functioning as names, is to locate the difference, but to remain open to perplexity. What Wittgenstein tells us is that while superficially regarded the statement is a concatenation of the three parts 'a', 'R' and 'b', viewed more profoundly it is a two-termed fact, with 'R' coming in to the statement as bringing it about that the expressions 'a' and 'b' are dyadically related in a certain way, i.e. as bringing it about that the expressions 'a' and 'b' are related as having an 'R' between them. And he is making the point that what is essential to any statement which will say that aRb is not that the names 'a' and 'b' have a relation word between them (or before them or in any other relation to them), but that these names be related (dyadically) in some way or other whether or not this involves the use of a third sign design. Indeed, he is telling us that it is philosophically clarifying to recognize that instead of expressing the proposition that a is next to b by writing 'is next to' between 'a' and 'b', we could write 'a' in some relation to 'b' us-
ing only these signs. In a perspicuous language this is what we would do. Suppose that the Jumblies have such a language. It contains no relation words, but has the same name expressions as our tidied up English. Then we could translate Jumblese into English by making such statements as

\[
\text{`a}\overset{\circ}{b} (\text{in Jumblese}) \text{ means } a \text{ is next to } b
\]

and be on our way to philosophical clarification. Of particular interest in this connection would be the Jumblese translation of *Appearance and Reality*.

It will be noticed that I have correlated the fact that in `aRb` the `R` plays the predicate role with the fact that in Jumblese the proposition expressed by `aRb` would be expressed by relating the two names without the use of a predicate expression. Now in Frege's system, `R` would be said to stand for (*bedeuten*) a concept, whereas `a` and `b` stand for objects. Thus what Wittgenstein puts by saying that configurations of objects are represented by configurations of names (3.21)—so that Jumblese `\overset{\circ}{b}` and PMese `aRb` are equally configurations of two names, though the latter is not perspicuously so—could also be put by saying that to represent that certain objects satisfy an n-adic concept, one makes their names satisfy an n-adic concept. Roughly, Wittgenstein's configurations are the counterparts of a sub-set of Frege's concepts, and Wittgenstein is taking issue with Frege by insisting that a perspicuous language would contain no concept words functioning predicatively, that is to say, as `R` functions when we say that aRb. How a perspicuous language would do the job done by concept words in their non-predicative use is something on which Wittgenstein throws less light, though his sketchy treatment of the parallel problem of how a perspicuous language would handle belief statements in which, according to Frege, the *Bedeutung* of the subordinate clause is what would ordinarily be its sense, gives some clue to the answer.

Now the above remarks adumbrate many topics of importance for ontology and the philosophy of logic. Some of them I shall pick up at a later stage in the argument. For the moment, however, I shall concentrate on the question, 'What sort of thing are Wittgenstein's objects?' And the first thing I shall say is that in my opinion Copi is undoubtedly right in insisting that Wittgenstein's objects are particulars. To put the same point in a somewhat different way, Wittgenstein's names are names of particulars. This is not to say, of course, that expressions which function in unperspicuous languages in a superficially name-like way, but do not name particulars, are meaningless. It

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3. Which n-adic concept the names are made to satisfy is, of course, as philosophers use the term, a matter of convention.
is simply to say that they would not translate into the names of a perspicuous language. Roughly, unperspicuous name-like expressions fall into two categories for Wittgenstein: (1) Those which would translate into a perspicuous language as, on Russell's theory of descriptions, statements involving descriptive phrases translate into unique existentials (compare Wittgenstein's treatment of complexes in 3.24); (2)—which is more interesting—those which would not translate at all into that part of a perspicuous language which is used to make statements about what is or is not the case in the world. It is the latter which are in a special sense without meaning, though not in any ordinary sense meaningless. The 'objects' or 'individuals' or 'logical subjects' they mention are pseudo-objects in that to 'mention them' is to call attention to those features of discourse about what is or is not the case in the world which 'show themselves', i.e. are present in a perspicuous language not as words, but in the manner in which words are combined. Thus it is perfectly legitimate to say that there are 'objects' other than particulars, and to make statements about them. These objects (complexes aside) are not in the world, however, nor do statements about them tell us how things stand in the world. In Wittgenstein's terminology no statements about such objects are 'pictures', and, therefore, in the sense in which 'pictures' have sense they are without sense.

Now one can conceive of a philosopher who agrees with Wittgenstein that in a perspicuous language the fact that two objects stand in a dyadic relation would be represented by making their names stand in a dyadic relation, but who rejects the idea that the only objects or individuals in the world are particulars. Such a philosopher might distinguish, for example, within the fact that a certain sense-datum (supposing there to be such entities) is green, between two objects, a particular of which the name might be 'a', and an item which, though equally an object or individual, is not a particular. Let us suppose that the name of this object is 'green'. Let us say that green is a universal rather than a particular, and that among universals it is a quality rather than a relation. According to this philosopher, the perspicuous way of saying that a is green (abstracting from problems pertaining to temporal reference) is by putting the two names 'a' and 'green' in some relation, the same relation in

4. One is reminded of the peculiar objects which, according to Frege, one talks about when one attempts to talk about concepts.

5. I shall subsequently discuss the dangers involved in the use of color examples with particular reference to the interpretation of color words as names.

6. The philosopher I have in mind is Professor Gustav Bergmann and the views I am discussing are those to be found, I believe, in certain passages of his interesting paper on "Ineffability, Ontology and Method" which appeared in the January 1960 number of the Philosophical Review.
which we would put 'b' and 'red' if we wished to say that b is red. Let us suppose that we write 'Green a'.

Our previous discussion suggests the question: What would be the unperspicuous way of saying what is said by 'Green a', i.e. which would stand to 'Green a' as, on Wittgenstein's view 'aRb' stands to, say, 'b'? The philosopher I have in mind proposes the following answer:

a exemplifies green

And this is not unexpected, for where, as in this case, two objects are involved, what is needed for the purpose of unperspicuity is a two place predicate which is appropriately concatenated with the name of a particular on one side and the name of a universal on the other, and this is one of the jobs we philosophers pay "exemplifies" to do. Thus this philosopher would be saying that as on Wittgenstein's view the perspicuous way of saying that a is next to b is by writing 'a' in some relation to 'b', so the perspicuous way of saying that a exemplifies green is by writing 'a' in some relation to 'green'. Having thus made use of Wittgenstein's ladder, he would climb off on to his own pinnacle. For he must claim that Wittgenstein made a profound point with the wrong examples. He must, in short, deny that the perspicuous way of saying that a is next to b is by writing 'a' in some relation to 'b'. That this is so is readily seen from the following considerations.

Exemplification is not the sort of thing that philosophers would ordinarily call an empirical relation. This title is usually reserved for such relations as spatial juxtaposition and temporal succession. Yet exemplification might well be an—or perhaps the—empirical relation? in a more profound sense than is usually recognized, as would be the case if the simplest atomic facts in the world were of the kind perspicuously represented by 'Green a' and unperspicuously represented by 'a exemplifies green'.

For let us see what happens to what we ordinarily refer to as empirical relations if relational statements are approached in a manner consistent with the above treatment of 'a is green'. According to the latter, the fact that a is green is perspicuously represented by the juxtaposition of two names, 'a' and 'green', and unperspicuously represented by a sentence which contains three expressions, two of which are names, while the third, which might be taken by unperceptive philosophers to be a third name, actually serves the purpose of bringing it about that a distinctive dyadic relation obtains between the names. It is clear, then, that the parallel treatment of 'a is below b' would claim that it

is perspicuously represented by a suitable juxtaposition of *three* names, ‘a’, ‘b’ and ‘below’, thus,

Below a b

and unperspicuously represented by a sentence which uses *four* expressions, thus, perhaps

Exempl* a b below

I will comment later on the interpretation of ‘below’ as a name, and on the fact that it is *prima facie* less plausible than the similar move with respect to ‘green’. I should, however, preface the following remarks by saying that I share with Professor Bergmann the sentiment which might be expressed by saying that ordinary grammar is the paper money of wise men but the gold of fools. For my immediate purpose is to contrast the Tractarian theory of predication with that of Professor Bergmann, who, though he decidedly prefers Saul to Paul, is by no means an orthodox exponent of the old testament; and I regard the point as of great philosophical significance.

According to the *Tractatus*, then, the fact that a is below b is *perspicuously* represented by an expression consisting of *two* names dyadically related, and *unperspicuously* represented by an expression containing, in addition to these two names, a two-place predicate expression. According to Professor Bergmann, if I understand him correctly, such facts as that a is below b are perspicuously represented by expressions consisting of *three* names triadically related, and unperspicuously represented by an expression containing, in addition to these three names (suitably punctuated) an expression having the force of ‘exemplifies’. What exactly does this difference amount to? And which view is closer to the truth?

To take up the first question first, the difference can be reformulated in such a way as to bring out its kinship with the old issue between realists and nominalists. Wittgenstein is telling us that the only objects in the world are particulars, Bergmann is telling us that the world includes as objects both particulars and universals. Bergmann, of course, has his own razor and in his own way gives the world a close shave, but not quite as close as does Wittgenstein. Another way of putting the difference is by saying that whereas

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8. I use this way of putting the matter to make the point with minimum fuss and feathers. It is worth reflecting, however, that the grammatical parallel to ‘a exemplifies green’ would be either ‘a exemplifies being below b’ or ‘a and b jointly exemplify below-ness (the relation of one thing being below another)’.
for Wittgenstein (Saul) it is empirical relations in the world that are perspicuously expressed by relating the names of their relata, for Bergmann empirical relations appear in discourse about the world as nominata, and it is exemplification and only exemplification which is perspicuously expressed by relating the names of its relata.

To clarify the latter way of putting the matter, some terminological remarks are in order. If we so use the term 'relation' that to say of something that it is a relation is to say that it is perspicuously represented in discourse by a configuration of expressions rather than by the use of a separate expression, then for Bergmann there is, refinements aside, only one relation, i.e. exemplification, and what are ordinarily said to be relations, for example below, would occur in the world as relata. Thus if we were to continue to use the term 'relation' in such a way that below would be a relation, then exemplification, as construed by Bergmann would not be a relation. For although, as he sees it, both below and exemplification are in the world, the former appears in discourse as a nominatum, whereas exemplification does not, indeed can not.

To keep matters straight, it will be useful to introduce the term 'nexus' in such a way that to say of something that it is a nexus is to say that it is perspicuously represented in discourse by a configuration of expressions rather than by a separate expression. If we do this, we can contrast Bergmann and Wittgenstein as follows:

**Wittgenstein:** There are many nexus in the world. Simple relations of matter of fact are nexus. All objects or individuals which form a nexus are particulars, i.e. individuals of type 0. There is no relation or nexus of exemplification in the world.

**Bergmann:** There is only one\(^9\) nexus, exemplification. Every atomic state of affairs contains at least one (and, if the thesis of elementarism be true, at most one) individual which is not a particular.

If one so uses the term 'ineffable' that to eff something is to signify it by using a name, then Wittgenstein's view would be that what are ordinarily called relations are ineffable, for they are all nexus and are expressed (whether perspicuously or not) by configurations of names. For Bergmann, on the other hand, what are ordinarily called relations are effed; it is exemplification which is ineffable.

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\(^9\) Strictly speaking, there would be a relation of exemplification for each order of fact, and, on non-elementaristic views, a family of such relations for each type.

\(^{10}\) See note 9.
Before attempting to evaluate these contrasting positions, let us beat about the neighboring bushes. And for a start, let us notice that Wittgenstein tells us that atomic facts are configurations of objects, thus

2.0272 The configuration of the objects forms the atomic fact.

The question I wish to raise is how strictly we are to interpret the plural of the word ‘object’ in this context. Specifically, could there be a configuration of one object? It must be granted that an affirmative answer would sound odd. But, then, it sounds odd to speak of drawing a conclusion from a null class of premises. Philosophers of a ‘reconstructionist’ bent have often found it clarifying to treat one thing as a “limiting case” of another; and if Russell, for one, was willing to speak of a quality as a monadic relation, there is no great initial improbability to the idea that Wittgenstein might be willing to speak of a monadic configuration.

Would he be willing to do so? The question is an important one, and calls for a careful examination of the text. I do not think that 2.0272, taken by itself, throws much light on the matter. Yet when it is taken together with such passages as

2.031 In the atomic fact the objects are combined in a definite way

2.03 In the atomic fact objects hang in one another like the members of a chain

which are accompanied by no hint that there might be monadic ‘combinations’ or, so to speak, chains with a single link, the cumulative effect is to buttress the thesis that there is no provision in the Tractatus for monadic atomic facts.

Yet at first sight, at least, this would not seem to be inevitable. After all, one who says that the fact that a is below b would be perspicuously represented by an expression in which the name ‘a’ stands in a dyadic relation (to ‘b’) might be expected to say that the fact that a is green would be perspicuously represented by an expression in which the name ‘a’ stands in a monadic relation, i.e., in a more usual way of speaking, is of a certain quality. Thus one can imagine a philosopher who says that in a perspicuous language, monadic atomic facts would be represented by writing the name of the single object they contain in various colors or in various styles of type. The idea is a familiar one. Is there any reason to suppose that it was not available to Wittgenstein?
One line of thought might be that in such a symbolism we could not distinguish between a name and a statement. After all, a name has to be written in some style or other, and if so, wouldn't every occurrence of a name, in this hypothetical symbolism, have by virtue of its style the force of a statement, and therefore not be a name at all? This objection, however, overestimates the extent to which empirical similarities between expressions imply similarity of linguistic role. Obviously, writing 'a' alongside 'b' might be saying that a temporally precedes b, whereas an 'a' below a 'b' might have no meaning at all. Thus, to write 'a' in boldface might be to say that a is green, whereas an 'a' in ordinary type might function merely as a name. How this might be so will be discussed later on. My present point is simply that to understand expressions is to know which of the many facts about them (shape, size, color, etc.) are relevant (and in what way) to their meaning. It could surely be the case that in a perspicuous language the fact that a heap of ink was a token of a certain name was a matter of its being an instance of a certain letter of the alphabet written in one or another of a certain number of manners. But one or more of these manners might be, so to speak, 'neutral' in that to write the name in such a manner would not be to make an assertion, but simply to write the name, whereas to write the name in other manners would be to make various assertions. Only, then, in the case of the non-'neutral' manners would the writing of the name be the assertion of a monadic fact.

Another line of thought would be to the effect that in a language in which monadic atomic facts (if such there be) were expressed by writing single names in various manners, there would be a difficulty about variables—not about variables ranging over particulars, for here the device of having special letters for variables could be used, but about variables such as would be the counterparts of the monadic predicate variables of Principia notation. Thus we could represent the sentential function 'x is green' by using the variable 'x' and writing it in boldface, thus

\[ x \]

But how would one say of a that it was of some quality or other? What would correspond to 'a is f' and '(Ef) a is f' as 'x' to 'x is green' and '(Ex) x' to '(Ex) x is green'? Would we not have to introduce an expression to be the variable—after all, one can't write a manner by itself—and if one has separate variables to make possible the expression of what would be expressed in PMese by

\[ (Ef) fa, (g) gb, \text{etc.} \]
i.e. variables other than those which range over *particulars*, would this not be, in effect, to treat the atomic propositions which are supposedly represented perspicuously by, for example,

\[ a \]

as involving two *constants*, and hence two *names*? Must not its truly perspicuous representation be rather

\[ \text{Green } a \]

as Bergmann claims?

Consider the following schema for translation from PMese into Jumblese:

<table>
<thead>
<tr>
<th>PMese</th>
<th>Jumblese</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Names of particulars</strong></td>
<td>The same letters written in a variety of neutral styles, the variety being a matter of height, the neutrality a matter of the use of the ordinary font: a, b, c, . . .; a, b, c, . . .; a, b, c, . . .</td>
</tr>
<tr>
<td>a, b, c, . . .</td>
<td>a, a, . . .</td>
</tr>
</tbody>
</table>

**II. Statements** (not including relational statements, which will be discussed shortly):

\[ \text{Green } a, \text{ red } a, . . . \]

**III. Statement functions**

1. *Predicate constant, individual variable*:
   \[ \text{Green } x, \text{ red } y, . . . ~ x, y, . . . \]

2. *Predicate variable, individual constant*:
   \[ f a, g b, . . . ~ \text{Name s in neutral styles (see I): } a_2, . . .; a, . . .; a, . . . \]

3. *Predicate variable, individual variable*:
   \[ f x, g y, . . . ~ \text{Name variables in neutral styles: } x_2, y_2, . . .; x, y, z, . . .; x, y, z, . . . \]

**IV. Quantification**

\[ \text{(Ex) green } x \]
\[ \text{(Ef) } f a, (\text{Eg) } g a, . . . \]
\[ \text{(Ef) (Ex) } f x, (\text{Eg) (Ex) } g x, . . . \]
\[ \text{(E1) (Ex) } x, . . . \]
Notice that in the final samples of Jumblese, the (-shaped symbols serve to represent a neutral style; which depends on its size.

It is to be noted that in this form of Jumblese, the neutral styles by virtue of which an expression functions as a name without making a statement is also the neutral style which is illustrated by the expressions serving as the counterparts of the predicate variables of PMese. It is therefore an interesting feature of this form of Jumblese that expressions which function as names but not as statements have the form of a statement. It is often said with reference to PMese that the form of a predicate is, for example,

Red x

It is less frequently said that the form of a name is, for example,

fa

In the variety of Jumblese sketched above, the latter would be as true as the former. (Cf. Tractatus 3.311.)

This point clearly should be expanded to take account of the forms of relational statements, but I shall not attempt to do this, save by implication, on the present occasion.

Now the difficulty, if there is one, pertaining to predicate variables is not limited to predicate variables pertaining to these putative monadic atomic statements. If there were a point to be made along the above line, it would pertain as well to dyadic and polyadic statements as Wittgenstein interprets them. Thus, to continue with our translation schema, we have:

<table>
<thead>
<tr>
<th>PMese</th>
<th>Jumblese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larger (ab), Redder (ab)</td>
<td>$^a_b$, $^a_b$</td>
</tr>
<tr>
<td>R(ab), S(ab), T(ab), . . .</td>
<td>ab, a b, a b, . . .</td>
</tr>
<tr>
<td>Larger (xy), Redder (xy), . . .</td>
<td>$^x_y$, $^x_y$ . . .</td>
</tr>
<tr>
<td>R(xy), S(xy), . . .</td>
<td>xy, x y, x y, . . .</td>
</tr>
<tr>
<td>(Ex) (Ey) Larger (xy)</td>
<td>(Ex) (Ey) $^x_y$</td>
</tr>
<tr>
<td>(ER) R(ab), (ES) S(ab), . . .</td>
<td>(E .) ab, (E .) a b, . . .</td>
</tr>
<tr>
<td>(ER) (Ex) (Ey) R(xy)</td>
<td>(E .) (Ex) (Ey) xy</td>
</tr>
</tbody>
</table>

Here again we find the introduction of symbols to be the counterparts of the relation variables of PMese, i.e. symbols which illustrate the neutral manners which are used in

ab, a b, a b, a b, etc.

to express what is expressed in PMese by the statement functions

R(ab), S(ab), T(ab), etc.
Thus, in addition to the variables '(', ')', ',', '...', which correspond to the one place predicate variables of Principia, we have the variables '...', '...', to correspond to the dyadic predicate variables of Principia.

The topic of perspicuousness with respect to variables and quantification is an interesting and important one in its own right, and the above remarks have barely scratched the surface. The only point I have wanted to make is that if considerations pertaining to quantification or to distinguishing between names and statements support the idea that the atomic statements of a perspicuous language must contain at least two names, these considerations would do so not by supporting the idea that a minimal atomic statement would contain the names of two particulars, but by supporting the idea that it would contain the name of a universal. In other words, they would point to Bergmann's form of logical atomism as contrasted with that of Wittgenstein.

Now I side with Wittgenstein on this matter, that is to say I would argue that the atomic descriptive statements of an ideal language would contain names of particulars only. As I see it, therefore, it is of crucial importance to ontology not to confuse the contrast between constant and variable with that between name and variable. For to confuse these two contrasts is to move from the correct idea that

Green a

can be viewed against the doubly quantified statement

$$\text{(Ef) (Ex) fx}$$

to the incorrect idea that

Green a

is the juxtaposition of two names, and says perspicuously what would be unperspicuously said by

a exemplifes green.

To view the Jumblese statement

a

against the doubly quantified statement

$$\text{(E(}x\text{)) x}$$
is, indeed, to highlight two facts about the expression 'a', the fact by virtue of which it is a writing in some style or other of a certain name, and the fact by
virtue of which, to speak metaphorically, green comes into the picture. But I see no reason to infer that because the expression's being a case of a certain name, and the expression's pertaining to green are each bound up with a monadic (though not, of course, atomic) fact about the expression, that both its being about a and its being about green come into the picture in the same way, i.e. that they are both named.

For the being about a and the being about green could each be true of the expression by virtue of monadic facts about it, and still not pertain to its meaning in the same way in any more important sense. The crucial thing about an expression is the role it plays in the language, and the fact that a certain expression is an 'a' in some style or other, and the fact that it is in bold-face, may both be monadic facts and yet play different roles in the language. In which connection it is relevant to note that the monadic fact about the expression by virtue of which it pertains to green is not the monadic fact that it is thick, but the monadic fact that it is a thick instance of a name or name variable.

II

Before continuing with the substantive argument of this paper, I shall say something more to the historical question as to whether Wittgenstein himself 'countenanced' monadic atomic facts. I have argued that the passages in which he speaks of atomic facts as configurations of objects (in the plural) are not decisive, by pointing out that Russell might have spoken of atomic facts as related objects, but have so used the term 'relation' that one could speak of monadic relations. It seems to me that similar considerations prevent such passages as

2.15 That the elements of the picture are combined with one another in a definite way represents that the things are so combined with one another.

3.21 To the configuration of the single signs in the propositional sign corresponds the configuration of the objects in the state of affairs.

from deciding the issue against the idea that an atomic proposition could contain only one name.

On one occasion Wittgenstein seems to me to come as close to saying that there are monadic atomic propositions as he could have come without saying it in so many words. Thus consider
4.24 The names are the simple symbols. I indicate them by single letters ('x', 'y', 'z'). The elementary proposition I write as function of the names, in the form 'fx', 'φ(x, y)', etc.

This passage is the more striking in that it occurs very shortly after

4.22 The elementary proposition consists of names. It is a connexion, a concatenation of names.

Now to interpret 4.24 it is important to note that although Wittgenstein tells us that atomic facts to the effect that two objects are dyadically related would be perspicuously represented by placing the names of these objects in dyadic relation without the use of any relation word, the Tractatus contains no use but only mentions (and indirect ones at that) of such perspicuous representations. Thus Wittgenstein does not use Jumblese, but always PMese, in illustrating the form of atomic propositions, thus always 'aRb' (cf. the 'φ(x, y)' of 4.24). What he does do is tell us that the symbol 'R' serves not as a name, but as a means of bringing it about that the names 'a' and 'b' are dyadically related.

This being so, Wittgenstein is telling us in 4.24 that when he uses an expression of the form 'fx' to write an elementary proposition, the function word represented by the 'f' is occurring not as a name, but as bringing it about that the name represented by 'x' occurs in a certain manner, i.e. that the name as occurring in a certain monadic configuration is a proposition.

Now if a philosopher combines the two theses, (1) there are no atomic facts involving only one particular, (2) all objects are particulars, it would be reasonable to say that he is committed to a doctrine of bare particulars. For, speaking informally, he holds that though objects stand in empirical relations, they have no qualities. Notice that this would not be true of Bergmann's position, for while he holds that there are no atomic facts containing only one object, he insists that there are atomic facts which contain only one particular. Thus he can deny that there are bare particulars by insisting that every object exemplifies a quality.

Now in my opinion Copi is correct in attributing to Wittgenstein the second of the above two theses (all objects are particulars). If, therefore, he were correct in attributing to Wittgenstein the first thesis, his claim that Wittgenstein is committed to a doctrine of bare particulars would be sound. Conversely, if Wittgenstein did hold a doctrine of bare particulars, then he was committed to the thesis that there are no monadic atomic facts. It is not surprising, therefore, to find Copi arguing that his contention that Wittgenstein rejects monadic atomic facts is supported by what he (somewhat reluctantly)
takes to be an affirmation of the doctrine of bare particulars. Thus after confessing that "It must be admitted that several of Wittgenstein's remarks suggest that objects have 'external' properties as well as 'internal' ones (2.0123, 2.0233, 4.023)," he writes (p. 163):

Despite the difficulty of dealing with such passages, there seems to me to be overwhelming evidence that he regarded objects as bare particulars, having no material properties whatever.

In the first place, Wittgenstein explicitly denies that objects can have properties. His assertion that 'objects are colorless' (2.0232) must be understood as synecdochical, for the context makes it clear that he is not interested in denying color qualities only, but all qualities of 'material properties' (the term first appears in the immediately preceding paragraph (2.0232)).

Now I think that this is simply a misunderstanding. The correct interpretation of the passage in question requires only a careful reading of the context. What Wittgenstein says is "Roughly speaking (Beilaufeg gesprochen): objects are colorless," and this remark occurs as a comment on

2.0231 The substance of the world can only determine a form and not any material properties. For these are first presented by the propositions—first formed by the configuration of the objects.

What Wittgenstein is telling us here is that objects do not determine facts: thus even if a is green, the fact that a is green is not determined by a. It is interesting, in this connection, to reflect on

2.014 Objects contain the possibility of all states of affairs.

Thus, while a does not determine the fact that it is green, it does determine the range of possible facts of which the fact that it is green is but one.

Names exist in a logical space which includes the predicates which combine with it to make statements. (In a perspicuous language—Jumblese—the predicate words, as has been pointed out, would appear as manners of being names, as, in a literal sense, internal features of the names.) And no atomic statement is analytic, hence,

2.0132 In order to know an object, I must know not its external but its internal properties.

When Wittgenstein says that

2.0123 If I know an object, then I also know all the possibilities of its occurrence in atomic facts.
this is as much as to say that if I understand a name, then I also know all the possibilities of its occurrence in atomic statements. When he says

2.013 Everything is, as it were, in a space of possible atomic facts.

this is as much as to say that every name is, as it were, in a space of possible atomic statements. And when he says

2.0131 . . . A speck in a visual field need not be red, but it must have a color.

he is making the point that objects are internally related to sets of "external" properties, but not to any one "external" property, i.e. that names are internally related to sets of primitive predicates\(^{12}\) (configurations; cf. Jumblese).

Thus it is not surprising to us (though disturbing to Copi) to find Wittgenstein saying in the passage following that in which he says that (roughly speaking) objects are colorless,

2.0233 Two objects of the same logical form are—apart from their external properties—only differentiated from one another in that they are different.

For this means not, as it might seem, that objects are bare, but simply that two objects of the same logical form\(^{13}\) determine the same range of possible facts, i.e. two names of the same logical form belong to the same range of configurations.

As far as I can see, Copi's second argument to show that Wittgenstein's objects are bare particulars is also a misunderstanding. He begins by correctly pointing out that according to Wittgenstein objects are named, whereas states of affairs are "described"—the word is Wittgenstein's. He then writes (p. 164) that

if an object had a property, that would be a fact whose assertion would constitute a description of that object. But objects can not be so described, whence it follows that objects have no properties.

---

11. When he adds that "I can think of this space as empty, but not of the thing without the space," he suggests the intriguing possibility that we can make sense of the idea that the language we use might have had no application.

12. Whether these sets constitute embracing sets of primitive predicates of different orders, or whether they fall into subsets (families of determinates) is a topic for separate investigation.

13. I find here the implication that primitive one-place predicates (configurations)—if not all primitive predicates—come in families (determinates) and that objects are of different logical form if, for example, one exists in the logical space of color, the other in the logical space of sound.
This argument overlooks the fact that Wittgenstein, under the influence of logical jargon, uses the term 'describe' where one would expect 'assert' (cf. 3.221). Thus he is simply telling us that objects cannot be 'described'; i.e. asserted; from which it by no means follows that they can't be described in the ordinary sense. Indeed, in 4.023, Wittgenstein writes "As the description of an object describes it by its external properties, so propositions describe reality by its internal properties."

The third argument has the form "... if an object had a material property, that it had the property would be a fact involving only one particular, hence no object can have any material property, and all particulars are bare" (p. 164). The hypothetical is sound. The evidence adduced for denying the consequent is 4.032 which is interpreted as saying that all propositional signs are composite, and must consequently contain at least two elements, that is, at least two names. But 4.032 does not say that all propositional signs are composite, but that they are all "logically articulated," and I have attempted to explain how a propositional sign can consist of one logically articulated name. I grant that in a parenthetical remark which immediately follows Wittgenstein writes, "(Even the proposition 'ambulo' is composite for its stem gives a different sense with another termination, or its termination with another stem)," but I do not believe that this remark, which correctly points out that ordinary Latin is not perspicuous with respect to logical articulation, is decisive. (I am happy to acknowledge that my interpretation, like Copi's has its difficulties).

Copi's concluding argument is to the effect that Wittgenstein tells us in the Investigations that the objects of the Tractatus were primary elements like those described in the Theaetetus (21e). This would be cogent if we were given a reason for supposing either that the elements of Theaetetus 21e were bare particulars, or that Wittgenstein thought they were. I see no reason to think that either is the case.

The most telling argument in Copi's paper against the idea that the Tractatus countenanced monadic atomic facts is not used by Copi directly to this end, but as part of his brief for the sound thesis that Wittgenstein's objects are not properties. Slightly redirected, it is to the effect that if there are any monadic atomic facts, surely they include such facts as that a certain point in a visual field is red. But, the argument proceeds, if 'a is red' is an elementary proposition, then 'a is blue' cannot contradict it. But, as is well known, Wittgenstein tells us (6.3751) that "For two colors, e.g., to be at one place in the visual field, is impossible, logically impossible, for it is excluded by the logical structure of color ... (It is clear that the logical product of two elementary propositions can neither be a tautology nor a contradiction.)" Copi
draws the conclusion (p. 162) that “color predications are not elementary predications.”

Now, two points require to be made in this connection. The first is that one might be convinced that there could be monadic atomic facts (in that peculiar sense in which, for any n there could be n-adic atomic facts) without being able to give any examples. It is worth noting, in this connection, that in Some Main Problems of Philosophy, Moore, in effect, wonders whether there are any qualities (as opposed to relational properties), and specifically explores the logical space of colors to see if it provides us with examples of qualities. Moore was prepared to find that there are no qualities, i.e. that the simplest facts are already relational. True, Moore’s qualitative facts would be Bergmanian rather than Wittgensteinian, that is, would each be a nexus of a particular and a universal, but the fact that Moore was prepared to suspend judgment with respect to the question “Are there qualities?” combined with the fact that he found the logical structure of color to be very complex indeed, suggests that Wittgenstein might well have taken a similar attitude. After all, as Anscombe points out, Wittgenstein regards it as in some sense a matter of fact that the most complex atomic fact is n-adic rather than m-adic (m > n)—cf. 4.2211. Could it not be in the same sense a matter of fact that the least complex is, say, dyadic rather than monadic?

Thus, perhaps the correct answer to the historical question is that Wittgenstein would have regarded the question ‘Are particulars bare?’ as, in a deep sense, a factual one, a question to which he did not claim to have the answer, and to which, as logician, he was not required to have the answer.

The second remark is that Wittgenstein may well have thought that there are monadic atomic facts, indeed that their existence is obvious, but that no statement in ordinary usage represented such a fact, so that no example could be given in the sense of written down. Although he thought that ordinary language contained elementary propositions, he emphasizes that they are contained in a way which is not perspicuous. There is no presupposition that any ordinary sentence as ordinarily used in the context of everyday life ever expresses an atomic proposition. Indeed, the presupposition is to the contrary.

III

It has been said by Broad, among others, that philosophers have been led into error in perception theory by concentrating their attention on visual examples. In my opinion they have been at least as frequently led into error in logical theory by a similar concentration on color. The danger arises from the fact that such a word as ‘red’, for example, is really three words, an adjective, a
common noun and a proper name, rolled into one. Thus we can say, with equal propriety,

The book is red

Scarlet is a color

Red is a color

A moment ago I urged the importance of the distinction between descriptive constants and names. I suggested that while it would be correct to say that the statement

Green a

consists of two constants, as is brought out by viewing it against the three quantified statements,

(Ex) Green x

(Ef) fa

(Ef) (Ex) fx

it is most misleading to say that it consists of two names. And the reason, by now, should be clear. For if one does view the sentence ‘Green a’ as a juxtaposition of names, one will be bound, particularly if one has read the Tractatus, to think that by juxtaposing the names ‘Green’ and ‘a’ it affirms that the two objects or individuals or logical subjects green and a are ‘united’ or ‘hang in each other’ or are bound together by a ‘characterizing tie’ or whatever.

Now what makes this move all the more plausible is that there is an object green and that there is a relation which is often called exemplification, such that if a is green then it is also true that a exemplifies green. Thus it is tempting indeed to say that

a exemplifies green

is simply an unsperspicuous way of saying what is said perspicuously by

Green a

And the fascinating thing about it is that this claim would be absolutely correct provided that ‘green a’ was not taken to say what is ordinarily said by ‘a is green’. The point stands out like a sore thumb if one leave colors aside and uses a geometrical example. Thus consider the statement

a is triangular
or, for our purposes,

Triangular $a$

It would clearly be odd to say

$a$ exemplifies triangular

although it is not odd to say

$a$ exemplifies green.

The reason is that 'triangular' unlike 'green' does not function in ordinary usage as both an adjective and a singular term. What we must say is

$a$ exemplifies triangularity.

Now in a perspicuous language, i.e. a language which had a built-in protection against Bradley's puzzle we might say that $a$ exemplifies triangularity by concatenating 'a' and 'triangularity' or that Socrates exemplifies Wisdom by writing

Socrates : Wisdom.

Our language is not such a perspicuous one, and to bring this out in this connection, we might write,

We must not say,

'The complex sign "a exemplifies triangularity" says "a stands in the exemplification relation to triangularity" but we must say 'that "a" stands in a certain relation to "triangularity" says that a exemplifies triangularity.'

Thus it is correct to say that

Green $a$

says perspicuously what is said by

$a$ exemplifies green

only if 'green' is used in the sense of the singular term 'greenness'. And when it is used in this sense, the statement

Green $a$

does not have the sense of the ordinary statement

$a$ is green,

though it is logically equivalent to it.
Professor Bergmann thinks that Green a consists of two names, ‘a’, the name of a particular, and ‘green’, the name of a universal, and, by being their juxtaposition, asserts that the one exemplifies the other. On his view, philosophers who insist that ‘a is green’ says that a exemplifies green but do not realize that ‘a exemplifies green’ is simply an unperspicuous way of juxtaposing ‘a’ with ‘green’ are attempting to eff the ineffable. He thinks, to use the terminology I proposed earlier, that exemplification is the nexus, the mode of configuration of objects which can only be expressed by a configuration of names. Professor Bergmann sees configurations of particulars and universals where Wittgenstein saw only configurations of particulars.

But what does a exemplifies triangularity say if it isn’t an unperspicuous way of saying Triangular a

Instead of giving an answer (as I have attempted to do on other occasions) I shall attempt an analogy, and then claim that it is more than a mere analogy. It seems to me that the necessary equivalence but non-synonymy of a exemplifies triangularity with a is triangular is analogous to the necessary equivalence but non-synonymy of

That a is triangular is true with a is triangular

That the analogy is more than a mere analogy is suggested by the fact that instead of saying that a exemplifies triangularity, we might with equal propriety say that triangularity is true of a, or holds of a.

Now if a exemplifies triangularity
triangularity is true of a

triangularity holds of a

are to be elucidated in terms of

That a is triangular is true

then exemplification is no more present in the world of fact in that narrow sense which tractarians like Professor Bergmann and myself find illuminating, than is meaning, or truth, and for the same reason.

The crucial ineffability in the Tractatus concerns the relation between statements and facts. Is there such a relation? And is it ineffable? The answer seems to me to be the following. There is a meaning relation between statements and facts, but both terms are in the linguistic order. To say that a statement means a fact is to say, for example,

‘Gruen a’ (in German) means Green a, and it is a fact that Green a,

The first conjunct appears to assert a relation between a linguistic and a nonlinguistic item, between a statement and an item in the real order. And the second conjunct to say of this item that it is a fact. As I see it, the first conjunct does assert a relation, but the relation obtains between a German expression and an English expression as being an expression in our language. It has the force of

‘Gruen a’ (in German) corresponds to ‘Green a’ in our language.

We could also put this by saying

‘Gruen a’ (in German) means that green a

for to put ‘that’ before a sentence has the force of quoting it with the implication that the sentence is in our language, and is being considered as such. The reason why we find it counter-intuitive to put it in this way is that since ‘means’ is the translation rubric, this would conflict with the usage according to which we say

‘Dass gruen a’ (in German) means that green a

Suppose it is granted that meaning is the translatability relation between an expression which may or may not be in our language and one which is, and is being considered as such. What, then, does it mean to say

That green a is a fact
Clearly this is equivalent to saying

That green a is true

which calls to mind the equivalence

That green a is true $\equiv$ green a

This, however, is not the most perspicuous way to represent matters, for while the equivalence obtains, indeed necessarily obtains, its truth depends on the principle of inference—and this is the crux—

From 'that green a is true' (in our language) to infer 'green a' (in our language).

And it is by virtue of the fact that we draw such inferences that meaning and truth talk gets its connection with the world. In this sense, the connection is done rather than talked about.

Viewed from this perspective, Wittgenstein's later conception of a language as a form of life is already foreshadowed by the ineffability thesis of the *Tractatus*. But to see this is to see that no ineffability is involved. For while to infer is neither to refer to that which can be referred to, nor to assert that which can be asserted, this does not mean that it is to fail to eff something which is, therefore, ineffable.
Grammar and Existence:
A Preface to Ontology

I

My purpose in this paper is to examine the current dogma that to sanction the move from

(1) S is white
to

(2) (Ef) S is f

or from

(3) S is a man
to

(4) (Ek) S is a K

or from

(5) Tom is clever or Tom is tall
to

(6) (Ep) p or Tom is tall

is to sanction the move from empirical statements to statements asserting the existence of entities of a higher order than perceptible individuals. I shall begin by assuming that if these moves, each of which is a form of what is called 'existential quantification', do involve a commitment to such entities, the enti-
ties in question are such straightforward abstract entities as Triangularity, Mankind, and the proposition that Tom is clever. I shall subsequently turn my attention to the idea, recently elaborated by Peter Geach, but which stems from the work of Gottlob Frege, that what one is committed to by these moves, or their ordinary language counterparts, is not abstract individuals, entities which ape the individuality of perceptible things, but rather what, for the moment, I shall simply refer to as non-individual entities, entities which have no names, but are, somehow, stood for by parts of speech other than names.

I shall begin by exploring the move from (1) to (2), taking as my point of departure the fact that the latter is often 'informally' rendered by

\[(2^1) \text{ There is an } f \text{ such that } S \text{ is } f.\]

For, I believe, a careful examination of this 'reading' will enable us to put our finger on the source of the dogma in its first or orthodox form.

Now a first glance at (2^1) may well lead one to think that the expression 'an f' in 'There is an f . . .' has the form of the particle 'an' followed by a variable which takes common nouns, or expressions having the force of common nouns, as its values. Another glance, however, raises the question, 'If the first "f" is a common noun variable, must not the same be true of the second?' One sees immediately, however, that if the second 'f' were a common noun variable, the 'white' from which the quantification began would have to be a common noun. We should accordingly expect (1) to read,

\[(1^1) S \text{ is a white}\]

and even if we hastily transform (1^1) into

\[(1^2) S \text{ is a white thing}\]

we are startled to think that 'quantification over predicate variables' involves the questionable idea that 'S is white' has the form 'S is a white thing', or must be transformed into the latter as a condition of the quantification. We also notice that this line of thought carries with it the implication that (2^1) should read

\[(2^2) \text{ There is an } f \text{ such that } S \text{ is an } f.\]

Now it is perfectly clear that something has gone wrong; a conviction which is conclusively reinforced by the reflection that if we 'read'

\[(7) (\text{Ex}) \ x \text{ is white}\]
as

(7') There is an x such that x is white

parity of reasoning would require us to interpret the second 'x' as a common noun variable, which it simply cannot be.

What, then, are we to make of the expressions 'an x' in (7') and 'an f' in (2')? Since we cannot dodge the fact that in their ordinary use the context 'a(n) —' calls for a common noun to fill the gap, is there any other way than the above in which these expressions can be construed in terms of common nouns? The answer, of course, is obvious to one who knows the literature of the problem, for one immediately thinks of those curious common nouns 'individual' and 'quality', and of the locutions, 'There is an individual . . . ' and 'There is a quality . . .'. Surely, then, it is the category words, 'individual' and 'quality', which belong after the 'There is a . . . ' in the 'informal readings' of (2) and (7).

If we follow up this line of thought, we end up with something like

(2') There is a quality, f, such that S is f,

and

(7') There is an individual, x, such that x is white

and with the idea that the 'f' which occurs in the context 'an f' of the original 'informal reading' is playing a dual role: (a) the role of the category word (constant) 'quality'; (b) the role of a variable which reappears at the end of the sentence. But is (2') a well-formed sentence? Here is the rub; for notice that 'There is a quality, f, . . . ' commits us to the form

(8) f is a quality

and, if 'white' is to be a value of 'f', to

(9) White is a quality.

But if so, this means that just as 'quality' plays in (9) a role analogous to that of 'man' in 'Tom is a man', so 'white' is playing a role analogous to that of 'Tom'. We have, it appears, avoided the Scylla of turning 'white' into a common noun, only to whirl into the Charybdis of the idea that 'quantification over a predicate variable' involves turning it into a proper name, with a consequent commitment to Platonism. And this fact stands out even more clearly if we replace our original sentence (1) by

(10) S is triangular.
For whereas 'white' can play both the adjective and noun roles, so that (9) is a proper English sentence, we must actually transform 'triangular' into 'triangularity' to get the statement which corresponds to (9), namely

(11) Triangularity is a quality.

II

I asked a moment ago if (23) is a well-formed sentence, and we now have serious grounds for doubt. For while, as we have just seen, the first 'f' in (23) must be a variable which takes such singular terms as 'whiteness' and 'triangularity' for its values, the second 'f' is required by its context, namely 'S is ---', to take adjectives. If, therefore, 'f' is to be the same variable throughout the sentence, the concluding context must be reformulated to admit of a variable which also takes singular terms. How this might be done is no mystery. We simply construct our variable with the aid of the most convenient of the suffixes which are used to form abstract nouns from adjectives, thus 'f-ness', and rewrite (23) to read

(24) There is a quality, f-ness, such that S has f-ness

and discover that what our 'informal reading' of (2) has given us is an existential statement which stands to

(11) S has whiteness

as 'There is a man, x, such that S loves x' stands to 'S loves Socrates'.

Well, then, to go from (1) to a quantified statement in which 'the predicate is quantified', must we first, in effect, transform it into (11)—in which, after all, the predicate is no longer '(is) white' but 'exemplifies whiteness'? Does all quantification presuppose a point of departure in which the constants to be replaced by variables are singular terms? The answer, surely, is a categorical No. The contrary supposition is generated not by reflecting on the logic of quantification as such, but by reflecting, as we have been doing, on an 'informal reading' of quantified statements, a reading which may have much to recommend it in the way of making certain logical relationships intuitive, but is far from giving us the ordinary language equivalent of these quantified statements. The 'informal reading' is a contrived reading which generates puzzles as soon as its auxiliary role is overlooked,
and it is made the focal-point of philosophical reflection on quantification and existence.

III

But what, then, it may well be asked, is the correct reading of (2), if it is neither 'There is an f such that S is f' (2') nor 'There is a quality, f-ness, such that S has f-ness' (2")? In other words, how should we ordinarily say what the logician says by means of (2)? Now it is easy enough, if I may be permitted a paradox, to invent an 'ordinary language equivalent' of (2). One simply begins by noting that the force in the case of quantification over variables of type 0, the force of '(Ex) x is white' (7) is captured by

\[(7^1) \text{Something is white}\]

and proceeds to represent (2) by

\[(2^6) \text{S is something.}\]

The latter both preserves the form '... is ...' (as contrasted with '... has (or exemplifies) ...') and, by avoiding the reading 'There is an f ...' by-passes the stream of thought explored in sections I and II above.

Now, if we could convince ourselves that (2^6) would be a reasonable invention—or, better, that it is not really an invention at all—we would have gained an important vantage-point in the battle over abstract entities. The above suggestion, however, in the absence of an elaborate interpretation and defense, is scarcely more than a promissory note. And there is no dodging the fact that most if not all of the general statements we make which correspond to logistically formulated statements in which there is quantification over variables which take adjectives, common nouns, verbs, and sentences for their values, do involve the use of category words. And since the use of category words involves a prima facie commitment to abstract singular terms such as 'Triangularity'—and others which we shall be exploring in a moment—the question naturally arises, 'Does the use of these singular terms involve a commitment to Platonism?'

But before we begin to explore the significance of the fact that we do make use of category words and abstract singular terms, it is important to dwell for a moment on the claim which is implicit in the argument up to this point. This claim—which it is my purpose to defend—can be summed up by saying that one no more has to construe '(Ef) S is f' (2) as saying 'There is a quality, f-ness, such that S has f-ness' (2") than we have
to construe 'S is white' (1) as really saying 'S has whiteness' (11). Another way of making this claim is by saying that the widespread view that the introduction of predicate variables carries with it the use of such category words as 'quality', 'attribute', or 'property' is simply a mistake.

Indeed, from this point of view, not only is the 'introduction of the category word "quality"' a distinct step in 'committing oneself to a framework of qualities', this 'commitment' involves the introduction of a new set of variables ('f-ness' as opposed to 'f') and a set of singular terms (e.g. 'whiteness', 'triangularity') to be their values. According to this claim, it is a mistake to suppose that a predicate variable belongs in the context '... is a C' where 'C' is a category word. Thus 'f is a quality' (8) would be ill formed, the proper expression being

(12) f-ness is a quality.

For while the singular term 'Socrates' belongs in both the ordinary context 'Socrates is a man' and the categorizing context

(13) Socrates is a particular

and the singular term variable 'x' belongs in both the context, ' — is white' and the context ' — is an individual', 'triangular' must be turned into 'triangularity' and 'f' to 'f-ness' as one moves from 'S is —' to ' — is a quality'. The rea-

1. It might be thought illuminating to replace the original statement, (1), by

(12) S: Whiteness

and the statement

(9) White is a quality

by

(91) Whiteness: Qualitykind

and to say that in (12) 'Whiteness' is the 'predicate', whereas in (91) it is the 'subject'. It must be pointed out, however, that one has not shown that (12) is not simply a rewriting of the categorial counterpart of (1), namely

(11) S has whiteness

(that 'whiteness' is juxtaposed to 'S' says that S has whiteness) or, indeed, a rewriting of (1) itself [that 'whiteness' is juxtaposed to 'S' says that S is white]—in which case the singular term 'whiteness' would be a sham—unless one sketches the modus operandi of a new form of language which breaks away from our ordinary categories of 'singular term', 'common noun', 'adjective', etc., and which cannot in any straightforward sense be translated into the language we actually use. That (11)—or (1)—could be rewritten as (12), and that (9) could be rewritten as (91) has not the slightest tendency to show that they have a common logical form to be represented by ' —: ...'. Compare Peter Strawson's contribution to the symposium on ‘Logical Subjects and Physical Objects' in Volume 17 of the Philosophy and Phenomenological Research (1957), and my criticisms thereof.
son, of course, is that 'Socrates' is a singular term, and 'x' a singular term variable to begin with, while 'triangular' and 'f' are not. (It should not be assumed that 'Socrates' is unambiguously the same singular term in both cases.)

IV

Before taking the next step in the argument, it will be useful to develop the parallel claim—which I also wish to defend—in connection with the move from 'S is a man' (3) to '(EK) S is a K' (4). To read (4) as

(4') There is a K such that S is a K

and to take the context 'There is a K . . .' seriously leads one to

(4'') There is a class, K-kind, such that S is a member of K-kind

just as 'There is an f such that S is f' (2') led us to 'There is a quality, f-ness, such that S has f-ness' (2''). Furthermore, just as 'S has white-ness' (1') is the categorial counterpart of (1), so

(3') S is a member of mankind

is the categorial counterpart of (3). And, it seems to me, 'man' is no more functioning as the name of a class in (3) than 'white' is functioning as the name of a quality in (1). Furthermore, just as the 'is' in the latter is not 'has' or 'exemplifies' in disguise, so the 'is a' in the former is not 'is a member of' in disguise. It is surely as incorrect to regard 'S is a man' as a class-membership statement, as it is to regard 'S is triangular' as a quality-exemplification statement.

The 'introduction of classes' as extensional entities takes its point of departure from common nouns (and expressions having the force of common nouns) which are applied to a certain domain of logical subjects—where a logical subject is, roughly, an item referred to by a singular term. If we limit our attention to classes pertaining to physical things, the point I wish to make

2. By no means all common nouns and common noun expressions stand for kinds of thing. Kinds are a distinctive subset of classes, and we speak of the instances rather than the members of kinds. Since I am not concerned in this paper with the distinctive character of kinds, I shall refer to kinds simply as classes and speak of their members rather than their instances.

* [Correction of "categorical" in original printing.]

3. The term 'individual' is often used in the sense of 'logical subject' as characterized above. In this broad use, 'individual' is to be contrasted with 'particular', for particulars are, roughly, those individuals which are referred to by the singular terms which occur in observation statements.
can best be put by saying that once one has made the move from statements of the forms

(14) S is a K

and

(15) S is an f-thing

to their categorial counterparts

(14') S is a member of K-kind

and

(15') S is a member of the class of f-things

it is an additional step to introduce classes as extensional entities in terms of co-extensive classes. For it is simply not true that in nontechnical contexts classes are identical if their memberships coincide.

To resume, just as the transition from (1) to (2) does not involve treating 'f' as a variable for which singular terms ('names of properties') are values, so, I wish to argue, the transition from 'S is a man' (3) to '(EK) S is a K' (4) and from 'S is a white-thing' (12) to

(18) (E f-thing) S is an f-thing

do not involve treating 'K' or 'f-thing' as variables for which singular terms ('names of kinds') are values.

Again, just as it is, I believe, clarifying to read '(Ex) x is white' as 'Something is white', rather than 'There is an individual, x, such that x is white', and

4. It is important to note that while we can form the expression 'white-thing' from the adjective 'white' and the category word 'thing' in accordance with the formula

(16) S is a white-thing = Df S is a thing • S is white

it would be a serious mistake to suppose that all common nouns pertaining to physical objects are built from adjectives and the category word 'thing' in accordance with the formula

(17) S is an N = Df (S is a thing) and S is A₁...An

(where 'N' is a common noun and the 'A₁'s adjectives). To suppose that 'thing' is the sole primitive common name is (a) to overlook the fact that the category word 'thing' has a use only because there are statements of the form 'S is an N'; (b) to expose oneself to all the classical puzzles about substrata. (This point is elaborated in my "Substance and Form in Aristotle: an Exploration" in The Journal of Philosophy, 54, 1957, pp. 688-699.) Reflection on the first of these points makes it clear, incidentally, that it is a mistake to view the category of substance or thinghood as a summum genus.
'(Ef) S is f' as 'S is something' rather than 'There is a property, f-ness, such that S has f-ness', so I believe it to be clarifying to read '(EK) S is a K' (4) as

\[(4') \text{ S is a } \text{something}\]

rather than as 'There is a class, K-kind, such that S is a member of K-kind' (4').

Finally, to mobilize the force of these considerations, note that the statement

\[(19) (EK) \equiv (\exists x)(\exists y) x \in K \land y \in K \land x \neq y \implies (z) z \in K : z = x \lor z = y\]

does not say 'There is a class . . .', though what it does say can be put categorizingly by saying 'There is a class which has a member and another member, and all its members are identical with either of these'.

V

Similar considerations apply, mutatis mutandis, to the move from 'Tom is clever or Tom is tall' (5) to '(Ep) p or Tom is tall' (6). The variable 'p' is no more to be construed as taking singular terms for its values, than is 'f' or 'K'. On the other hand, the statement

\[(5') \text{(The proposition) that Tom is clever is a disjunct of (the proposition) that Tom is tall}\]

is the categorial counterpart of (5) just as 'S has (the quality) whiteness' is the categorial counterpart of (1) 'S is white'. It will be convenient to use the expression 'that-p' as the variable which corresponds to 'p' as 'f-ness' to 'f', and 'K-kind' to 'K'. And to conclude the drawing of parallels, I believe it to be clarifying to read '(Ep) p or Tom is tall' (6) as

\[(6') \text{Something or Tom is tall}.\]

Note, by the way, that if, as it seems reasonable to suppose, 'that it is raining' is functioning as a singular term in

\[(20) \text{Jones believes that it is raining},\]

the quantified statement corresponding to (20) as (6) corresponds to (5) would be not

\[(21) (Ep) \text{Jones believes } p\]
but rather

\[(21') (E \text{ that-p}) \text{ Jones believes (the proposition) that-p.}\]

But we shall have something more to say on this topic in our concluding remarks.

VI

Let us suppose, for the moment, that the above line of thought can be carried through and defended. And let us ask what light it throws on the idea that the 'existentially quantified' formulae of the logistician are the counterparts of the statements in everyday discourse in which, to use Quine's phrase, we make ontological commitments, i.e. say that there are objects or entities of such and such kinds? Just this, that they are *not* the counterparts. Or, more precisely, that there is no *general* correspondence between *existentially quantified formulae* and *existence statements*. Only in those cases where the variable which is quantified is a variable of which the values are singular terms will a quantified formula be the counterpart of an existence statement. Nor is this all; not even all (so-called) existential quantification over singular term variables has the force of an existence statement. For the latter involve common nouns or expressions having the force of common nouns. Thus,

\[(22) \text{ There are tame tigers} \]

involves the context

\[(23) x \text{ is a tame tiger.} \]

Failure to see that common nouns or expressions having the force of common nouns are essentially involved in existence statements is due, in part, to the mistaken idea that such a statement as 'S is white' (1), in which occurs the adjective 'white', differs only, so to speak, graphologically from 'S is a white thing' (12), in which occurs the common noun expression 'white-thing'. For if this were so, then 'Something is white' would differ only graphologically from 'something is a white thing' and we could use indifferently the formulae '(Ex) x is white' (7) and '(Ex) x is a white thing' (74). It is important to see that it is just as incorrect to read '(Ex) x is white' as 'There is a thing which . . .' as to read '(Ef) S is f' as 'There is a property . . .'. For unless one sees that not even quantification over singular term variables of type 0 makes, as such, an existence commitment involving an ontological category, i.e. says 'There are particulars', one is likely to think that 'There are particulars' is unavoidable in a
way in which 'There are qualities' might not be. For while we can scarcely hope to dispense with quantification over variables of type 0, able philosophers have found it possible to hope that quantification over variables of higher types can (in principle) be dispensed with, or at least reduced to the status of a bookkeeping device for dealing with cash in which it does not appear.

We have already had something to say about the force of 'thing' in the noun expression 'white thing', and we shall have more to say about the category words 'individual' and 'particular' at the end of the argument. The point I am concerned to press at the moment, however, is that among the forms by the use of which one most clearly and explicitly asserts the existence of objects of a certain sort—I am not concerned with singular existence statements, which raise their own problems—are the forms 'There is an N', 'Something is an N' and 'There are Ns', and that the logistical counterpart of these forms is

\[(24) \ (Ei) \ i \text{ is an } N\]

where 'i' is a variable taking singular terms of a given type as its values, and 'N' is an appropriate common noun.

We can sum this up by saying that only where the so-called 'existential quantification' is a quantification over a context of the form 'i is an N' is a quantified statement the counterpart of a statement asserting the existence of objects of a certain sort—and this, after all, is analytic.5 Put this positively, the thesis seems to ring true. If, however, we make the same point negatively, by saying that to quantify over an adjective-, common noun-, or sentence-variable is not to make the PMese equivalent of a statement asserting the existence of attributes, kinds, or propositions, it becomes clear that we have much more work to do. For, to take but the case of quantification over an adjective variable, our claim that it is illuminating to parallel the reading of '(Ex) x is white' (7) as 'Something is white' (73), by a reading of '(Ef) S is f' (2) as 'S is something' (25) stand in urgent need of expansion and clarification.

Perhaps the best way of accomplishing this is by examining the constructive views advanced in Peter Geach's contribution to the Aristotelian Society symposium4 on 'What there is' which takes its point of departure from Quine's provoking essay of this name. Geach sees that Quine's account won't

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5. It follows that the phrase 'existential quantification' should be dropped and replaced by (rather than abbreviated into) one of its logistical equivalents, e.g. $\Sigma$-quantification.
do. He sees, to put the matter in terms of our examples, that the statement ‘S is white’ (1) entails the general statement

(2*) There is something which S is

(i.e. white) and insists, correctly, that the latter is not to be confused with

(2?) There is something which S has

(i.e. whiteness). To take another example, he sees that

(25) Jack and Jill are both tall

entails the general statement

(26) There is something which Jack and Jill both are

and that the latter statement is not to be confused with

(26') There is something which Jack and Jill have in common.

It would be incorrect to attach the rider ‘i.e. tallness’ to the former. The proper rider would be ‘i.e. tall’, thus

(26^2) There is something (i.e. tall) which Jack and Jill both are.

Now Geach’s ‘There is something which S is’ corresponds to our ‘S is something’. And his insistence that the something which S is is white and not whiteness corresponds to our distinction between ‘S is something’ and ‘S has (i.e. exemplifies) something’. Thus, in the terms of our analysis, Geach’s ‘There is something which S is’ (26) is the counterpart of ‘(Ef) S is f’ (2) and he has correctly seen that the latter does not involve a commitment to the use of such abstract singular terms as ‘whiteness’ or ‘tallness’.

But while he is on the right track up to this point, he builds the above insight into a larger mistake. For he is misled by his own formulation into supposing that

(26^2) There is something (i.e. tall) which both Jack and Jill are

although it does not commit us to the ‘abstract or universal entity’ tallness, does commit us to the ‘property’ tall. Thus he tells us that while the predicate ‘red’ is not to be construed as a name, it does ‘stand for’ something, and he proposes ‘property’ as a ‘general term for what predicates stand for’. He continues, ‘This way of speaking [saying that what a predicate stands for is a property] has its dangers, but can be given a harmless interpretation; “property” may here be taken to be just short for “something that an object is or is
not". Now Geach's properties are essentially the same sort of thing as Frege's concepts. Indeed, it is clear from other statements of his that Geach would have used Frege's term were it not for its conceptualistic connotations. I shall shortly be discussing a difficulty which is present in Frege's account of concepts. It will, however, be convenient to lay the groundwork by exploring what Geach has to say about properties.

Now it is important to realize that Geach gives two accounts of the term 'property'; one of which, though cautious, is based on a simple grammatical mistake, while the other is derived from Frege's account, and is more difficult to expose. The cautious account is contained in the passage quoted above, in which he stipulates that 'property' is to be equivalent to 'something that an object is or is not'. The Fregean account is the one in which properties are introduced as what predicates stand for. We shall return at a later stage in the argument to the dangers involved in the idea that predicates stand for properties. Our present concern is with the force of the statement 'There is something which Jack and Jill both are' (26).

Let me begin by noting that in our illustration, 'There is something which Jack and Jill both are' (26), was a generalization from 'Jack and Jill are both tall' (25). Now to move from the latter to

(27) Jack and Jill are both something

is to avoid at least the appearance of an existence statement. For the hypothesis with which we are working is that only those 'something-' statements which are of the form 'Something is an N', where 'N' is a common noun, have the force of existence statements—thus of the statement 'There are Ns'. But Geach's formulation, beginning, as it does, with 'There is... ', though it is equally legitimate and equally involves no commitment to abstract singular terms, has the prima facie appearance of an existence statement. And, I am sorry to say, Geach has been taken in by it. And if the entities he introduces are what things are rather than what they exemplify, they are abstract entities, none the less, as Quine has noted in his reply, and Geach's denial that these entities are individually referred to by such singular terms as 'Tallness' is open, as we shall see, to the reply that he has avoided the abstract individual tallness

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7. Ibid., p. 133.
8. Clearly the reading of '(Ef) S is f' as 'S is something' would require the use of indices to draw distinctions which become relevant when it is a question of reading such statements as (27). For if Jack were tall and Jill were short, it would follow that Jack and Jill were both something, though they would not be 'the same something'.
only at the expense of treating the adjective 'tall' as a peculiar kind of singular term, and hence introducing the abstract individual *tall*.

The key point to notice is that unlike existence statements proper, the statement

(26) *There is something* which Jack and Jill both *are*

begins not with 'There is a . . .', not with 'There is a *something* . . .', but simply with 'There is something . . .'. If it began with 'There is a something . . .', thus using 'something' as a common noun, one might well look for a common noun, such as 'property', to pinpoint just what *sort* of 'something' 'there is' which Jack and Jill both are. We could then have

(26') *There is a property* which Jack and Jill both *are*.

But all this, as by now should be obvious, is logical nonsense. 'Something' is *not* a common noun, and it is incorrect, therefore, to introduce 'property' as equivalent to 'something which an object is or is not'. The term 'property' has, as a common noun, the form '— is a property' whereas, *unless* 'something' *is to be construed as a common noun*, the supposed equivalent has the form '— is something which an object is or is not', thus

(28) Tall is something which an object is or is not

and *not* '— is a something which an object is or is not'. Only if the expression 'something which an object is or is not' were a common noun expression (which it is not) would it be correct to introduce the common noun 'property' as its stipulated equivalent. In short, *this* way of introducing the term 'property' is simply a mistake.

VII

It is important to remember that I have not criticized Geach's claim that there is something which Jack and Jill both *are*. It is to what he proceeds to *make* of this claim that I took exception. I want now to examine this claim in closer detail, for I think that once we get the hang of Geach's formulation we will be less tempted to make his mistake.

Suppose we had begun with an example which involved the common noun 'man', instead of the adjective 'tall', say

(29) Tom is a man.

The corresponding generalization, as we have represented it, would be,

(30) Tom is a *something*
where the fact that the 'something' comes after the indefinite article makes it clear that 'something' is, so to speak, quantifying over a common noun variable.

How would we express this generalization in the manner of Geach? Certainly we can say

(30\textsuperscript{1}) There is something which Tom is.

But this does not distinguish the result of generalizing from (29) on the one hand, and from

(31) Tom is tall

on the other. While to say 'There is a something which Tom is' is to court disaster. The answer suggests itself when we note that the 'There is something which . . .' manner of expressing quantification rests on a rhetorical device which I shall call 'question-echoing counterparts'. The point is simply that such a statement as

(10) S is triangular

can serve as the answer to either of the following questions,

(32) What is triangular?

and

(33) S is what?

Now to the original statement there correspond the following pair of question-echoing counterparts,

(10\textsuperscript{1}) S is what is triangular: Triangular is what S is.

It is important to note that although the adjective 'triangular' is serving as the grammatical subject of the second of these statements the 'role' it is playing is a unique one, and is, indeed, rhetorical in character. It would surely be a howler to suppose that because it is functioning in this context as a grammatical subject, it is in any more profound sense functioning as subject. Its role is rhetorically derivative from its adjectival role in the original, or non-question-echoing statement. Other examples of question-echoing counterparts would be 'Tom is who is a man': 'A man is what Tom is' and 'Tall is what Jack and Jill both are': 'It is Jack and Jill who are both tall.'

Now the question-word 'what?' plays a number of roles in English which might well be split up among a number of interrogatives. In particular, we
might introduce the interrogative 'quale?' to indicate that the answer is to be in terms of an adjective, and the interrogative 'quid?' to indicate that the answer is to be in terms of a common noun. Then we would have the question-echoing counterparts

(31') \(\text{Tall is quale Tom is: Tom is who is tall,}\)

(29') \(\text{A man is quid Tom is: Tom is who is a man.}\)

To the first of each of these pairs there would correspond a general statement which would bear the mark of its origin, thus,

(34) \(\text{There is something which is quale Tom is (i.e. tall).}\)

(35) \(\text{There is something which is quid Tom is (i.e. a man)}\)
or, more concisely,

(34') \(\text{There is somequale which Tom is (i.e. tall).}\)

(35') \(\text{There is somequid which Tom is (i.e. a man).}\)

VIII

I pointed out above that Geach gives two accounts of how the general term 'property' might be introduced. Of these two accounts we have so far considered only one—the 'cautious' one, we have called it—and found it to be a mistake. The second account, as we noted, derives from Frege, and our discussion of it will be usefully prepared by a theme from Frege's 'On Concept and Object'.

It will be remembered that Frege distinguishes between concepts and objects and is faced by the problem: 'How can one say of anything that it is a concept?' For the term 'concept' being, presumably, a common noun, we should be able to make statements of the form

(36) — is a concept.

Frege, however, proceeds to rule out such statements as

(37) The concept square root of four is a concept

on the ground that the expression ‘the concept square root of four’, being a singular term, refers to an object rather than a concept. The same objection would, presumably, hold against

(38) The concept man is a concept

and

(39) The concept triangular is a concept

and, even more obviously, against

(38') Man-kind is a concept

and

(39') Triangularity is a concept.

Since, presumably, something can fill the blank in ‘— is a concept’, we seem to be left with

(38') Man is a concept

and

(39') Triangular is a concept.

These sentences, however, are puzzling, to say the least, for it is difficult to repress the feeling that since ‘concept’ is a common noun, the context ‘— is a concept’ requires a singular term rather than an adjective or a common noun to complete it.

Now our discussion of Geach has made it clear that we can form sentences in which something other than a singular term is the grammatical subject. Consider, for example,

(40) Triangular is what (quale) the table is

and

(41) Men is what (quid) Tom and Dick are.

Or, as we can also put it,

(40') Triangular is something which the table is.

(41') Men is something which Tom and Dick are.
But, as we emphasized at that time, there is nothing in these contexts which authorizes the introduction of a common noun, whether ‘concept’ or ‘property’. There is, however, another context which tempts one to introduce such a common noun, namely,

(42) — is what ‘triangular’ stands for

(43) — is what ‘man’ stands for.

For, one is tempted to expostulate with Geach, surely adjectives and common nouns *stand for something*—though, of course, they are not *names*. Surely we can say

(44) ‘Triangular’ stands for something

or

(441) There is something which ‘triangular’ stands for

And can we not therefore legitimately introduce the common noun ‘concept’ as having the force of ‘something which a predicate stands for’? The answer is, as before, No; not, however, because it is incorrect to say that there is something which ‘triangular’ stands for (or *bedeutet*), but because the expression ‘something which a predicate stands for’ like the expression ‘something which an object is or is not’ does not play the sort of role which would make it proper to introduce a common noun as its stipulated equivalent. This time, however, the matter is not quite so simple, for there is a related line of thought which does seem to authorize without grammatical absurdity the introduction of a common noun having the force of Frege’s ‘concept’ or Geach’s ‘property’. This line of thought rests on the idea that ‘means’—which I shall now use in place of ‘stands for’ because its simpler grammatical form will make the point more intuitive—has at least the appearance of being a *transitive verb*. That this appearance is misleading will be the burden of a sub-

11. There is a family of semantical concepts each of which might be (and has been) conceived of as a ‘mode of meaning’. Thus we might say that in our language ‘triangular’ *connotes* triangularity, *denotes₁* triangular things, and *denotes₂* the class of triangular things. Each of these is a legitimate concept and a proper subject for logical investigation. But none of them, obviously, is what Geach has in mind when he speaks of ‘triangular’ as *standing for* something. The sense of ‘meaning’ which I have in mind is that in which it is an *informative* statement for us to say that ‘dreieckig’ (in German) *means* triangular, whereas, “‘triangular’” (in our language) *means* triangular is as ‘trifling’ as ‘White horses are white’.
sequent stage in my argument. But accepting, for the moment, this appearance at its face value, and taking as our starting-point, without comment, the sentence

(45) "Triangular" means triangular,

the following moves all seem in good order; first to

(451) Triangular is meant by 'triangular'

then, on the analogy of the move from 'x is victimized by y' to 'x is the victim of y', to

(452) Triangular is the meaning of 'triangular',

which involves the common noun 'meaning'. It is then a simple step to stipulate that 'concept', 'property', 'nature', and 'form' are to be general terms for the meanings of adjectives and common nouns.

I shall be subjecting this line of thought to a severe critique in a moment. For the time being, however, I shall simply postulate that this mode of introducing such sentences as 'Triangular is a meaning', 'Triangular is a concept' and 'Triangular is a property' is in some sense misguided. For I want to go on to the question, Would this mean that Frege's notion of a concept is misguided? The answer is No rather than Yes. Frege did have something important in mind which he builds into his notion of a concept, and which does not require the use of adjectives, common nouns, or verbs as the grammatical subjects of sentences. For the significant core of Frege's doctrine is compatible with the idea that the common noun context ' — is a concept' requires something like a singular term for its subject, and hence with the rejection of a simple concept-object dichotomy. The clue to the correct formulation of this core theme is found in his characterization of concepts as 'unsaturated' (ungeaettigte). For, in effect, this means that we may be able to get somewhere with 'unsaturated' singular terms—if we can find such—as the subject of statements of the form ' — is a concept'. And once we have hit upon this suggestion, the next move follows of itself. For among the singular terms available to us from the previous discussion are singular terms of the form 'that-p', and we know what an 'unsaturated' singular term of this form would look like. In short, we hit upon, for example,

(393) That x is triangular is a concept.

On this analysis, concepts would be 'unsaturated' propositions. And if, as Frege seems to do, we use the term 'object' in such a manner that anything re-
ferred to by a singular term is an object, we would have to say that concepts differ from objects not by being non-objects, but by being 'unsaturated' or 'incomplete' objects. Thus, when Frege says that to 'assert something about a concept . . . it must first be converted into an object, or, speaking more precisely, represented by an object' (p. 46), his thought was undoubtedly guided by the fact that (39') comes as close as it does to having the adjective 'triangular' as its subject, by having the unsaturated singular term 'that x is triangular' as its subject instead.

Now if the above line of thought is sound, we would no longer be precluded from saying that triangularity is a concept (39') by the fact that 'triangularity' is a singular term. The fundamental difference between 'triangularity' and 'that x is triangular' would be that the latter makes explicit a gappiness or incompleteness which is perhaps implicit in the former. Indeed, it is tempting to suppose that the abstract singular term 'triangularity' simply has the force of the unsaturated singular term 'that x is triangular'. We shall subsequently see that this is not the case, but if we permit ourselves this supposition for the moment, then we would interpret the statement 'Triangularity is a quality' (11) as, so to speak, a rewriting of

(11') \textit{That }x\textit{ is triangular} is a quality

and, consequently, regard a \textit{quality} as a specific form of \textit{concept}, the latter being a more inclusive notion, including as it does \textit{multiply} as well as \textit{singly} unsaturated propositions, and a variety of each.

Now it must be admitted that the idea that there are abstract entities such as triangularity, mankind, etc., takes a most interesting, if disturbing, turn if these entities are to be equated with gappy or unsaturated propositions. The notion of a \textit{gappy} entity is a puzzling one, even if it is softened into the idea of an \textit{incomplete} entity. On the other hand, it appears to illuminate contrasting historical positions. For if one accepts the idea that 'Triangularity' is simply, so to speak, a rewriting of 'That x is triangular', one is tempted to say that the difference between the Platonic and the Aristotelian conceptions of universals is that Plato takes the abstract singular term 'triangularity' to be a name which conceals no gaps, whereas Aristotle, by denying the apartness of the universal, is, in effect, recognizing the unsaturated, incomplete, or gappy status which is made explicit by the unsaturated abstract singular term 'that x is triangular'. There is, I believe, some truth to this suggestion—though I do not think that it does justice to the radical character of Aristotle's rejection of Plato's Ideas. But that is a story for another occasion.
IX

Let us suppose, for the time being, then, that the abstract singular term 'triangularity' simply has the force of 'that x is triangular'. Then in addition to its intrinsic interest, the above discussion has shown us a way of saying something about triangularity without using the singular term 'triangularity'. Thus, instead of saying

(46) Triangularity implies having three sides

we can say

(46') That anything is triangular implies that it has three sides.

The latter preserves—indeed, highlights—the adjectival role of 'triangular'.

No sooner have we said this, however, than we see how little we have said, if our aim is to avoid Platonistic anxieties. For if we put aside the complications introduced by the generality of (46') and turn our attention, instead, to

(47) That S is triangular implies that S has three sides

it becomes manifest that we have avoided the singular term 'triangularity' only to embrace the singular term 'that S is triangular', and that we have escaped universals only to accept propositions.

Actually, however, this new turn of events has brought us to the very heart of the matter. Statement (47) is, indeed, of the form

(48) that-p implies that-q

and does involve two singular terms. But not all logical connectives play a predicative role, and while those which do connect singular terms of the form 'that-p', those which do not connect statements and statement expressions, and statements are not singular terms, having, as they do, the form 'p' rather than 'that-p'. Both predicative and non-predicative connectives have their legitimate place in the grammar of our language, but unless these places are carefully distinguished and correctly understood, philosophical perplexities of the most pervasive sort will be endemic.

The story is, in essence, a familiar one. Truth-functional connectives do not require that the connected expressions function as singular terms. Thus, as we saw above, while 'Tom is clever or Tom is tall' (5) and '(Ep) p or Tom is tall' (6) have categorial counterparts which are built around the singular terms 'that Tom is clever', 'that Tom is tall', and the singular term variable 'that-p', neither (5) nor (6) itself contains any other singular term than 'Tom'.


Can we, then, say what is said by 'That S is triangular implies that S has three sides' (47) and 'That anything is triangular implies that it has three sides' (46') without committing ourselves to singular terms formed from statements? Surely it will be said, all we need to do is to make use of the familiar symbol ‘⊨’ which was specifically designed to be the non-predicative core of the predicative term 'implies'. We would then have

(47') S is triangular ⊨ S has three sides

and

(46') (x) x is triangular ⊨ x has three sides

and if this move is successful, we should have freed ourselves (temporarily, at least) not only from expressions of the form ‘that-p’, but also, unless we find other reasons for reintroducing them, from unsaturated singular terms of the forms ‘that x is f’ and ‘that x is a K’; and hence from ‘f-ness’ and ‘K-kind’. We would indeed have extricated ourselves from Plato’s beard.

X

It is well to pause for a moment to let the fact sink in that our argument has brought the problem of abstract entities face to face with the problem of necessary connection; and to note that it is but a short step to the problem of ‘causal connection’ or ‘natural implication’, and to the realization that ‘causally implies’ like ‘logically implies’ is a predicative connective and requires the use of abstract singular terms as in

(49) That it has just lightninged (causally) implies that it will shortly thunder

and

(50) That x is released (causally) implies that x will fall.

XI

Even if we could take it as established that to quantify over adjective-, common noun- and statement-variables is not to assert the existence of qualities, kinds, or propositions, we would sooner or later have to face the fact that ordinary language does involve the use of the singular terms and the common nouns which raise the spectre of Platonism—and, indeed, that we do make
the existence statements which the Platonist hails as the substance of his position. For we do make such statements as 'There is a quality (thus triangularity) which . . .', 'There is a class (thus, dog-kind—or the class of white things) which . . .', and 'There is a proposition (thus, that Caesar crossed the Rubicon) which . . .'. These statements, genuinely existential in character, make forthright ontological commitments. Or are these commitments, perhaps, less forthright than they seem? Can they, perhaps, be 'reduced' to statements which make no reference, explicit or implicit, to ontological categories?

We asked above "Is there any way of saying something about triangularity without actually using the abstract singular term 'triangularity'?" This question led us first to the idea of the predicative implication-statement 'That anything is triangular implies that it has three sides', which avoids 'triangularity' but at the expense of using the unsaturated abstract singular term 'that x is triangular'. The effort to avoid even these abstract singular terms led us then to the notion of a general truth-functional statement to be represented as

\[(46^2) (x) \text{ is triangular } \supset x \text{ has three sides.}\]

Without questioning the soundness of this notion, I shall now ask instead, 'Is there any statement of which the subject is "f-ness" which cannot be reformulated as a statement in which "f-ness" is replaced by the sentential function "x is f" (N.B.: not 'that x is f')?" To this question correspond a number of others of which two are more directly germane to our argument, namely, 'Is there any statement of which the subject is "K-kind" which cannot be reformulated as a statement in which "K-kind" is replaced by "x is a K" (not "that x is a K")' and 'Is there any statement of which the subject is "that-p" which cannot be reformulated as a statement in which "that-p" is replaced by "p"? And to these questions the direct and simple answer is Yes. For neither

\[(51) \text{ f-ness is a quality}\]
\[
\text{nor}\]
\[(52) \text{ K-kind is a class}\]
\[
\text{nor}\]
\[(53) \text{ That } p \text{ is a proposition}\]
can be so reformulated.

But if these contexts (which we have called categorizing contexts) do not admit of the desired reformulation, and consequently revive our Platonistic anxieties, it is equally true that these anxieties can be at least temporarily stilled by a relatively simple and straightforward therapy. This relief is pro-
vided by pointing out that whereas the truth or falsity of statements to the effect that a physical object belongs to an empirical kind is ascertained by observing or inferring that it satisfies certain empirical criteria, the truth or falsity of such categorizing statements as

(11) Triangularity is a quality,

(54) Dog-kind is a class,

(55) That Chicago is large is a proposition,

is ascertained not by ‘examining’ triangularity, betweenness, dog-kind, or that Chicago is large, but by reflecting on the role in discourse of the corresponding expressions. This is the insight contained in Carnap’s contention (in The Logical Syntax of Language) that the above statements are in the ‘material mode of speech’ and are the ‘quasi-syntactical’ counterparts (roughly—for I am following the general spirit, rather than the letter of Carnap’s account) of

(112) ‘Triangular’ (N.B.: not ‘triangularity’) is an adjective (in English),

(541) ‘Dog’ (N.B.: not ‘dog-kind’) is a common noun (in English),

(551) ‘Chicago is large’ (N.B.: not ‘that Chicago is large’) is a sentence (in English).

But surely, it will be said, the word ‘triangular’ is just as abstract an entity as triangularity. Where is the ‘nominalistic’ gain? Is not the term “‘triangular’”, as much a singular term as ‘triangularity’, and ‘adjective’ as much a common noun as ‘quality’? The answer is simple and straightforward. “‘Triangular’” is not a singular term, but a common noun, and the gain arises in that we can hope to equate (113) with something like

(113) (x) x is a ‘triangular’ \( \exists x \) is an adjective

where “‘triangular’” is a common noun referring to items playing a certain linguistic role, as ‘bishop’ is a common noun referring to items playing a certain chess role. ‘A ‘triangular’ is an adjective’ would be the counterpart of ‘A bishop is a diagonal-mover’.

12. This Carnapian interpretation of categorizing statements would carry with it a reinterpretation of the categorial counterparts of such statements as (1). Thus, ‘S exemplifies f-ness’ would be the equivalent in the material mode, a quasi-semantical equivalent of “‘f’ is true of S”. The relation of the latter to “‘S is f’ is true” would remain to be explored. Again, ‘S is a member of K-kind’ would be the quasi-semantical equivalent of “‘K’ is true of S”. The latter, however, would seem to be as closely related to “‘S’ satisfies the criteria of ‘‘K’”, as to “‘S is a K’ is true”.

Unfortunately, no sooner is one relaxed by this therapy, and considering the possibility of extending it to some other contexts in which 'abstract entities are acknowledged', than a number of more serious objections arise which threaten a relapse.

The first of these objections grants that if the only contexts involving such expressions as 'triangularity', 'betweenness', 'dog-kind', and 'that Chicago is large' which could not be reformulated in the object language without the use of abstract singular terms were categorizing statements such as (11), (54), and (55) above, or such other statements as might be capable of straightforward treatment under the more general notion of 'quasi-syntactical statements in the material mode of speech', then the Carnapian therapy—vintage 1932—would be successful. After granting this, however, it proceeds to argue that there are contexts in which abstract singular terms occur, which neither can be reformulated in the object language, to avoid them, nor respond to this syntactical treatment. Consequently, it continues, there are reasons which cannot be dispelled by any therapy yet mentioned for thinking that we are committed to the straightforward existence of qualities, relations, kinds, propositions, etc. And if, it concludes, by way of counter-attack, there are such entities, then even the idea that such a categorizing statement as

(11) Triangularity is a quality

is really about the adjective 'triangular' instead of, as it purports to be, about triangularity, must be simply a mistake.

XII

Now the task of examining all contexts in which abstract singular terms occur to see if they admit of an interpretation free of Platonistic implications, is an intricate and demanding one which, even if I were prepared to undertake it, would require a larger canvas than is at hand. I shall therefore limit myself to a few manageable points which, as I see it, lay the groundwork for a successful use of a therapy essentially the same as the one proposed by Carnap (but which, of course, has a much longer—and indeed, venerable—history).

The first point I wish to make arises from the fact that if we press the above critic to specify the contexts he has in mind, the chances are that he will come up with examples from discourse in which we are either explaining what a word means or characterizing the thoughts and beliefs of intelligent beings.

It goes without saying that one of the oldest and strongest roots of conceptual realism is the conviction that we cannot make sense of thinking in its var-
ious modes unless we interpret it as involving something like an ‘intellectual perception’ of abstract entities. Thus the road we are traveling leads sooner or later to the problem of problems, the Mind-Body problem, the Gordian knot which has been cut so often, but never untied. I do not propose to untie it on this occasion. I shall therefore turn my attention to discourse about the meanings of words to see if it involves a commitment to abstract entities.

Let us consider, therefore, such a context as the following:

(56) ‘Dreieckig’ (in German) means . . .

And let us ask what we should place at the end of this context to make a well-formed sentence. A number of answers suggest themselves, of which the first, and most obviously unsatisfactory, is that what we should place there is the quoted expression “‘triangular’”. This clearly won’t do, at least as it stands, for the simple reason that if we were looking for the *beginning* of a sentence which has as its ending

(57) . . . (in German) means ‘triangular’

we would find the answer—assuming that Germans form the names of expressions, as we do, by means of the quoting device—in

(58) “‘Triangular’” (in German) means ‘triangular’.

Now we might try to put this informally by saying that the German word ‘dreieckig’ means a *quality* and not a *word*, and that if any German expression means the *word* ‘triangular’ it is the German expression “‘triangular’”. But so to put the matter raises more puzzles than it resolves, for when we say that the German word ‘dreieckig’ means a *quality*, we imply that the proper way to complete the original context (56), is by the use of the abstract singular term ‘triangularity’, which would give us

(59) ‘Dreieckig’ (in German) means (the quality) triangularity,

and a moment’s reflection tells us that this won’t do at all. For surely the German word which means triangularity is ‘Dreieckigkeit’ and *not* ‘dreieckig’, thus

(60) ‘Dreieckigkeit’ (in German) means triangularity.13

Now the source of our trouble is that we have been taking for granted that what belongs in the place of the dots in (56) is a singular term. But, then, it

13. See note 1.
will be said, is not 'means' a transitive verb? And does it not, therefore, require to be followed by an expression which refers to an object, as do the concluding expressions in

(61) Tom hit Harry,

(62) Tom hit a man,

(63) Tom hit the man next door.

It is this reasoning which confronts us with our dilemma, for if the context takes a singular term, and if, as we have seen, it does not take 'triangularity', what else is there for it to take but "triangular". We must apparently choose between

(64) 'Dreieckig' (in German) means 'triangular'

which is false, and,

(65) 'Dreieckig' (in German) means triangular

which because it uses the adjective 'triangular' rather than a singular term is, apparently, ill-formed.

Now the way out of this labyrinth consists in recognizing that it is incorrect to say that 'dreieckig' means a word, and equally incorrect to say that it means a non-word, for the simple reason that 'means' is not a transitive verb. Not that it is an intransitive verb, for it is neither, and the attempt to fit it under one or the other of these headings, on the supposition that they are not only mutually exclusive but jointly exhaustive, is the cause of the puzzle.

Once this point has been made, however, it can be granted that even though

(64) 'Dreieckig' (in German) means 'triangular'

is false, there is a sense in which the true statement

(65) 'Dreieckig' (in German) means triangular

is about the English word 'triangular'. For by making statements of this form we bring people to understand the German word 'dreieckig', for example, by leading them to reflect on their use of its English counterpart. It is because the understanding of (53) involves an imaginative rehearsal of the use of 'triangular' that (53) differs from a simple statement to the effect that 'dreieckig' is the
German counterpart of the English word ‘triangular’. The latter statement could be fully understood, as the former could not, by someone who did not have the English word ‘triangular’ in his active vocabulary.

Now the prime result of all this logic chopping is that the context

(66) ‘—’ (in L) means . . .

does not require a singular term to fill the right-hand blank. Thus, to use other relevant examples,

(67) ‘Homme’ (in French) means man [not mankind]

and

(68) ‘Paris est belle’ (in French) means Paris is beautiful [not that Paris is beautiful].

It follows that the existentially quantified counterparts of (65), (67), and (68) are

(69) (Ef) ‘dreieckig’ (in German) means f,

(70) (EK) ‘Homme’ (in French) means K,

(71) (Ep) ‘Paris est belle’ (in French) means p,

and that it would be as incorrect to read these as ‘There is a quality . . .’, ‘There is a class . . .’, and ‘There is a property . . .’, as we found it to be to make the corresponding readings in the case of (2), (4), and (6).

We are now in a position to grant that we do speak of the ‘meaning’ of a word while insisting that the common noun ‘meaning’ (or its sophisticated counterparts, ‘concept’ (Frege) and ‘property’ (Geach))—far from embodying a fundamental logical category—arises from contexts of the form “—” means . . . ’ (66), by treating ‘means’ as of a piece with ordinary transitive verbs. Thus, by analogy we have

(65¹) Triangular is meant (in German) by ‘dreieckig’,

(65²) Triangular is what ‘dreieckig’ (in German) means,

(69¹) There is something (i.e. triangular) which ‘dreieckig’ (in German) means

and while none of these involves a commitment to a common noun expression having the force of ‘meaning’ the fact that one of the principles of lin-
guistic development is analogy, easily generates the common noun ‘meaning’ and permits us to say

\[(65^3) \text{ Triangular is the meaning of ‘dreieckig’ (in German)}\]

and to make the statement properly existential in form,

\[(69^2) \text{ There is a meaning which ‘dreieckig’ (in German) means} \]
or, with Geach,

\[(69^3) \text{ There is a property which ‘dreieckig’ (in German) stands for.}\]

In other words, while it would be incorrect simply to say that there are no such things as meanings, or Frege’s concepts, or Geach’s properties, to trace the common noun ‘meaning’ to its source in the translation rubric ‘—’ (in L) means . . .' (66) is to make what amounts to this point in a less misleading and dogmatic way.

The upshot of the foregoing discussion of meaning with respect to the primary theme of this article can be summed up by saying that the translation context (66) does not properly take a singular term on the right-hand side unless the expression of L which is placed in the single quotes of the left hand side is itself a singular term. In other words, this context does not of itself originate a commitment to abstract entities.

This point might be obscured by a failure, where the quoted expression of L is a sentence, to distinguish between the context

\[(72) ‘—’ (in L) means p\]

and the context

\[(73) X—by uttering ‘. . .' (in L)—asserts that-p\]

where X is a person. The former context abstracts from the many specific ways in which the English sentence represented by ‘p’ and the corresponding sentence of L function in discourse. That the context

\[(74) X \text{ asserts that-p}\]

unlike context (72) above does involve the use of the abstract singular term ‘that-p’ is a point to which we shall return at the close of the argument.

XIII

Perhaps the most interesting consequence of the above analysis is the fact that it frees the ‘semantical definition of truth’ from the commitment to proposi-
tions which it has often been taken to involve. Thus, the definiens of Carnap's 
definition of 'true sentence of $L$' developed on pages 49ff. of his *Introduction 
to Semantics*, namely,

$$(75) \text{S is a true sentence of } L = \forall p \ (\text{Ep}) \ S \text{ designates } p \ (\text{in } L) \cdot p$$

is incorrectly read as 'there is a proposition, $p$, such that $S$ designates $p$ (in $L$) 
and $p'$. It can readily be seen that this reading exhibits inconsistencies which 
are the counterpart of those explored in the opening section of this chapter in 
connection with the 'informal reading' of '(Ef) $S$ is $f$' as 'there is an $f$ such that 
$S$ is $f$. Thus, whereas 'S designates $p'$ requires that 'p' be a sentential variable 
and not a singular term variable, the context 'there is a proposition, $p$, ...' re­
quires that 'p' be a singular term variable of the form 'that-$p'$. And if we revise 
the definition to avoid the inconsistency by taking 'S' to be the name of a that-
clause (in $L$) rather than the name of a sentence, thus obtaining

$$(76) \text{S is a true that-clause (in } L) = \exists \text{ There is a proposition, that-$p$, such } 
\text{that } S \text{ designates } \text{that-$p'} (\text{in } L)\text{ and that-$p'}$$

we see at once that we have an ill-formed expression on our hands, for the 
concluding conjunct 'p' of the original definiens has been turned into the singular term variable 'that-$p'$; and to patch this up we must turn 'and that-$p'$ into 
'and that-$p$ is the case', where 'that-$p$ is the case' is the categorized counterpart 
of 'p'; as 'S has $f$-ness' is of 'S is $f$'.

The 'propositional' reading of Carnap's definition becomes, under the 
purpose of the demand for consistency,

$$\text{(77) T is a true that-clause (in } L) = \forall \text{ there is a proposition, that-$p$, such } 
\text{that } T \text{ designates } \text{that-$p'} (\text{in } L)\text{ and that-$p'$ is the case.}$$

and while I do not wish to impugn the consistency of the notion, thus intro­
duced, of the truth of a that-clause, I do wish to insist that this notion is 
philosophically unsound in so far as it rests on the mistaken idea that the truth 
must be defined in terms of propositions, and leads to the mistaken idea that 
the truth of *statements* is derivative from that of *that-clauses*.14

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14. To point out that Carnap's definition of 'true sentence of $L$' does not have these consequences 
is not to endorse his definition as an *explication* of the concept of truth. See Chapter 6 above [''Truth 
and 'Correspondence'" , *Science, Perception and Reality*].
Our success in showing that the context "—" (in L) means . . . does not originate a commitment to the use of abstract singular terms (though it accepts them with grace if they are already in use) raises the hope that all other uses of abstract singular terms stem from their use in 'quasi-syntactical statements in the material mode of speech'. In other words, the hope is revived that what we have called the syntactical therapy will work. If, however, as a result of this optimism we take a closer look at this therapy, we find that it is not without its own difficulties. Indeed, it is apparently open to a simple and devastating objection. How can 'Triangularity is a quality' (11) have something like the force of "'Triangular" (in English) is an adjective' (112) in view of the fact that (11) makes no reference to the English language? The objection is no mere question begging, for it presents an argument to prove that (11) makes no reference to the English language in general nor to the English word 'triangular' in particular. It points out that the German translation of (11) is

\[(11g)\text{ Dreieckigkeit ist eine qualitaet}\]

and argues that there is just as much reason to say that (11g) is about the German word 'dreieckig' as to say that (11) is about the English word 'triangular'. Since (11g) presumably makes the same statement as its English counterpart (11), the objection concludes that neither of these statements is about either word.

Again, how can the truth of (11) be ascertained by reflecting on the use of the word 'triangular' if, were a German to say

\[(78)\text{ Dreieckigkeit ist eine qualitaet, aber es gibt keine Englische Sprache,}\]

his colleagues would recognize that his statement was only contingently false? For if his statement is only contingently false, it might have been true, and if it had been true, he could have made a true statement, namely (11g) above even though there was no English language in general, nor, in particular, such an English word as 'triangular'. And if there is only a contingent connection between the truth of (11g) and the existence of the English language, how could we English users ascertain the truth of (11) simply by reflecting on the syntax of the English word 'triangular'?

The answer to this puzzle involves two steps, the first of which we have already taken, for it consists in reminding ourselves that
(79) ‘Dreieckigkeit ist eine qualitaet’ (in German) means *triangularity is a quality*. Consequently, the fact that (11g) ‘has the meaning it does’ does not commit us to the existence of a nonlinguistic abstract entity (a proposition) of which (11g) is the German name; nor, *a fortiori*, does the fact that (11) and (11g) ‘have the same meaning’ commit us to the existence of a nonlinguistic abstract entity which stands over and against both languages and has a name in each. That there is a *linguistic* abstract entity, of which ‘that triangularity is a quality’ is the English name, is indeed the case. But, as has been pointed out, ‘that triangularity is a quality’ stands to all vocables, English or German, which play a certain (complex) linguistic role as ‘the pawn’ stands to pawns of whatever shape, size, or colour. It has been pointed out above, that statements about linguistic roles are reducible to statements involving no abstract singular terms.

Now if we take seriously the fact that the *inter-translatability* of (11) and (11g), their existence as *counterparts* of one another in the two languages, does not involve the existence of a proposition which they both name, we are in a position to approach the question ‘By virtue of what are these two sentences counterparts?’ without being tangled *ab initio* in a commitment to Platonistic entities. In other words, we can look for a role which (11) might play in English and for a role which (11g) might play in German which would make (11) and (11g) *counterparts* and appropriately *inter-translatable*, unhampered by the mistaken idea that two inter-translatable expressions must be different names of one entity.

And once we undertake this unhampered search, the result is surely a foregone conclusion. Thus the second step consists in noting that while

(80) Triangularity is a quality, but ‘triangular’ is not an adjective in the language I speak

is not in any simple sense self-contradictory, as is shown by the fact that *one* of its German counterparts,

(80g) Dreieckigkeit ist eine qualitaet aber ‘triangular’ ist nicht ein Adjectiv in seine (Sellars) Sprache

is only contingently false, it is nevertheless ‘logically odd’ in a way which requires its falsity. Notice that not only (83g) but both
(801) Triangularity is a quality, but 'triangular' was not an adjective in the language I spoke yesterday

and

(802) Triangularity is a quality, but 'triangular' will not be an adjective in the language I will speak tomorrow

are contingently false. The logical oddity of (80) consequently hinges on the fact that I cannot—and this is a matter of strict logic—simultaneously make understanding use of 'triangularity is a quality' while understandingly denying that 'triangular' is an adjective. And the reason for this is simply that to know how to use singular terms ending in '-ity' is to know that they are formed from adjectives; while to know how to use the common noun 'quality' is (roughly) to know that its well formed singular sentences are of the form '— is a quality' where the blank is appropriately filled by an abstract noun. (That the parallel points about 'keit' and 'qualitaet' in German are genuine parallels is clear.) Thus a more penetrating examination (80) shows it to be self-contradictory in spite of the fact that one of its German counterparts is not.

Thus, while my ability to use 'triangular' understandingly involves an ability to use sentences of the form '— is triangular' in reporting and describing matters of physical, extralinguistic fact, my ability to use 'triangularity' understandingly involves no new dimension of the reporting and describing of extralinguistic fact—no scrutiny of abstract entities—but constitutes, rather, my grasp of the adjectival role of 'triangular'.

Is this all there is to it? Is the story really so simple? Of course not. Philosophy moves along asymptotes, and to move along one, it must move along many. Progress is dialectical, and comes from raising and answering objections. This time the objection is that the above account makes unintelligible the plain fact that we have the two sentences 'Triangularity is a quality' (11) and "'Triangular" (in English) is an adjective" (112). Why should our "grasp of the adjectival role of 'triangular'", be embodied in the former, when the latter does exactly this job in such a straightforward and successful way?

The answer to this question is best approached by noting an important difference between the two abstract singular-term expressions 'triangularity' and 'that x is triangular', which we have hitherto taken to have the same force. The existence of such a difference is made clear by the fact that there is something odd about the statement 'That x is triangular is a quality' (111) and even odder about

(81) That Socrates is a K is a particular.
To begin with, it is, surely, triangularity which is the quality just as it is Socrates which is the particular. If so, a distinction is called for between 'Triangularity is a quality' (11) and what we might represent as

\[ (82) \text{That } x \text{ is triangular is a particular-gappy proposition} \]

and, correspondingly, between

\[ (83) \text{Socrates is a particular} \]

and

\[ (84) \text{That Socrates is a } K \text{ is a kind-gappy proposition.} \]

Thus, if we assume for the moment that ontological categories are the material mode of speech for syntactical categories, then the syntactical counterpart of 'Triangularity is a quality' (11) would not be

\[ (11') \text{'}x \text{ is triangular'} \text{ is a singular-term gappy attributive sentence} \]

but simply "Triangular" (in English) is an adjective (112) and the syntactical counterpart of 'Socrates is a particular' (83) not

\[ (84') \text{'}Socrates is a } K' \text{ is a common-noun gappy classifying sentence} \]

but simply

\[ (83') \text{'}Socrates' is a singular term (of type 0).} \]

The non-self-sufficiency, then, of universals and individuals is not a matter of gappiness, but rather a reflection of the fact that adjectives, common nouns, and singular terms alike are what they are because of their different contribution to the statement-making role performed by the sentence.

It is often said that 'one place predicate' is a more penetrating syntactical concept than that of an adjective—even when the latter is expanded to include adjectival expressions as well as simple adjectives. And there is certainly an element of truth in this contention which we might try to put by saying that 'one place predicate' makes explicit reference to the way in which adjectives are incomplete. But once we try to spell this out, we see that the point is not that 'adjective' obscures the fact that adjectives are incomplete—for it does not—but rather that it does not give us, so to speak, an intuitive picture of this incompleteness. Indeed, we are only half-way to this intuitive picture if we replace (112) by

\[ (11') \text{'}Triangular' (in English) is a one place predicate.
To get it we must say

(116) ‘— is triangular’ (in English) is a singular-term-gappy-attributive sentence.

Consider, now, the statement

(821) That — is triangular is a particular-gappy state of affairs

(which is a candid reading of what might also be rendered by

(822) That x is triangular is a propositional (N.B.: not sentential) function).

What can we make of it? Are we not tempted to think that (821) is simply a rewriting of (116)? For, we might argue, how could (821) be true if it were not a rewriting of (116)? Can it be a complete sentence if it contains a gap instead of mentioning it? And where can an appropriate gap be found if not in the gappy sentence ‘— is triangular’?

Why, then, would we hesitate? What is there about the ‘feel’ of (821) which militates against the idea that it could be a rewriting of (116)? I think I can put my finger on it by calling attention to the fact that a foreigner who was learning English and had made substantial progress, but had not yet added the word ‘triangular’ to his vocabulary, could fully understand (116), whereas (821) cannot be fully understood unless one not only knows that ‘triangular’ is an English word, but actually has it in one’s active vocabulary.

But if this is the source of our hesitation, we are in a position to answer our original question. For we have now located a difference between the ‘material’ and the ‘formal’ modes of speech which enables us to see how they can ‘have the same force’ without one being a simple rewriting of the other. For while it would be incorrect to say that ‘That — is triangular is a particular-gappy state of affairs’ (821) is a mere rewriting of ‘— is triangular’ (in English) is a singular-term-gappy attributive sentence” (116), it is at least a reasonable next step in the direction of the truth to interpret it as a rewriting which presupposes that ‘writer’ and ‘reader’ are able to use as well as mention sentences of the form ‘— is triangular’.

It should be noted, in this connection, that a similar point can be made about the difference between ‘‘Dreieckig’ (in German) means triangular” (65) and

(654) ‘Dreieckig’ (in German) is the counterpart of the English word ‘triangular’.
For the former presupposes, as the latter does not, that the English-speaking person to whom it is addressed not only recognizes that 'triangular' is an English word, but enjoys its presence in his active vocabulary. It is, as we have seen, by leading those to whom it is addressed to rehearse in imagination the role of 'triangular' that (65) is an explanation of the German word 'dreieckig'. Thus (65) has essentially the force of "dreieckig" (in German), plays the same role as "triangular" in our language.

And this is the place to pick up a topic which was raised towards the end of our first bout with the rubric "—" means . . . only to be dropped like the hot potato it is. I there pointed out that the context "—" (in L) means \( p' \) (72), where '—' is a sentence of L, must not be confused with 'X, by uttering "—" (in L), asserts \( \text{that-}p' \) (73). The latter does, whereas the former does not, involve the use of the singular term 'that-p'. What then are we to do about this apparent commitment to Platonic entities? The clue is contained in (73) itself. I am not, however, suggesting that 'X asserts that-\( p' \) (74) is a simple rewriting of

\[
(85) \text{X utters '—'} \quad \text{(in L)}
\]

which won't do at all for the obvious reason that one can assert, for example, that it is raining without using any given language, L. Shall we, then, accept the equation

\[
(86) \text{X asserted that-}p =_D \text{There is a language, L, and a sentence S, such that S is a sentence of L and S (in L) means } p \text{ and X, speaking L, uttered S?}
\]

This might be the beginning of an analysis, for our discussion of the material mode of speech has shown us that 'X asserts that-\( p' \) (74) might mention a sentence (in this case a sentence in an unspecified language), even though it does not appear to do so, and that 'that-\( p' \) can be construed as the name of a role which is played in different languages by different vocables and in the unspecified language by unspecified vocables. On the other hand, that 86 cannot be the end of the analysis is clear.

XV

I began by arguing that 'existential quantification over predicate or sentential variables' does not assert the existence of abstract entities. I then suggested that if the only contexts involving abstract singular terms of the forms 'f-ness', 'K-kind', and 'that-p' which could not be reformulated in terms of expres-
sions of the forms ‘x is f’, ‘x is a K’, and ‘p’ were categorizing statements such as ‘f-ness is a quality’, ‘K-kind is a class’, ‘that p is a proposition’, then we might well hope to relieve Platonistic anxieties by the use of syntactical therapy. I then examined a context which has been thought to correlate words with extralinguistic abstract entities, namely the context “—” (in L) means . . . ”; and found that it does not do so. Encouraged by this, I proceeded to examine the distinction between the material and the formal modes of speech to see if the idea that such categorizing statements as “Triangularity is a quality” have the force of syntactical statements such as “triangular” is an adjective” can run the gauntlet of familiar objections, with what I believe to be hopeful results.

Yet if I stand off and scrutinize the argument, my enthusiasm cannot but be sobered by a consciousness of how much remains to be done before something like a nominalistic position is secure. For I cannot overlook the fact that two of the most puzzling contexts in which abstract singular terms occur have been noted only to be passed over in search of simpler game. I refer, of course, in the first place to mentalistic contexts such as

\[
(87) \text{Jones inferred that } S \text{ is } f
\]

and, in the second, to such ‘nomological’ contexts as

\[
(88) \text{That it has just lightninged implies that it will shortly thunder.}
\]

Then there are such evaluative contexts as

\[
(89) \text{That he was late is better than that he not have come at all.}
\]

The task of clarifying the force of contexts such as these is as large as philosophy itself. And to this task the foregoing is but a prolegomenon.
Abstract Entities

I

I have argued in a number of papers over the past decade or so that the abstract entities which are the subject matter of the contemporary debate between platonistic and anti-platonistic philosophers—qualities, relations, classes, propositions and the like—are linguistic entities. They are linguistic expressions. They are *expressions*, however, in a rarified sense, for they are distinguishable from the specific linguistic materials (sign designs) which embody them in historically given languages. Redness, as a first approximation, is the word *red* construed as a linguistic kind or sort which is capable of realization or


2. The medieval problem of universals, as is well known, was primarily the problem of genera and species in the category of substance, though solutions were extended by analogy (and with little success) to other categories. More recent discussion, for a number of reasons of which the most obvious—the temporary eclipse of the category of substance—is scarcely more than a restatement of the phenomenon to be explained, locates the problem primarily in the categories of quality and relation and extends solutions to genera and species of *things* and *events* in a fairly cursory manner and with equal lack of success. The present paper, as I see it, provides a perspective within which the medieval and the modern problems fall into place and show themselves to be different facets of a more embracing issue.

3. I shall use dot quotes to form the names of the expressions—in the sense to be explicated—which is realized in English by the sign design illustrated between them. I shall use asterisk quotes to
embodiment in different linguistic materials, e.g., *red*, *rot*, and *rouge*, to become the English word "red," the German word "rot," and the French word "rouge." Expressions in this rarified sense I have called—borrowing Peirce's term but putting it to a different, if related, use—linguistic types. Thus *red* is a type which is shared by the English word "red," the German word "rot," and the French word "rouge."

Now the thesis that the universal redness is the linguistic type *red* has the ring of absurdity. There are several ways in which this discomfort can be expressed. ("What is the type *red*—if there is such a thing—but a universal? And, granted that there are linguistic universals, is it not obvious that redness is a non-linguistic universal?" ) I shall open my argument by formulating an objection which, by cutting deeper than most, leads to a firm foundation for a restatement and defense of the thesis.

To prepare the way for this objection, let us suppose that the thesis to be defended is properly formulated as the claim that abstract entities are linguistic types, where a linguistic type is a kind or sort of expression in the sense adumbrated above. The objection opens by granting, for the sake of argument, that there are such things as linguistic types which can be embodied in different linguistic materials in different languages. It then argues that to construe the abstract singular terms which are the source of so much philosophical perplexity as referring to linguistic types is not only wrong-headed, but obviously so. It is open to an immediate *reductio* in Barbara.

All abstract entities are linguistic kinds
All kinds are abstract entities
*Therefore*, all kinds are linguistic kinds.

The conclusion is obviously false. Man, for example, is a kind, but scarcely a linguistic kind. (That "man" is a linguistic kind is another matter.) On the other hand, surely the minor premise is true. Is there a fallacy of ambiguity? Or must it not be granted that the major premise is false and with it the interpretation of qualities, relations, propositions, etc. as linguistic types?

Before facing these questions, some beating about in the neighboring bushes is in order. Thus, if the conclusion is false, and the minor premise true, we can construct the following syllogism with the denial of the original conclusion as its major premise:

form the name of the sign design illustrated between them, thus "red" is the name of the design which in English is the written word "red." These conventions will be clarified and made more precise in the course of the argument.
Some kinds are not linguistic kinds
All kinds are abstract entities
Therefore, some abstract entities are not linguistic kinds.

What might these abstract entities be? And how are they referred to? How is their abstractness to be understood? Obviously, if the thesis that universals (in the sense of qualities, relations, classes and the like) are linguistic kinds is to stand, the abstractness of the abstract entities which are not linguistic kinds cannot be explained by saying that they are universals. Perhaps some light on the nature of the abstract entities which, putatively, are not linguistic kinds, can be thrown by exploring the kinds which, according to our new major premise, are not linguistic kinds.

Consider, for example, the various pieces in chess. A familiar dialectic unfolds. Pawns, for example, are a concrete many. Over and against this many is the pawn as a one. This encounter with an old friend (the One and the Many) would normally be a source of rejoicing to any philosopher worth his salt. But to one who attempts to interpret sorts and kinds as linguistic types, it must occasion a sense of malaise. It will certainly do so if he has been assuming that the problem of universals in the modern sense (i.e., the problem of the status of qualities, relations, sorts, kinds, and classes as over and against their instances or members) is the problem of “the one and the many.” For if the pawn as one is a kind or sort to which the many individual pawns belong, then we are confronted by the syllogism

All universals are linguistic kinds
The pawn is a universal
Therefore, the pawn is a linguistic kind

which restores the original tension. For surely the conclusion is false. Shall we deny the major and thus abandon the thesis which was to be defended? Or is the minor premise vulnerable? To highlight the latter possibility, let us once again form a new syllogism, taking the denial of the above conclusion as our new minor premise, thus,

All universals are linguistic kinds
The pawn is not a linguistic kind
Therefore, the pawn is not a universal.
Can this conclusion be defended? It requires us to hold that not all ones over and against many are universals (i.e., qualities, relations, sorts, kinds or classes), and, consequently, to conclude that the problem of "the one and the many" is in fact broader than the problem of universals (in the specified sense).

But how are we to understand the idea that we can refer to the pawn as a one over and against the many pawns without referring to it as a universal of which the latter are instances? The key to the answer lies in working out the implications of the idea that to refer to such a one we need a singular term other than the singular terms by which we refer to individual pawns, and yet which does not refer to a universal of which they are instances. At first sight, however, this line of thought is stymied by the fact that the pawn is a kind or sort of chess piece, which seems to imply that the singular term ("the pawn"), which we have been using to refer to the one which is not to be a universal, does, after all, refer to a universal. It is only if this singular term has another use in which it does not refer to a universal that the above move can be made.

Now "pawn" is a common noun, and it will prove helpful to explore the logic of common nouns to see if there is a more general phenomenon of which the desired result is but a special case. Thus, consider the common noun "lion." Is there a singular term, which we might represent by $S_L$, by the use of which true singular statements of the form

$$S_L$$

can be made where it would be incorrect to prefix these statements by "the universal . . ." thus

$$\text{The universal } S_L \text{ is . . . ?}$$

To ask this question is to answer it. For it must have been immediately clear that "the lion" serves exactly this purpose. For we can make the true statement,

The lion is tawny

whereas it would obviously be incorrect to say

The universal, the lion, is tawny.

4. The use of "the" in such contexts has been called the "institutional" use by A. H. Langford. For an invaluable study of some of the problems which arise in this connection, see his paper, "The Institutional Use of the," Philosophy and Phenomenological Research. 10, 1949, pp. 115-120. I should add that the idea of a distributive singular term and the light it throws on the problem of abstract entities was developed independently of Langford's paper.
Abstract Entities

The example is instructive, for it calls our attention to the fact that a distinctive feature of this use of "the lion" is that what be said of the lion also be said of lions, thus:

The lion is tawny
Lions are tawny.

If, therefore, we can understand the relation of the lion (one) to lions (many) without construing the lion as a universal of which lions are instances; and if the looked-for singular term pertaining to pawns can be construed by analogy with "the lion"—indeed, as "the pawn"—then we would be in a position to understand how the pawn could be a one as against a many, without being a universal of which pawns are instances. This in turn would enable a distinction between a generic sense of "abstract entity" in which the lion and the pawn as well as triangularity (construed as the •triangular•) and that two plus two equals four (construed as the •two plus two equals four•) would be abstract entities as being ones over and against many5 and a narrower sense of abstract entity in which qualities, relations, sorts, classes, propositions and the like are abstract entities, but of these only a proper subset, universals but not propositions, for example, would be ones as over and against instances or members. This subset would include the kind lion and the class of pawns, which must not be confused with the lion and the pawn as construed above. But all this will be given a more careful formulation in what follows.

Such is the agenda. It is readily carried out. The first task concerns the relation of the lion to lions. Here the fundamental theme is the equivalence schema:

The K is f ≡ All Ks are f;

where this represents an identity of sense, the dagger indicating that the right-hand side is a "non-accidental" truth about Ks (i.e., [roughly] that being f is either one of the criteria for being a K or is implied by the latter on inductive grounds).6 Notice particularly that although the commentary represented by

---

5. The many corresponding to triangularity (in this context) and to that two plus two equals four would be linguistic many. According to the convention I shall follow in this paper, dot quotes are used to form the common nouns which refer to the items which play the role played in our language by the design illustrated between them.

6. The logic of such statements as "the lion is tawny" requires to be spelled out with care, otherwise the lion may have to suffer paradoxical indignities not unlike the wig which Russell removed from the present king of France. A minimal condition is that "Not (the K is f)" not be equated with "The K is not-f." This echoes the requirement that "All Ks are f" be a nonaccidental truth about Ks to support "The K is f."
the dagger is in the metalanguage, the two sides of the equivalence and, specifically, the expression “the $K$” and “$K$s” are at the same level of discourse—discourse about the lion being at the same level as discourse about lions.

Now if we reflect on the two statement forms

1. The $K$ is a one
2. $K$s are a many

we note that they are in the material mode, the former having (in first approximation) the sense of

“The $K$” (in English, our language) is a singular term,

the latter (and it will be noticed that the plural verb is an unperspicuous consequence of surface grammar) having the sense of

“$K$s” (in English, our language) is a plural term.

The second of the above statements (2) must be carefully distinguished from “$K$s are a many” in the sense of “There are many $K$s,” which is why it would be more perspicuously represented by

2.’ $K$s is a many.

The contrast between the $K$ as a one and $K$s as a many is obviously independent of how many $K$s there are, if any. I propose to call expressions of which “the lion” is a paradigm example “distributive singulars.” Notice, however, that distributive singulars need not contain the institutional “the.” Thus “man” in “Man is rational” is a distributive singular, and the statement is equivalent to “All men are (of necessity) rational.”

We have therefore unearthed a sense in which ones are reducible to many$s$, the lion to lions, and, in general, the $K$ to $K$s. This reduction, however, must not be confused with a reduction of qualities, relations, kinds, or classes to their instances or members. The latter (i.e., qualities, etc.) are, indeed, reducible to particulars in accordance with the schema

The $K$ is $f$

$K$s (of necessity) are $f$.

But the particulars in question are not the lions and tigers, the flashes and thunderclaps of the world tout court, but that rule-governed subset, linguistic (and conceptual) episode—the “logical order”—in terms of which the “real order” is pictured.
The above conclusion is implicit in what has already been said. For to construe “triangularity” as having, albeit less perspicuously, the sense of “the \(\text{\	extasteriskcentered\textit{\textit{triangular\textit{-}}}}\)" is to imply that triangularity as a \textit{one} is reducible to a many which is not \textit{triangular things}, but rather \(\text{\textasteriskcentered\textit{\textit{triangular\textit{-}}}}\textit{s}\), as \textit{the pawn} is reducible to \textit{pawns}. Thus, “\text{\textasteriskcentered\textit{\textit{triangular\textit{-}}}}\textit{s}” would be the common name of items which play the role played in our language by \(\text{\textasteriskcentered\textit{\textit{triangular\textit{-}}}}\textit{s}\), where the asterisk quotes form the common name of the design tokens of which one is found between them—as “pawn” is the common name of items which play the role played in our game of chess by pieces of wood. And “triangularity” would be the singular term which stands to the role played by \(\text{\textasteriskcentered\textit{\textit{triangular\textit{-}}}}\textit{s}\) as “the pawn” stands to the role played by pawns, and “the lion” pertains to the class of lions or lionkind. Notice, however, that in the use which we have in mind neither “the pawn” nor “the lion” is the name of the role or kind to which the common noun pertains. This, however, is not to say that these expressions may not have a further use in which they do function as names of universals. This question will come up for review at a later stage of the argument.

It is, perhaps, worth a moment’s digression to note that attempts have not been wanting by nominalistically oriented philosophers to avail themselves of the contextual definition of \textit{ones} in terms of \textit{manys} to reduce universals to particulars: thus

\[
\text{Triangularity is } f = \text{df triangles are } f
\]

(with more or less commentary on the right-hand side). An interesting virtue of this solution is that, if it were correct, the temptation to hold a doctrine of self-predication would be simultaneously explained and rendered harmless. For

\[
\text{Triangularity is triangular}
\]

would be tautologically true, having the sense of

\[
\text{Triangles (as such) are triangular.}
\]

That the theory is false is a consequence not of a mistaken approach to the problem of the one and the many (for such a singular term as “the triangular thing” could be introduced by this procedure), but rather of a failure to appreciate the \textit{normative force} of the contexts in which expressions referring to universals and propositions, belong. It is by reflection on these contexts, and, in particular, on the necessary equivalence between

\[
F\text{-ness implies } g\text{-ness}
\]
That something is \( g \) may be inferred from that it is \( f \)

that one comes to appreciate the kinship of such expressions as "triangularity" and "that a is triangular" to "the pawn." Both the idea that qualities, relations, kinds, and classes are not reducible to many and the idea that they are reducible to their instances or members are guilty of something analogous to the naturalistic fallacy.

II

Let us take a closer look at the way in which the pawn is bound up with the rules of chess, in the hope that it will help us understand what it means to speak of universals, propositions, individual concepts and other abstract entities in the narrower sense of the term as linguistic types.

The fundamental point is reasonably straightforward. Just as the equivalences

The \( K \) is \( f \equiv Ks \) are \( f \)

which pertain to thing kinds, rest on the more basic relationship between the common noun "\( K \)" and its criteria of application, which can, for our purposes, be represented by the schema

\[
x \text{ is a } K = x \text{ is } \varphi_1 \ldots \varphi_n,
\]

so the corresponding equivalences pertaining to pieces in a rule-governed system

The \( R \) is \( f \equiv Rs \) are \( f \)

rest on the relationship between the common noun "\( R \)" (e.g., "pawn") and its criteria, expressed by the schema

\[
x \text{ is an } R \equiv \begin{cases} (x \text{ is } f_1 \ldots f_n) \text{ and} \\ (x \text{ is in } \mathcal{C}_i \rightarrow \text{permitted } [x \text{ is moved thusly}]) \end{cases}
\]

Notice that the criteria have been split into a descriptive and a prescriptive component. It is the latter which is essential to the character of the equiva-
lence as defining a "piece." For while it is possible and, indeed, usual to specify the empirical characteristics of the pieces beyond what is implied by the description of the moves to be made with them, and beyond what is implied by the fact that pieces of the same kind must be discernibly similar and pieces of different kinds discernibly different, this need not be done.

The division of the criteria into descriptive and prescriptive components is, potentially, the drawing of a distinction between a "piece" in a narrower sense (the criteria of which are specified by the prescriptive component) and what might be called a recognized "embodiment" or "materialization" of the piece. Thus,

\[ x \text{ is an } R \equiv D(x) \text{ and } P(x) \]

can generate (where "\( D(x) \)" contains more than is implied by "\( P(x) \)"")

\[ x \text{ is a } DR' \]

where "\( D \)" is an adjective belonging to the vocabulary of the game which is derived from the function "\( D(x) \)" and "\( R' \)" is a common noun the criteria of which are summed up by "\( P(x) \)."

Again, the empirical criteria for what is to count as a "move" or a "play" and for what is to count as a "position," perhaps on a "board," from which it is to be made, can be specified in more or less generic or determinable terms. Thus, if (with an eye to chess as a paradigm) the moves of a game are specified in relatively generic terms, the potentiality exists for a similar distinction between the move as specified in terms of permissions relating to these generically characterized alterations of the status quo, and the various recognized "materializations" of the move. The latter would usually go hand in hand with the specification of what were to count as the different kinds of pieces and, if one is necessary, what was to count as the board.

Since the empirical criteria for pieces, positions and moves are always, of necessity, to some degree generic, the potentiality for a distinction between these pieces, positions, and moves, and a plurality of recognized "embodiments" of them in empirically different "materials" and, hence, of different "materializations" of the same game is always present. Notice that we have been concerned with "recognized" varieties, as contrasted with ad hoc variations, e.g., "let's use pieces made of candy, so that when captured they can be eaten!"

Again, the fact that, although the empirical criteria associated with the move-, piece-, and position-words of the game vocabulary may be quite generic, it is always possible—save in the limiting case of the summa genera defined in terms of the mathematical theory of structures—to modify the con-
nection between the distinctive vocabulary of the game and their criteria by associating the vocabulary of the game with more generic forms of these criteria, thus opening the way to new ways of playing the game ("Let's play chess with Cadillacs for queens, Volkswagens for pawns . . . and counties for squares") and to the possibility of acknowledging ways of playing the game which would have been ruled out by the more specific criteria. 8

What is it to come to see that two games of independent origin are different ways of playing one and the same game? Surely it is in the first instance to see that a common game vocabulary could be introduced and associated with generic empirical criteria of which the two sets of criteria for the two game vocabularies would be determinate forms. To see this from outside, as it were, is to see that they could be regarded as different ways of playing one and the same game. To put such an embracing game vocabulary to actual use is to see them from inside as different ways of playing the same game.

Thus, if Texans had independently developed a game played with automobiles and counties called "Tess," with its own distinctive vocabulary for its pieces and moves, we might have come first to appreciate isolated similarities between Tess and chess, and then to see that they could (along the above lines) be regarded as different ways of playing a game which chess would be another way of playing. At this stage, instead of coining a new vocabulary for the "same game," we would probably raise the criteria for being a "pawn," a "king," a "board," and consequently for being a game of chess, to a higher degree of abstraction, and begin to contrast "Texas chess" with "conventional chess" as (materially) different varieties of chess. Before this move, we could speak of two similar games, and, even, of two games "so similar that they could be regarded as different ways of playing one and the same game." Only after this step could we speak, without qualification, of two forms of the same game.

The point of the above remarks is clearly to suggest that it is fruitful to regard human languages of approximately the same degree of sophistication as materially different varieties of one and the same "language game"; thus, to compare the difference between German, say, and our language, which I shall suppose to be English, to that between Texas chess and conventional chess.

7. Think of what games of chess played by bringing about appropriate changes in the most radically different materials would have in common!

8. The distinction between what might be contrasted as "formal" and "material" varieties of a game is an important one. Chess played with conventional pieces differs "materially" from Texas chess described above. Chess without capture en passant differs "formally" from chess with such capture. My concern is to highlight the concept of materially different forms of the same game.
More particularly the point is to suggest that as both small objects of the fa­miliar shape and Volkswagens can be pawns, the former in conventional chess, the latter in Texas chess, so both *triangular*s and *dreieckig*s can be *triangular*s, the former in English, the latter in German.

But, as should be clear from the above discussion, it is one thing to say that English and German, granting that they can be usefully compared to games, can be regarded as different ways of playing one and the same game, and, as a result, to coin a "game vocabulary" which, if it came to be used, would structure the situation as one in which one and the same game (Human Language) is played in a number of materially different ways. It is quite another to say that the conception of our language as one way of playing a game with more generic descriptive criteria of which there are other materially different varieties is already implicit in the conceptual framework we actually use. Thus, it might be said, "granted that English and German can be regarded, etc., and that

•triangular

"could be introduced" to be a common noun which stands to *dreieckig*s (in German) and *triangular*s (in English) as

pawn

stands to Volkswagens (in Texas chess) and the familiar pieces of material (in conventional Chess), is there any expression in actual use which embodies this conception of the situation? Are you not claiming that there is? Or are you?"

This challenge immediately calls attention to the fact that what I have actually claimed to find in actual use is an expression which corresponds not to the contrived common noun

•triangular

but, rather, to the contrived singular term

the •triangular•.

For I have been proposing (as a first approximation) a "rational reconstruction" of Triangularity as the •triangular•. The question, therefore, immediately arises, "Is there, in actual use, a common noun related to 'triangularity' in a way which can be compared to the way in which 'pawn' is related to 'the

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9. It will be remembered that asterisk quotes are used to form the common noun for the designs illustrated between them.
pawn? And if not, why not?” The challenge and the question can be summed up by asking,

Granted that

*dreieckig*s (in G) and *triangular*s (in E) stand for triangularity

can be compared to

Volkswagens (in Texas chess) and the familiarly shaped pieces of material
(in conventional chess) embody the pawn,

why is there no common noun in actual usage such that, representing it by
“R,” we can say

*dreieckig*s (in G) and *triangular*s (in E) are Rs

as we can say

Volkswagens (in Texas chess) and the familiarly shaped pieces of material
(in conventional chess) are pawns?

The answer to this challenge and the related questions is to be found by reflecting (1) on the comparative rarity of interlinguistic comparisons, and (2) on the advantages and disadvantages of the ready availability of samples of pieces when the game in question is a linguistic one. If we follow the first line of thought, we notice that, when it is a question of two expressions in one and the same language, we do find common nouns which admit of radical differences in the designs to which they apply. Thus we can say not only

(instances of) sound; and shape; stand for triangularity

but

(instances of) sound; and shape; are “triangular”s.

Thus it would be a mistake to say that the quoted expression,

“triangular”

simply refers to the script design sampled between the quotes qua playing a role in the language. Nor will it do to argue that the sample represents a class conceived in quite generic terms, for to stretch “generic resemblance” to cover what written and spoken “triangular”s have in common is to conceal vital differences between different ways in which linguistic designs can have something in common.
Nor will it do to argue that

"triangular"

refers to the disjunction of written and spoken designs. For to do this is to misinterpret the looseness of the connection between being of a certain shape and being a "triangular" as a matter of a tight connection between the latter and the disjunctive character of being of a certain shape or of a certain sound. It is better, all things considered, to say that quotation is a flexible device which only at one extreme (in certain contexts) implies that the expressions referred to by an expression in quotes are of the sampled design, and that, where it applies to items of other designs, the guiding thread is not similarity of design.

Shall we say that the guiding thread is similarity of office or role? Before we attempt to do so, we must pay due attention to the fact that, although the expressions formed by the use of quotation marks (and their counterparts in speech) do have a range of application which extends beyond the design they illustrate, the additional designs to which they most obviously extend (Written designs in the case of spoken quotation; spoken designs in the case of written quotation) are tied to them by the user’s language habits. If we put this by saying that whatever the potential scope of the reference of quoted expressions may be, their actual reference is limited to designs which are more intimately related to one another than by similarity of office or role, then we can imagine someone to argue as follows:

We actually do say of an inscription in another language, thus *dreieckig*s in German, that it stands for triangularity. We do not actually say of an inscription in another language that it is a "triangular"; nor do we have any other role common noun by which to make such a statement. Therefore “triangularity” as we actually use it can scarcely be construed as having a sense of the form “the R.”

This argument, however, makes a basic mistake. It overlooks the fact that the use of “triangularity” in inter-linguistic contexts is an extended use which has developed from its use in intra-linguistic contexts. Thus, instead of contrasting the appropriateness of

*dreieckig*s (in G) stand for triangularity

10. I leave aside for separate treatment on another occasion the whole topic of the use of quotation to quote thoughts, but see Chapter 2 of Science, Perception and Reality [reprinted as Chapter 8 of this volume].
with the oddity of

*dreieckig*s (in G) are “triangular”s,

we should reflect on the equal appropriateness of

*triangular*s (in E) stand for triangularity

and

*triangular*s (in E) are “triangular”s

and ask ourselves

Why, granted that in the limited horizon of reference to our own language game, “triangularity” can be correlated with common noun ““triangular,,’” is the extended use of “triangularity” in inter-linguistic contexts not paralleled by a similarly extended use of ““triangular”’’?

To do so is to notice that, within the limited horizon, the abstract suffix “-ity” can be regarded as a form of quotation, thus

triangularity

and

“triangular”

would be parallel constructs. The chief difference (of a nonsuperficial kind) would be that, whereas ordinary quotation yields expressions which, though they serve primarily as singular terms, thus

“Triangular” is an adjective

can also serve without undue violence as common nouns, thus

There were three “because”s and four “whereas”s in the resolution, expressions formed with “-ity” are singular terms only. But, although “-ity” adding and ordinary quoting build linguistic designs into expressions referring to linguistic expressions with which these designs have something to do, the references of expressions formed with “-ity” is clearly less tightly tied to the illustrated design than is the reference of expressions formed by ordinary quotes. This is shown by the fact that whereas we can always take an adjective and form a singular term from it by the use of an appropriate suffix, the result is often stilted and artificial, and competes with a standard expression involv-
ing such a suffix, but of which the stem is no longer an adjective in actual use. From our point of view this means that whereas singular terms with these suffixes refer to linguistic types with which the design preceding the suffix has a reasonably close connection (sufficiently close in one way or another to mobilize relevant linguistic dispositions for rehearsal), the connection need not be so direct that we can say

“...-ity” refers to the type embodied in our language by *...*s,

let alone

“...-ity” refers to *...*s qua playing the role they do in our language.

Direct quotation, on the other hand, is less free to wander from its primary use in which it forms expressions which refer to linguistically functioning designs which are either of the kind illustrated in the quotation or are intimately related to them in the nexus thought-speech-writing. Thus, when it is a matter of putting existing resources to use in speaking of foreign expressions, singular terms formed by adding suffixes to relevant designs are better suited to the task of referring to designs which have only a similarity of role to connect them with the designs they illustrate. This is not to say that expressions formed by ordinary quotation are never given a parallel extension. They are, but, typically, in contexts in which the import of particular historical (or fictional) utterances is being given, and in which quotation can without too much violence be regarded as occurring in the rubric

/that which corresponds in the speaker’s language to/.../

thus,

Julius Caesar said /that which.../ “The die is cast.”

The above remarks, I believe, throw some light on the fact that, whereas within the horizon of one language (a situation which can be compared to one in which we chess players have not yet encountered Tess) we find common nouns formed by ordinary quotes which parallel singular terms of the same design in such a way that it is reasonable to “reconstruct” their relationship in terms of the perspicuous relationship between “a K” and “the K,”

11. Though it must not be too unfamiliar, for when it fails to be recognized as an archaic (or classical) counterpart of an adjective in current use, it will be replaced by a singular term formed from the latter.
when it is a matter of foreign expressions these parallel singular terms and common nouns formed by ordinary quotation are not available. We must use singular terms (formed by suffixes and other devices) to which there are no corresponding common nouns. This, of course, is not to say that the "logical space" of inter-linguistic role or office common nouns is lacking. Implicit in such singular terms as "triangularity," it can be brought to the surface as a quantified variable in explicating the translation rubric. Thus, consider

"dreieckig" (in G) means triangular.

It would be clearly incorrect to construe this as stating that

*dreickig*s (in the German variety of the human language game) are "triangular"s.

It would, however, be equally incorrect to equate it with

*dreieckig*s (in G) stand for what *triangular*s stand for in our language (i.e., triangularity).

For the identity of role implied by the original statement can be given explicit recognition by construing it as

*dreieckig*s (in G) are what *triangular*s are in our language12

which has the form (using "R" as a common noun variable)

*dreieckig*s (in G) ⊆ (R) (*triangular*s [in E] ⊆ R).

Let us, therefore, continue to use expressions formed by means of dot quotes to refer to linguistic types, which latter, though identifiable (by virtue of the name-forming practice) as the types realized in our language by the designs within the quotes, do not have being of these designs among their criteria. Thus, a •triangular• need not be a *triangular* (written or spoken). It can be a *dreieckig*. The most useful way to put this at the present stage of the argument is by the proportion

12. To which we with our contrived role common noun, can add . . . (i.e., *triangular*s).
expression formed by dot quotes = expression formed by ordinary quotes

"pawn" as applying to the appropriate pieces in any game which can be regarded as a different embodiment of chess

"pawn" as applying to the familiarly shaped pieces used in ordinary chess

If we bear in mind our earlier discussion of the criteria for application of common nouns, we can say that dot quotation corresponds to ordinary quotation where the latter practice has been modified in such a way that the descriptive component of the criteria for the application of the common noun formed by quoting has been reduced to that which is implied by the prescriptive component, and the latter has been given its most generic formulation.13

It should also be noted that, whereas ordinary quotation forms an expression which, depending on context, functions as a common noun or as the corresponding singular term, we shall give our dot quotes the job of forming an expression which must be preceded by "the" to form the corresponding singular term. It will be remembered that it is expressions of the latter kind which we are offering as our "rational reconstructions" of abstract singular terms, thus

Triangularity = the •triangular•
That it is raining = the •it is raining•.14

At this point it might be asked, "How do expressions in dot quotes translate into other languages?" The answer is to be found by reflecting on the above distinction between being a criterion for the application of a name, and being an implication of a name-forming practice. Thus, given that Germans use dot quotes as we are using them, English

the 10th inscription was a •triangular•

13. That the prescriptive component of the criteria of linguistic role or office common nouns pertains to intra-linguistic syntax (including "material" as well as "formal" transformation rules) and what I have elsewhere called language entry and language departure transitions, will not be argued in this paper. See "Some Reflections on Language Games" [reprinted as Chapter 2 of this volume], Philosophy of Science, 21, 1954, pp. 204–228. Also, "Truth and 'Correspondence,'" Journal of Philosophy, 59, 1962, pp. 29–56. Both these papers are reprinted in Science, Perception and Reality.

14. As has already been implied, these equations, and particularly the former, are but a first approximation to an adequate reconstruction. A finer-grained analysis will be given in a subsequent section.
It is worth noting, however, that this assumes that the generic rules with reference to which the expression "*triangular*" is to be understood are serving directly as prescriptive criteria for the common noun. In this event, the connection of the design *triangular* with the role *triangular* is a purely nominal one—is a matter of a name-forming practice. The design, however, can play a more substantive role without thereby becoming a criterion of application in the sense that to be a *triangular* an item must be a *triangular*. For "*triangular*" might be so used that a *triangular* is directly an item playing the role played in our language by *triangular*s. Clearly, in this event, a reference to the design would be involved in the criterion of application (without, however, requiring that *triangular*s be *triangular*s). We might say that in this case the ultimate criteria for being a *triangular* are indirectly specified by definite description in the immediate criterion, whereas in the former case, the ultimate and immediate criteria coincide. In the present case, the translation of "*triangular*" into "dreieckig" would be a translation of an expression into its counterpart in another language, without being a translation in that stricter sense in which a noun translates into another noun only if the immediate criteria of each mentions nothing which is not mentioned by the immediate criteria of the other. In the case we are considering, the immediate criteria of "*triangular*" would refer to *triangular*s, and the immediate criteria of "dreieckig" to *dreieckig*s. Our concern, however, is with the ultimate criteria of the expressions pertaining to linguistic types, and these would be identical, and such that if they were used as immediate criteria as in the case envisaged at the beginning of this paragraph, the German and English expressions pertaining to linguistic types would be inter-translatable in the strictest sense.

The point of the above remarks is to suggest that "triangularity" (which we are comparing to the contrived English "the *triangular*") and "Dreieckigkeit" (which we are comparing to the contrived German "die *dreieckig*") can be construed as translatable merely in the weaker sense without requiring that to express triangularity an item must be a *triangular*. On the other hand, since even if we so introduce dot quotes that the resulting expressions have immediate criteria which, mentioning specific designs, are appropriately translatable only into counterparts mentioning other designs, the ultimate criteria would be strictly translatable. And it is this strict translatability of ultimate criteria
which we have in mind when we say that “triangular” (in E) and “dreieckig” (in G) stand for one and the same abstract entity, triangularity.\textsuperscript{15}

It will therefore be a pardonable oversimplification if we interpret abstract singular terms by comparing their formation with the use of dot quotations so construed that the criteria of application of the quoted expressions are directly and simply what from a more subtle point of view are their indirect and ultimate criteria. The latter must, in any case, be available, even though it is by rehearsing in imagination prescriptions pertaining to the use of designs in our language that we become aware of them.*

IV

Before developing the above analysis into a more articulated theory of universals and propositions, let us put it to use in connection with a familiar problem.

Query: What light does the above analysis throw on the fact that both the following statements are true:

(a) Triangularity is a universal

(b) Triangularity is an individual

or, to rephrase these statements in ways which highlight the paradox,

(a\textsuperscript{1}) Triangularity is an attribute

(b\textsuperscript{1}) Triangularity is a subject

also

(a\textsuperscript{2}) Triangularity is a concept

(b\textsuperscript{2}) Triangularity is an object.

\textsuperscript{15} That few English words translate exactly into German raises other interesting and important questions relating to various ways in which languages can resemble or differ. Our attention has been directed to abstract entities as the sort of thing that \textit{can} find expression in other languages than our own. We can regard the pawn as the sort of thing that \textit{could} be embodied in all sorts of material and moved in all sorts of ways, provided that the relevant prescriptions are determinate forms of the same maximally generic prescriptions. A universal is the sort of thing that could \textit{find} expression in a number of languages. We are, of course, primarily interested in universals which are expressed in a living language (i.e., our own). It is important, however, to reflect on possible abstract entities, and, as an aid to this reflection, on possible games.

*\[The original section numbering omits III.\]
If we replace "triangularity" by its proposed reconstruction, the original statements become

(a') The •triangular• is a universal

(b') The •triangular• is an individual.

Both of these have distributive singular terms as grammatical subjects, and both of them might seem, therefore, to be reducible without further ado in accordance with the schema

\[ Ks \equiv f \]

explored in an earlier section. Actually, however, the situation is not quite so simple, for although it turns out that both of these statements do have distributive singular terms as their subjects, it is not the same distributive singular term. To appreciate this, consider the statements

(c) Socrates is a man

(d) Socrates is an individual.

The latter has as its rational reconstruction

\[(d') \text{•Socrates• is an individual constant}^{16}\]

and reduces to

\[(d^2) \text{•Socrates•s are individual constants.}\]

Thus the context

— is an individual

is an unperspicuous representation of the context

The •—• is an individual constant.

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16. It would be misleading to say that (d) is to be explicated as

The •Socrates• is an individual

(i.e., to change only the subject when passing to the formal mode of speech), for there is no provision in ordinary usage for reducing statements of the form

— is an individual
to cognate statements of the form

—s are individuals

in accordance with the above reduction schema. For an elaboration and generalization of this point, see the next note.
If so, then, whereas

(a³) The •triangular• is a universal
reduces directly to

(a⁴) •triangular•s are universals\(^{17}\)
i.e.,

(a⁵) •triangular•s are predicates
in order to reduce

(b⁴) The •triangular• is an individual
we must first see it as

(b⁵) The •the •triangular•• is an individual constant
which becomes

(b⁶) •the •triangular••s are individual constants.

According to this analysis, in (a) *triangularity* plays its basic role, whereas
in (b) it is playing a secondary role in which it is equivalent to *the •triangular­
larity•* (in a hybrid of English and our analytical contrivance), and to *the
•the •triangular••• in the pure form of the latter. The secondary role might

\(^{17}\) Again it would be misleading to say that (a) has the same sense as (a³). It must be borne in
mind that a rational reconstruction is neither a report of an identity of sense between two expres­
sions in actual use nor a simple reproduction of the use of a given expression in new verbal materi­
als. The point I am making in this and the previous note stands out more clearly if we change our
example to "triangularity is a quality," for "universal" is a philosophical term to which philosophers
give meaning (or meanings—often inconsistent), whereas the meaning of "quality," like that of "rela­tion," is to be reported (and analyzed). Thus whereas

The •triangular• is one-place predicate
can be reduced to

•triangular•s are one-place predicates
there is no provision in ordinary discourse for reducing statements such as

Triangularity is a quality
to statements of the form

—s are qualities.

Although it is philosophically illuminating to reconstruct such material mode of speech categories
as "individual," "quality," "relation," etc., as classifications of linguistic types, ordinary discourse does
not provide for a reduction of statements involving them which would parallel the straightforward
reduction of their formal mode of speech counterparts.
also be signalled by use of italics or underlining, in which case we would have as correct formulations of the original statements,

(a) Triangularity is a universal

(b) *Triangularity* is an individual

and, correspondingly,

(c) Socrates is a man

(d) *Socrates* is an individual.

V

We have been emphasizing the distinction between such common nouns as "lion," "pawn," etc., and the corresponding distributive singular terms "the lion," "the pawn," etc. Consider, now, the following statements:

(e) The lion is an abstract individual

(f) (The) lion is a kind

(g) The lion is a kind

(h) (The) lion is an abstract individual.

It is, I take it, clear that in all of these statements the expression "lion" is being used *not* to refer to lions, but to refer or to be a component of an expression which refers to an abstract entity. As a crude sizing-up of the situation, we might say that "lion" is being mentioned rather than used. But what of the definite article? Here there are two possibilities: (1) it is the phrase "the lion" which is being mentioned, and (2) the definite article "the" is being *used* rather than mentioned. The second construction is indicated in the above statements by placing the definite article in parentheses.

Thus (e) has the form

(e') *The lion* is an abstract individual

which, on our analysis, becomes the true statement

(e2) The •the lion• is a distributive singular term

which reduces to

(e3) •the lion•s are distributive singular terms (DSTs).
It will be noticed that although (e') shares the form "—s are distributive singular terms" with

\[(b^8) \text{•the •triangular••s are distributive singular terms}\]

the latter can be expanded to

\[(b^9) \text{•the •triangular••s are metalinguistic DSTs}\]

whereas (e') cannot. The significance of this latter fact will be pointed out shortly.

Turning our attention now to (f), we notice that in accordance with our convention it construes the role of the definite article as a matter of use rather than mention, "lion" alone being mentioned. This amounts to construing it as

\[(f') \text{Lion is a kind}\]

and the role of the definite article as that of avoiding the appearance of using a common noun as a singular term. On this interpretation (f') is to be reconstructed in first approximation as

\[(f^*) \text{"lion" is a common noun}\]

and, in terms of our finer-grained analysis, as

\[(f^o) \text{The •lion• is a common noun}\]

(which brings out the deeper appropriateness of the definite article). This in turn reduces to

\[(f^o) \text{•lion•s are common nouns}\]

and we see that on this interpretation (f) shows itself to be a sibling of "Triangularity is a quality," for the latter reduces, on our analysis, to "•triangular•s are (one place) predicates."

What, then, are we to make of (g)? Here, it will be remembered, the phrase "the lion" as a whole, rather than just the common noun "lion," is being mentioned. The essential point to notice is that if this construction is to make sense, the word "kind" must have a different sense than it does in (f). Indeed, it must be equivalent to "distributive individual." For whereas in the context of (f) "kind" is the material mode counterpart of "common noun," in the context of (g) it would have to be the material mode counterpart of "distributive singular term" (DST). For in the formal mode (g) gets under way as

"The lion" is . . .
and, appropriately, completed becomes

$$(g') \text{"the lion" is a DST}$$

or, in terms of our finer-grained analysis,

$$(g^2) \text{•the lion• is a DST}$$

which reduces to

$$(g^3) \text{•the lion•s are DSTs.}$$

The possibility that the word "kind" might have these two senses throws light on Russell's erstwhile distinction between classes as ones and classes as manys. Or, with an eye to Frege, we can say that in contexts such as (g) kinds are distributive objects, whereas in (f)-like contexts they are concepts or functions.

Let us finally turn our attention to (h) which though verbally similar to (e) differs by being construed as using rather than mentioning the definite article, using it, indeed, (as in f) to avoid the appearance of grammatical absurdity. Does (h) make sense? To see that it does, we must first note that instead of using the definite article to this end in (f) we could have used, instead, one of the suffixes ("-hood;" "-kind") which make singular terms out of common nouns. This would give us

$$(f') \text{Lionhood is a kind}$$

$$(f') \text{Lionkind is a kind.}$$

Of these I shall use "-kind" although it has the disadvantage of being used primarily to form collective nouns rather than abstract singular terms which would stand to common nouns as "triangularity" stands to "triangular." The usage I propose has the virtue of making "Lionkind is a kind (i.e., sort)" a true statement. According to this usage, (h) becomes

$$(h') \text{Lionkind is an abstract individual}$$

and stands to (f) as "Triangularity is an (abstract) individual" to "Triangularity is a quality." Furthermore, its rational reconstruction stands to

$$(f') \text{•lion•s are common nouns}$$

as

$$(b^8) \text{•the •triangular••s are DSTs}$$

18. For convenience, I have abbreviated "distributive singular term" as DST.
to

(a5) •triangular•s are (one-place) predicates.

Thus (h1) becomes

(h2) Lionkind is an abstract individual

and is explicated by the following series

(h3) The •lion• is an abstract individual

(h4) The •the •lion• is a DST

which reduces to

(h5) •the •lion•s are DSTs.

It will be noticed that (h5) can be expanded to

(h6) •the •lion•s are metalinguistic DSTs

in which respect it resembles (b8) and differs from

(e3) •the lion•s are DSTs.

VI

We are now in a position to see more clearly why it is incorrect to say that all abstract individuals are linguistic, where “abstract individual” is given the sense of “distributive individual.” For the adjective “linguistic” undergoes a subtle change in sense as one goes from explicandum to explicans (i.e., from the material to the formal mode of speech). Thus,

— is a linguistic abstract (distributive) individual

becomes

•—•s are metalinguistic distributive singular terms,

and appropriate examples of these forms would be

The •triangular• is a linguistic abstract (distributive) individual

•the •triangular•s are metalinguistic DSTs.

Thus, since it is not true that

•the lion•s are metalinguistic DSTs
it is not true that

*The lion* is a linguistic distributive individual.

If we draw the distinction between linguistic₁ (i.e., in a language) and linguistic₂ (i.e., pertaining to language), then

— is a linguistic distributive individual

is appropriate only where in its formal mode counterpart

—*s are linguistic DSTs,

“linguistic” has not the trivial sense of “linguistic₁” (where else could a DST be but in a language?), but the sense of “linguistic₂” which contrasts in this context with “not pertaining to language.”

It is, consequently, only if the term “abstract individual” is not given the broad scope of “distributive individual” but is restricted to qualities, relations, propositions, kinds, classes, and the like that

All abstract individuals are linguistic

expresses a truth.

VII

The above considerations also clarify the question

Are all abstract entities individuals?

If one approaches the notion of an individual in the broadest sense with Frege’s notion of an object, the questions arises,

Are there any abstract entities which are *not* objects?

And the answer seems unavoidable that of course there are abstract entities which are not objects. That this answer is correct and (pace Frege) unparadoxical emerges from the following examples:

1. *The lion* is a (distributive) individual and not a kind (i.e., *the lion* is a DST and not a common noun.)

2. Lionkind is a kind and not a (distributive) individual (i.e., *the lion* is a common noun and not a DST).
Abstract Entities

3. *Lionkind* is a (distributive) individual and not a kind (i.e., The •the •lion•• is a DST and not a common noun).

4. Triangularity is a quality and not a (distributive) individual (i.e., The •triangular•• is a predicate and not a DST).

5. *Triangularity* is a (distributive) individual and not a quality (i.e., The •the •triangular•• is a DST and not a predicate).

In (1), (3), and (5), we have examples of items which are objects and not functions; in (2) and (4), examples of items which are functions and not objects. It will be noticed that the examples of items which are functions and not objects—lionkind in (2) and triangularity in (4)—are *prima facie* identical with two of the items which are objects and not functions—lionkind in (3) and triangularity in (5). That this is only superficial appearance is one of the central themes of this paper.

But if all the above are abstract entities, though some are functions and others not, it is because all of the following are true:

6. *The lion* is an abstract entity

7. Lionkind is an abstract entity

8. *Lionkind* is an abstract entity

9. Triangularity is an abstract entity

10. *Triangularity* is an abstract entity.

What, then, we might ask, is the formal mode counterpart of "abstract entity"? Clearly it won't do to say simply "linguistic expression." For while all the following are true

6'. The •the lion• is a linguistic expression

7'. The •lion• is a linguistic expression

8'. The •the •lion•• is a linguistic expression

9'. The •triangular• is a linguistic expression

10'. The •the •triangular•• is a linguistic expression

it is *not* true that

11. Socrates is an abstract entity
although it is true that

11. The •Socrates• is a linguistic expression.

This points toward an interpretation of “entity” rather than “abstract entity” as the material mode for “linguistic expression,” and to a distinction between “non-abstract” and “abstract” entities which reflects a basic dichotomy between kinds of linguistic expression. Just how this latter might be characterized (or, indeed, whether a simple dichotomy will do) falls outside the scope of this paper. It is worth noting, however, that there is free play in the system for a distinction between wider and narrower senses of the term “abstract entity.” Thus we have already suggested that although

*The lion* is a distributive individual

we need not say

*The lion* is an abstract individual

but may reserve the latter category for items which satisfy the explication schema

— is an abstract individual

*The •••• is a linguistic distributive individual*

*The •the •••• is a metalinguistic DST.*

It will be useful to conclude this section with a remark on so-called “individual concepts.” If the term “concept” is used in the Fregean tradition, then an individual concept would be a concept which can be satisfied by at most one individual; thus, the property of being the last person to arrive at a certain dinner party. A concept which merely in point of fact was satisfied by only one individual would not in this sense be an individual concept. Thus the abstract singular term “Socrateity” might be used as equivalent to “being \(\varphi_1 \ldots \varphi_n\)” where the latter constitute the identification criteria for the name “Socrates” and where at most one object could be “\(\varphi_1 \ldots \varphi_n\).” A less interesting individual concept would be the property of being identical with Socrates. Such individual concepts would share with triangularity and mankind the character of being concepts in Frege’s sense, abstract entities, and (with the warnings spelled out above) abstract individuals.

In speaking of “individual concepts,” however, I have in mind items which
are not concepts in Frege’s sense. In Frege’s terminology they would more appropriately be called “individual senses.” For just as we can say

*>rouge* (in French) expresses (the sense) redness

i.e.,

*>rouge*s (in French) are •red•s

so we can say

*>Sokrates* (in German) expresses (the sense) Socrateity

i.e.,

*>Sokrates*s (in German) are •Socrates•s\(^{19}\)

Here two things are to be noted: (1) redness is not only an expressible sense, but a concept in Frege’s sense, and (2) Socrateity is an expressible sense, but not a concept as Frege uses this term.

Thus construed, Socrateity, unlike Socrates and like triangularity, is an abstract individual. Here we must be careful, for it will be remembered from the opening argument of this section that both

4. Triangularity is a quality and not a (distributive) individual (i.e., The •triangular• is a predicate and not a DST)

and

5. *Triangularity* is a (distributive) individual and not a quality (i.e., The •the •triangular"• is a DST and not a predicate)

are true. In the present case, by way of a parallel, we have

12. Socrateity is an individual-sense and not a (distributive) individual (i.e., The •Socrates• is an individual constant and not a DST).

13. *Socrateity* is a (distributive) individual and not an individual-sense (i.e., The •the •Socrates"• is a DST and not an individual constant).

It should also be noted that although on our analysis “Socrates is an individ-

---

19. It is important not to confuse

*>Sokrates* (in German) expresses (the sense) Socrateity

with

*>Sokrates* (in German) names Socrates.

The former (but not the latter) could be true even if there were no such person as Socrates.
ual” and “Socrateity is an individual-sense,” as we are using the latter, are strongly equivalent, actual usage restricts “Socrates” to one material mode context in addition to its non-metalinguistic use, whereas “Socrateity,” which in its primary use has the sense of “Socrates” in its secondary or material mode use, also has a secondary use (cf. [13]) in which it expresses a metametalinguistic concept in the material mode. For this reason it would be as incorrect to say that

Socrateity is a (non-distributive) individual

as to say

Socrates is an (abstract) individual.

VIII

Frege’s concepts are a subset of senses—predicative senses. Since the class of non-predicative senses includes many items which would traditionally have been called concepts (e.g., the senses of such expressions as “and,” “not,” “all,” etc.),20 the situation is fraught with the possibility of misunderstanding. Since, as I see it, Frege’s distinction between concepts and objects was of decisive importance in the history of ontology, I am strongly inclined to follow his lead and limit the term “concept” to predicative senses. In accordance with this usage I shall not speak of the senses of names, logical connectives, quantifiers, or other non-predicative expressions as concepts.

IX

We must now make good a still more basic oversimplification in our rational reconstruction of such abstract singular terms as “triangularity” as the names of linguistic types which are typically embodied in our language by the designs of which they contain an illustration (i.e., as having the force, in terms of our quoting convention, of, for example, “the triangular”). For, while these abstract singular terms are names of linguistic types, and, indeed, of types to which the designs they illustrate are intimately related, it is at least an oversimplification to say that the types in question are realized in these de-

20. That Frege thought of “p or Tom is tall” as expressing a function and hence as predicative is a symptom of a basic flaw in his system.
signs. The point I have in mind stands out like a sore thumb once we remember that in a perspicuous language constructed on the principles laid down in Wittgenstein’s *Tractatus*, for example, the Jumblese sketched in my “Naming and Saying,” basic statements are made not by concatenating predicate expressions with individual constants, but rather by writing these individual constants in various manners or styles. Thus the Jumblese counterpart of PMese

Triangular \((a)\)
might be an \(*a*\) from one type font, thus,

\[ a \]

and of

Circular \((a)\)
an \(*a*\) from another font, and so on. Again, the Jumblese counterpart of PMese

Larger \((a, b)\)
might be an \(*a*\) and \(*b*\) from the neutral font placed in a certain relationship, thus

\[ a_b \]

while the counterpart of PMese

Heavier \((a, b)\)
might be

\[ b_a \]

Corresponding to the PMese statement functions

Triangular \((x)\)
Circular \((x)\)
Larger \((x, y)\)
Heavier \((x, y)\)

---

21. [Reprinted as Chapter 5 of this volume], *Philosophy of Science*, 29, 1962, pp. 7–26, reprinted in *Science, Perception and Reality*. 
ABSTRACT ENTITIES

would be variables written in the corresponding styles or manners. Further
development of Jumblese means of expression would take us beyond our
present aims. For the above is sufficient to call attention to the fact that there
are no designs in Jumblese which play the role played by *triangular*s, *circular*s, *larger*s, etc., in PMese. Jumblese, in short, contains no predicate de-
signs.

Now what this amounts to is that PMese has a greater multiplicity of pieces
than does Jumblese for playing the same game. In effect, the role played by
*triangular*s, etc., in PMese is a subordinate one. Thus the role of *triangu-
lar*s is that of bringing it about that individual constants or variables have
the character of being concatenated with a *triangular*. PMese as well as
Jumblese makes statements by tokening individual constants in various man-
ners, but PMese manners involve the use of designs other than the names,
whereas Jumblese manners do not. Or, to put it somewhat differently, in
Jumblese we find a smaller number of designs, but a correspondingly greater
number of ways of forming and deploying those it has. (The subordinate
move in PMese of concatenating a *triangular* with an *a* to form *triangu-
lar (a)*—I shall use parenthesis without comment—can be compared to the
subordinate move of putting a separate crown on a pawn to make a queen.)

Now, if Jumblese has no design which plays the role played in PMese by
*triangular*s, it does have items which play the role played in PMese by *tri-
angular(x)*s. It does have, that is to say, items which are •triangular (x)-s (i.e.,
which stand for the propositional function that x is triangular). Thus, whereas
PMese has both predicates and propositional functions, Jumblese makes do
with the latter.

The question now arises, shall we say that triangularity is to be construed
as the type realized in our language by *triangular*s, in which case no Jum-
blese design would stand for or express triangularity? Or shall we say that tri-
angularity is to be construed as the type realized in our language by certain
sentential designs of which *triangular*s are the distinctive component? In
this case, Jumblese might very well have designs which express triangularity,
in spite of the fact that it has no designs which play the role played in our lan-
guage by *triangular*s.22

To fix our ideas as to what the second approach to a reconstruction of tri-
angularity might be, let us begin with the suggestion that

\[
\text{Triangularity} = \text{the } x \text{is triangular}\]

22. And, consequently, could not form this name of the office in question from a design which
corresponds to our *triangular* as Germans, for example, can do by using "dreieckig".
(i.e., that "triangularity" is the name in our language of the type realized in our language not by *triangular*s, but by *x is triangular*s). This suggestion has the merit of interpreting triangularity as a type which is found in Jumblese as well as PMese. Thus in Jumblese *x*s would correspond to *triangular*(x)*s in PMese, and like the latter would express or stand for triangularity (i.e., would be *x is triangular*s). This suggestion, furthermore, would fit in with the fact that the statement made by

Triangularity entails trilaterality

is often represented by the formula

"x is triangular" entails "x is trilateral."

But although the suggestion is on the right track, it won't do as it stands, for it involves a misunderstanding of what one is attempting to express by the use of the variable. That this is so stands out clearly if we compare the latter formula with its material mode of speech counterpart,

That something is triangular entails that it is trilateral.

Obviously it would be a mistake to symbolize the latter as

That (Ex) x is triangular entails . . .

The "something" is playing quite a different role. To bring out what it is doing, let us consider the statements

That a is triangular entails that a is trilateral
That b is triangular entails that b is trilateral.

According to our analysis,

That a is triangular

has the force of

The •a is triangular•

and refers to the type realized in our language by *a is triangular*s. The expression

•a is triangular•

is a metalinguistic common noun which is constructed through and through on the illustrating sign design principle. If, however, we want to form a
metalinguistic common noun which can be applied to the two object language statements

\( a \) is triangular

and

\( b \) is triangular,

it obviously cannot be constructed through and through on the illustrating sign design principle. If we abandoned the latter altogether, we could introduce non-illustrating common nouns, thus

\[(\text{genus}) \text{ INDCON}_1 \; (\text{species}) \text{ INDCON}_1 \; \text{INDCON}_2 \ldots \]

\[(\text{genus}) \text{ PRECON}_1 \; (\text{species}) \text{ PRECON}_1 \; \text{PRECON}_2 \ldots \]

and form the non-illustrating common nouns

\text{PRECON}_1\text{INDCON}_1, \text{PRECON}_2\text{INDCON}_2

to correspond to the illustrating common nouns

\( \ast \text{triangular} \; (a) \ast, \ast \text{triangular} \; (b) \ast \)

and also the more generic common noun

\text{PRECON}_1\text{INDCON}

which would have no illustrating counterpart. Thus corresponding to

\( x \) is a \text{PRECON}_1\text{INDCON}_1

we would have

\( x \) is a \( \ast \text{triangular} \; (a) \ast \)

and to

\( x \) is a \text{PRECON}_1\text{INDCON}_2

we would have

\( x \) is a \( \ast \text{triangular} \; (b) \ast \)

but there would be no illustrating counterpart to the more generic classification

\( x \) is a \text{PRECON}_1\text{INDCON}
or the even more generic

\( x \) is a PRECON INDкон.

But might there not be a way of forming metalinguistic common nouns which combine the illustrating principle with other techniques, using the latter where, as in generic representation, the former is not available (at least in a straightforward way)? Perhaps we can supplement the illustrating common nouns,

\( \cdot a\cdot, \cdot b\cdot, \cdot c\cdot, \ldots \)

\( \cdot \text{triangular}\cdot, \cdot \text{circular}\cdot, \ldots \)

with the non-illustrating ones listed above, and contrive such mixed common nouns as

\( \cdot \text{triangular}\cdot \text{INDкон} \)

to correspond to

\( \text{PREкон}1\text{INDкон}. \)

Now it seems reasonable to reconstruct

that something is triangular

not as the completely illustrating

The \( \cdot x \) is triangular\cdot

(in which case only sentential expressions with variables could realize the type referred to), but as the mixed expression

The (\( \cdot \text{triangular}\cdot \text{INDкон} \)).

If so, then the second suggestion with respect to the interpretation of "triangularity" turns into the proposal to construe it as identical in sense with "that something is triangular" as used above, and hence to be reconstructed as indicated.

A refinement of the above considerations points to the interpretation of the nonillustrating component of the common noun "(\( \cdot \text{triangular}\cdot \text{INDкон} \))" (i.e., "INDкон") as a variable with "INDкон1," "INDкон2," "INDконn,"

---

23. I introduce parentheses at this point to make clear that the definite article is followed by one common noun formed by juxtaposing an illustrating and a nonillustrating component.
etc., as its substituends rather than as a common noun constant related to the latter as genus to species. The two interpretations are intimately related, for compare

\[ x \in G \equiv x \in S_1 \text{ or } x \in S_2 \text{ or } \ldots \text{ or } x \in S_n \]

with

\[ (E_s) \ x \in S_i \equiv x \in S_1 \text{ or } x \in S_2 \text{ or } \ldots \text{ or } x \in S_m. \]

The reason for suggesting that the reconstruction of

that something is triangular

contains a metalinguistic variable (we have seen that it doesn't contain a metalinguistic constant which names an object language variable) is that we must account for the fact that the implication statement

That something is triangular implies that it is trilateral

connects types involving the same individual constant. This would not be represented by

The (•triangular•INDCON) implies the (•trilateral•INDCON).

This fact suggests that the reconstructed counterpart of "that something is triangular" must be, rather,

The (•triangular•INDCON_i)

where "INDCON," is a common noun variable admitting of quantification and having "INDCON_1," "INDCON_2," etc., as substituends. And, indeed, it is a clear implication of our analysis that statements beginning

That something is triangular . . .

involve two dimensions of quantification: (1) a covert universal quantification ranging over linguistic tokens, which is also present in

That a is triangular

and is made explicit by the sequence

That a is triangular
The •triangular (a)•
(t) te •triangular (a)• \rightarrow \ldots

and (2) an overt existential quantification which ranges in appearance (as be-
ing in the material mode of speech) over objects, but actually over linguistic types belonging to the category of individual constants, and which can be represented as

\[(\text{INDCON}_t) \text{ The } (\bullet\text{triangular} \bullet \text{INDCON}_t) \text{ is } \ldots\]

the two combining to yield

\[(\text{INDCON}_t) (t) t \varepsilon (\bullet\text{triangular} \bullet \text{INDCON}_t) \rightarrow \ldots\]

To disentangle this further involves following up the theme that to be a triangular \(\bullet (a) \bullet\) is to consist of a concatenation of a \(\bullet\text{triangular} \bullet\) with an \(\bullet a \bullet\) and should cause no difficulty.

But if we so reconstruct triangularity, can we say of any expression in Jumblese that it realizes this type? A negative answer might seem to be indicated by the fact that no expression in Jumblese is the result of concatenating an individual constant with a \(\bullet\text{triangular} \bullet\). And it does indeed follow from this that no expression in Jumblese stands for triangularity in the sense in which \(*\text{triangular}*\text{s} (\text{in E}) \text{ and } *\text{dreieckig}*\text{s} (\text{in G}) \text{ stand for triangularity. This, however, simply reminds us that Jumblese involves no design which plays the derivative role played by } *\text{triangular}*\text{s and } *\text{dreieckig}*\text{s in PMese type languages. On the other hand, the role played by expressions consisting of an INDCON concatenated with a } \bullet\text{triangular} \bullet\text{ is played in Jumblese, for it is played by expressions consisting of an INDCON formed in a certain style or manner.}

The question “What Jumblese expression, if any, stands for triangularity?” as interpreted in the preceding paragraph must not be confused with the question What Jumblese expression, if any would be the translation of “triangularity”? The latter, of course, would presuppose an account of Jumblese metalanguages, a difficult but by no means impossible task which will not be attempted here. The following hints, however, might be helpful.

A. A PMese type metalanguage which specifies sentential roles which are played in a given PMese type object language by

Triangular \((a)\), Larger \((a, b)\), Circular \((b)\), etc.

and in a Jumblese type object language by a

\[a, a_b, \ldots, b, \ldots\]

would involve the definition schemata
1. \( ^1\mathcal{E}_i = \varphi_i \) (INDCON)
2. \( ^2\mathcal{E}_k = Rk \) (INDCON, INDCON)
3. \( ^1\mathcal{E}_j = \varphi_j \) (INDCON), etc.

where (1) tells us that an item is an \( ^1\mathcal{E}_i \) if it is a \( \varphi \), individual constant. Thus, *a*’s (in Jumblese) and *triangular (a)*’s (in PMese) are \( ^1\mathcal{E}_i \). And (2) tells us that an item is a \( ^2\mathcal{E}_k \) if it consists of an INDCON which is \( R_k \) to an INDCON.

In Jumblese, to be \( \varphi_i \) is to be written in a certain style, and for two expressions to be \( R_k \) is for them to be as in *‘b’*. In PMese on the other hand, to be \( \varphi_i \) is to be concatenated with a •triangular• and for two expressions to be \( R_k \) is for them to be concatenated to the left with a •larger• as in *Larger (a, b)*.

B. This suggests that where a PMese metalanguage contains

\[
\varphi_i \text{ (INDCON)} \quad R_k \text{ (INDCON, INDCON)}
\]

its Jumblese counterpart would contain something like

\[
\text{INDCON} \quad \text{INDCONINDCON}
\]

(i.e., would use a style instead of concatenation with a *\( \varphi \)* or an *\( R \)*). And this is indeed the case. But, it is important to note, before this step can be taken, one must work out the Jumblese counterparts of such expressions as “a pawn” and “the pawn,” not to mention the other expression used in clarifying the grammar of roles and offices. Some light is thrown on this by considering the following table.

<table>
<thead>
<tr>
<th>TOM</th>
<th>Tom is a man</th>
</tr>
</thead>
<tbody>
<tr>
<td>(x) X ( \rightarrow ) X</td>
<td>All men are animals</td>
</tr>
<tr>
<td>( M )</td>
<td>(The) Man is an animal</td>
</tr>
</tbody>
</table>

where “M” is an introduced singular term written in the appropriate manner for saying of something that it is an animal.

With these remarks in mind, it can be suggested that the Jumblese counterpart of

The •triangular• INDCON

(which is our PMese type rational reconstruction of “triangularity”) might well be “INDCON” where the illustrating principle is followed by forming this metalinguistic expression in the same style as is used in the object lan-
language to say of something that it is triangular. Thus, assuming that Jumblese uses our quoting convention, we would have the following counterparts:

\[
\begin{align*}
\text{Illustrating} & \quad \text{Illustrating} \\
\text{Jumblese ML} & \quad \text{PMese ML} \\
\text{That } a \text{ is triangular} & \quad \text{\{ }a\text{\}} \\
\text{Triangularity} & \\
\text{That something is triangular} & \quad \text{INDCON} \\
\end{align*}
\]

To return to the primary line of thought, I conclude that triangularity is not to be construed as the \textit{triangular}, but rather as being the type realized in the PMese dialect of our language by expressions formed by concatenating a \textit{triangular} with an individual constant—and in PMese dialects of subject-predicate languages generally by bringing into an appropriate relation (e.g., concatenating) a \textit{triangular} and an individual constant.

From this point of view, the classical problem of universals rests in large part on the fact that, in such languages as English and German expressions referring to universals are constructed on an illustrating principle which highlights a design which actually plays a subordinate role, and consequently tempts us to cut up such sentences as

\[
\text{Triangular (a)}
\]

into two parts, one of which has to do with the universal rather than the particular, the other with the particular rather than the universal, and tempts us, therefore, to construe the statement as asserting a dyadic relation ("exemplification") to obtain between the particular and the universal.

The temptation in question is strengthened by reflection on the fact that after all it does make sense to say

\[
a \text{ exemplifies triangularity}
\]

which therefore strikes us as a "more explicit" way of saying what is said by the former statement. The puzzles generated by this line of thought are notorious. It is relevant, therefore, to ask what light is thrown by our analysis on such statements as "a exemplifies triangularity." Actually, as I have pointed out elsewhere,\textsuperscript{24} such statements, in which "exemplifies" is technical jargon

\textsuperscript{24} "Naming and Saying" [reprinted as Chapter 5 of this volume], \textit{Philosophy of Science}, 29, 1962, pp. 7–26, reprinted in \textit{Science, Perception and Reality}.
used where ordinary discourse speaks of things "having" qualities or "standing in" relations, are closely related to statements of the form

That triangular \((a)\) is true.

And the necessary equivalence of

\(a\) exemplifies ("has") triangularity

with

Triangular \((a)\)

is to be understood in terms of the necessary equivalence of the latter with

That triangular \((a)\) is true

and no more than the latter is to be construed as an identity of sense.

To appreciate this, one need only see that

\(a\) exemplifies triangularity

is equivalent to

Triangularity is true of \(a\).

For according to our analysis, the latter is to be reconstructed as

The \((\text{triangular}\text{ INDCON})\) is true of \(a\)

which tells us that where the individual constant in question is an \(\text{a}\) expressions which are \((\text{triangular}\text{ INDCON})\)s are true. It is therefore equivalent to

The \(\text{triangular} (a)\)\) is true

which is our reconstruction of

That triangular \((a)\) is true.

This analysis has the additional merit of making it clear that

Socrates exemplifies wisdom

does not assert a relation between Socrates and wisdom, for the \(*\text{Socrates}*\) is functioning as a metalinguistic expression in the material mode of speech. Thus the "relation" of exemplification which for Platonists binds the realm of becoming to the realm of being, and which for more moderate realists binds
the "real" order to the "logical" or "conceptual" order, is an offshoot of the "relation" of truth, which analysis shows to be no relation at all, but a sign of something to be done.25

I shall conclude these investigations by asking what light, if any, is thrown on the status of relations between abstract entities by the above analysis. Consider, for example, the statement

That $a$ is triangular implies that it is trilateral.

In the light of our analysis, we should expect to reconstruct this along somewhat the following lines

The $\text{\textbullet tri\text{-}angular (a)}$ implies the $\text{\textbullet tri\text{-}lateral (a)}$.

But how is this to be interpreted? Since the subject is the $\text{\textbullet tri\text{-}angular}$ it is clearly a universal statement. But it obviously is not telling us that wherever a $\text{\textbullet tri\text{-}angular (a)}$ occurs, there also occurs a $\text{\textbullet tri\text{-}lateral (a)}$, which is clearly false. Rather it is telling us what is correct and proper with respect to the occurrence of $\text{\textbullet tri\text{-}angular (a)}$'s. It is correct or proper (to introduce a theme from proof and derivation theory with respect to formalized languages) to place a $\text{\textbullet tri\text{-}lateral (a)}$ in sequence after a $\text{\textbullet tri\text{-}angular (a)}$, thus

\[
\text{\textbullet tri\text{-}angular (a)} \\
\text{\textbullet tri\text{-}lateral (a)}
\]

What is to count as a placing of a $\text{\textbullet tri\text{-}lateral (a)}$ in sequence with a $\text{\textbullet tri\text{-}angular (a)}$ can vary as much from language to language as what is to count as a $\text{\textbullet tri\text{-}angular (a)}$. But it is worth noting that when we say

25. "Truth and 'Correspondence'", p. 38, reprinted in Science, Perception and Reality. See also Chapters 3 and 4 of Science and Metaphysics [Chapter 3 of Science and Metaphysics is reprinted as Chapter 10 of this volume] (London, 1967).
That \( a \) is trilateral is a consequence of the fact that it is triangular

the consequence relation between propositions to which "is a consequence of" gives expression is to be understood in terms of a placing of tokens in sequence, one variety of which is illustrated above.

The above analysis can readily be extended to throw light on statements in which one speaks of necessary connections of universals. Thus, consider

Triangularity implies trilaterality.

Unperspicuously represented, this becomes

\[ f_1\text{-ness} \rightarrow f_2\text{-ness} \]

and anti-platonists attempt to reduce this to

\[ (x) f_1(x) \rightarrow f_2(x) \]

together with a commentary which refers to expectations or dispositions to believe. A more recent approach reconstructs it as

\[ '(x) f_1(x) \rightarrow f_2(x)' \]

is analytic

which is closer to the truth; but, unless "analytic" is misused to mean "unconditionally assertable," one ground (among others) of unconditional assertability is confused with such assertability itself.26 And when the normative character of the original statement is correctly explicated, we find

\[ \text{(INDCON,)} \]

The \([\text{\cdot triangular \cdot INDCON,}]\) implies the \([\text{\cdot trilateral \cdot INDCON,}]\)

which is the general implication of which the illustrating instances would be, for example

The \([\text{\cdot triangular (a) \cdot}]\) implies the \([\text{\cdot trilateral (a) \cdot}]\)

The \([\text{\cdot triangular (b) \cdot}]\) implies the \([\text{\cdot trilateral (b) \cdot}]\)

etc.

or, in more familiar garb,

That \( a \) is triangular implies that \( a \) is trilateral
That \( b \) is triangular implies that \( b \) is trilateral
etc.

which were analysed above.\(^{27}\)

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27. The considerations advanced on p. 200 suggest that the illustrating common noun "•triangular (a)•, which refers to •a•s which are concatenated with a •triangular•, would be more perspicuous if changed to "•triangular• [•a•]." The latter would refer to •a•s which are concatenated with a •triangular• as "white [dog]" might be used to refer to dogs which are white. This convention would replace the expressions on the left (below) with those on the right:

<table>
<thead>
<tr>
<th>The •triangular (a)•</th>
<th>The (•triangular• [•a•])</th>
</tr>
</thead>
<tbody>
<tr>
<td>The (•triangular• INDCON)</td>
<td>The (•triangular• [INDCON])</td>
</tr>
<tr>
<td>The •larger (a, b)•</td>
<td>The (•larger• [•a•, •b•])</td>
</tr>
<tr>
<td>The (•larger• INDCON, INDCON)</td>
<td>The (•larger• [INDCON, INDCON])</td>
</tr>
</tbody>
</table>

This more perspicuous convention is put to use in the following essay ["Classes as Abstract Entities and the Russell Paradox," Chapter 4 of *Philosophical Perspectives: Metaphysics and Epistemology* (Reseda, Calif.: Ridgeview Publishing, 1967)] which is devoted to a restatement and, hopefully, resolution of the Russell paradox.
III

MIND, LANGUAGE, AND THE WORLD
I. Introduction

1. The purpose of this chapter is to explore what I conceive to be the profound truth contained in the Thomistic thesis that the senses in their way and the intellect in its way are informed by the natures of external objects and events. But while I shall be defending the thesis that knowledge involves an isomorphism of the knower with the known at both the sensuous and intellectual levels, I shall argue that the Thomistic tradition has an oversimplified conception of this isomorphism. Since many of the characteristic theses of this tradition, e.g. the immateriality of the intellect, are grounded in its interpretation of the isomorphism of knower and known, the question as to whether this interpretation is correct is central to the evaluation of the Thomistic system.

2. Let me begin by contrasting the Thomistic account of intellectual acts with two other accounts—in my opinion radically mistaken—which have successively dominated the philosophical scene since the Renaissance. The first of these found its classic expression in the philosophy of Descartes; the second in the early stages of contemporary British and American realism. These erroneous views are interesting both for what they have in common and for their differences.

3. They have in common the idea that intellectual acts differ not in their intrinsic character as acts, but by virtue of being directly related to different relata. Thus the thought of X differs from the thought of Y not qua act of thought, but qua related to X as opposed to Y. The two positions construe
the status of these immediate relata differently. For the Cartesian, the immediate relatum is an item having being-for-mind ('objective' reality). Thus the thought of a golden mountain is a thought which is related to a golden mountain *qua* having being-for-mind, being for the mind that is thinking of it. This relation is often metaphorically expressed by saying that the thought has a golden mountain (in the 'objective' mode of being) as its 'content'. In this terminology we can say that the Cartesian acts of the intellect differ not *qua* acts, but *qua* having different contents. To use Arnauld's analogy, acts are like similar purses which differ only *qua* containing different kinds and numbers of coin.

4. It is not my purpose to develop the Cartesian position and discuss how Descartes and his successors were tempted to construe these contents as the immediate and primary objects of knowledge, and found themselves on the road to scepticism and idealism. This is a sad story with which you are all familiar, for it is one of the outstanding merits of the Thomistic tradition that it steadfastly refused to make this mistake, and correctly diagnosed it as a cancer at the heart of modern philosophy.

5. Now whereas the Cartesians postulated a domain of contents to mediate between the intellect and the real order, the extreme realists of the early decades of the present century expanded the real order to include all the items which had puzzled previous philosophers into the theory of contents. Thus non-existent objects and states of affairs found their place in the real order by means of a distinction between existence and subsistence and such other devices as Russell's theory of descriptions. The act of thinking that Socrates is mortal was construed as a direct relation between two reals: (1) an act of the intellect; (2) a state of affairs. The act of thinking that Socrates is foolish was also construed as a relation between an act of the intellect and a state of affairs in the real order. The difference by virtue of which the one thought was true and the other false was simply that the latter state of affairs, though a subsistent real, did not exist. But my concern is not to elaborate the characteristic doctrines of this new extreme realism, but simply to emphasize that like the Cartesians it interpreted the difference between intellectual acts as *extrinsic*, a matter of having different relata.

6. Now one can sympathize with the Neo-realistic rejection of contents. As has often been pointed out, to say that an object or state of affairs acquires 'objective' being as a content of thought when we think about it seems less an explanation than a metaphorical *restatement* of the fact that we are thinking about it. But if we dispense with 'contents', are we not forced to espouse extreme realism? The answer, of course, is No. For it is only if we assume that intellectual acts are identical in species, differing only extrinsically by virtue of
their different relata, that we are committed to this alternative. And once we look this assumption in the face, we see how odd it is. As a matter of fact the notion that acts of the intellect are *intrinsically* alike regardless of what they are about is so odd that one can understand the temptation of many recent realists to abandon the very notion of intellectual acts, and to flirt with naive forms of sensationalism and behaviourism.

7. But what is the alternative? In general terms it is to hold that acts of the intellect differ intrinsically *qua* acts in a way which systematically corresponds to what they are about, i.e. their subject-matter. And of the approaches along these lines which take seriously the category of intellectual act, the one which seems to me most fruitful is the doctrine of the mental word.

8. There are many forms which the doctrine of the mental word can take, and, indeed, has taken in the history of the philosophy of mind. I shall be concerned to contrast two of these forms, one of them the Thomistic doctrine (to the extent that I understand it), the other a view which has its roots in Wittgenstein's *Tractatus*, and which I am prepared to defend. But first some general considerations are in place, considerations common to all theories of the mental word. (a) We must distinguish between mental words, mental statements, mental questions, etc. (b) We must distinguish between varieties of mental word: names, predicates, logical words, abstract singular terms, etc. (c) But above all we must distinguish between mental words as *acts* and mental words as *dispositions* or *propensities*. This last distinction corresponds to that drawn by Thomists between the intellect in *second* act and the intellect in *first* act. The intellect is in first act with respect to a certain mental word, e.g. •man•, when it has this word in its 'vocabulary', i.e. is able and disposed to think in terms of it. When the intellect is in second act with respect to the word •man•, it is by virtue of actually thinking of something as a man. If the intellect is in first act with respect to this word, we shall say that it has the concept •man•.

9. Theories of the mental word characteristically hold that the intellect at birth is devoid of concepts, i.e. is not in first act with respect to any mental words. The view that the intellect is innately in first act with respect to some mental words is not an absurd one. Indeed, as I shall argue, the classical ('abstractive') account of concept formation runs into trouble as soon as it leaves the haven of concepts pertaining to the proper sensibles—and only *seems* to account for them. But fortunately the view that the intellect at birth has no

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1. I shall form the names of mental words by putting the corresponding English expressions within dot-quotes.
concepts does not require a commitment to the abstractive theory of concept formation, and one can reject the latter without rejecting the former.

10. It will have been noticed that I have as yet said nothing specific about what a mental word is. More accurately, I have limited myself to characterizing mental words (by implication) as forms of the intellect which are analogous to words in the ordinary sense of the term, i.e. to words as they occur in meaningful speech. Different theories of the mental word give different accounts of this analogy. How this analogy is to be understood will be a central theme in the second half of my argument. In discussing the Thomistic position the analogy is of less interest, because, according to this position, in contrast to the position I shall defend, the nature of a mental word can be understood independently of this analogy.

11. The three basic questions which any theory of the mental word must answer are: (1) What is a mental word? (2) How do we come by them? i.e. how do we acquire our mental vocabulary? (3) How are mental words related to the real order? These questions, as I see it, are answered by the Thomist along the following lines.

12. The mental word *triangular* is the nature or form triangular as informing the possible intellect, i.e. as putting the possible intellect in first act. The possible intellect is informed in a unique way. A piece of wax becomes triangular through being informed by the nature triangular. One is tempted to say that the possible intellect does not become triangular, but since to be informed by the nature triangular is to become triangular, what one says instead is that the possible intellect becomes triangular in the immaterial mode.

13. The above is an account of the mental word *triangular* qua disposition or habitus. A mental word as second act of the intellect would be, for example, the nature triangular as informing the intellect in second act, i.e. as informing an act of the intellect in that narrower sense in which acts are contrasted with dispositions or propensities. It will be useful at this point to extend to mental words the familiar distinction drawn by C. S. Peirce between word tokens and word types. In this terminology each particular act of the intellect which is informed by the nature triangular will be said to be a token of the mental word *triangular* as type. Thus, the mental word *triangular* as type would be the nature triangular qua capable of informing (immaterially) the possible intellect. The nature triangular as that which is capable of informing both pieces of wax and intellects, i.e. considered in abstraction from

2. When I speak in an unqualified way of an intellectual act, I shall mean it in the sense of second act.
its role as word and its role as physical form, will be referred to as the absolute nature triangular.

14. The existence in the intellect of the word •triangular• as habitus is, to continue our exposition, grounded in the immaterial existence of the absolute nature triangular in the faculty of sense. The heart of the theory is the idea that sense is already a cognitive faculty, acts of which belong to the intentional order, the order of signification. Sensations are sign events—natural signs if by this is meant that they are not conventional, though they are not (or, better, not merely) natural signs in the sense of symptoms or signals. The act of sense does not need to be noticed in order to play its role as sign. In one terminology, acts of sense and intellect are intrinsic signs as contrasted with such extrinsic signs as smoke (of fire) and lightning (of thunder).

15. To give the bare bones of the abstractive theory in terms of an example, white and triangular exist materially in the external white and triangular thing. Then, by action of the thing on the open eyes of a man who is not blind, the absolute natures white and triangular come to exist immaterially in the organ of sight. By virtue of this fact the organ in act signifies the white triangular thing. Hitherto when speaking of the mental word we have had in mind the mental word as in the intellect, the intellectual word. But since acts of sense belong to the order of signification, there is equal appropriateness in speaking of the sensitive word. Thus we might reformulate the above by saying that the act of the visual organ is a token of the sensitive word (or phrase) •white triangular thing• by virtue of being (immaterially) informed by the determinate nature of the external object qua visible.

16. In the case of both sense and intellect the word •triangular• is in the faculty by virtue of the faculty being immaterially informed by the absolute nature triangular. What, then, are the distinctive features of the vocabulary of sense (if I may so call it) as contrasted with the vocabulary of the intellect? One might well expect to find some such distinctions as the following:

(a) The vocabulary of sense contains only such predicative words as stand for the proper sensibles.

(b) The vocabulary of sense does not include abstract singular terms (formal universals), e.g. •triangularity•. The intellect somehow forms these words from their predicative counterparts.

(c) The vocabulary of sense does not contain such mental words as •mental word• or •signifies•. Query: does •mental word• belong to the vocabulary of inner sense? of the reflexive awareness of intellective acts?
I postpone for the moment the question as to whether the vocabulary of sense contains such basic logical words as and, or, not, if..., then... And I mention, for future reference, that according to the Thomistic position although sense belongs to the intentional order, it does not judge, i.e. the 'language' of sense contains no statements or assertions. Apparently sense can signify this white thing, but not this thing is white nor this white thing exists.

17. The abstractive theory of concept formation rests on this conception of sense as belonging to the order of intentionality or signification. To put it simply, the intellect can get its basic vocabulary from sense because this basic vocabulary already exists in the faculty of sense where it has been brought about by the action of external things. I shall therefore begin my critical discussion of the Thomistic doctrine of the mental word by attacking this assimilation of sense to the intentional order. My thesis will be that sense is a cognitive faculty only in the sense that it makes knowledge possible and is an essential element in knowledge, and that of itself it knows nothing. It is a necessary condition of the intentional order, but does not of itself belong to this order. This thesis was first advanced by Kant, but can, fortunately, be separated from other, less attractive, features of the Kantian system.

18. There are many reasons for the plausibility of the idea that sense belongs to the intentional order: the ease with which sensation can be confused with the unreflective perceptual judgment which is built upon it; the fact, noted above, that sense makes knowledge possible and is a necessary condition of the intentional order. It is primarily due, however, to the fact that sensations have what I shall call a pseudo-intentionality which is easily mistaken for the genuine intentionality of the cognitive order.

19. The first thing to note is that the expressions by which we refer to and characterize sensations do show a remarkable analogy to the expressions by which we refer to and characterize items belonging to the intentional or cognitive order. Thus we speak of

a sensation of a white triangular thing

and this shows a striking grammatical similarity to the language by which we refer to and characterize thoughts; thus we speak of

a thought of a white triangular thing.

And since we are construing the latter as an act of the intellect which signifies a white triangular thing by virtue of being a token of the mental phrase (such and such a) white triangular thing, there is a strong temptation to construe the former as an act of sense which signifies a white triangular thing by virtue
of being a token of the mental (sensitive) phrase *(this) white triangular thing*.

20. But it is doubtful if this temptation would be strong enough to carry the day if it were not for the considerations which generate the idea that the natures white and triangular inform the act of sense in an immaterial way. For this amounts to the idea that sense in act is isomorphic in the immaterial mode with the object of sense, and I shall be arguing subsequently (a) that there is a sense in which sensations are isomorphic with objects of sense, (b) that sensations are not white and triangular in the way in which material objects are white and triangular, and (c) in §56 below, that there are plausible, if mistaken, considerations which point to an equation of intentionality with isomorphism in the immaterial mode, considerations which are the very source of the latter conception.

21. Now it certainly must be granted that the sensation of a white triangular thing is neither white nor triangular (nor, for that matter, a thing) in the way in which its external cause is a white triangular thing. And, I believe, it must also be granted that unless the sensation of a white triangular thing were in some way isomorphic with its external cause, knowledge of the physical world would be impossible. Finally, I believe, it must be granted that whiteness and triangularity are somehow involved in the form or species of the act of sense. It is, unfortunately, only too easy to suppose that these admissions add up to the Thomistic theory of sensation. It is therefore important to see that all of these theses can be accounted for in a radically different way which involves no attribution of intentionality to sense.

22. According to this alternative account, our concept of a sensation of a white triangular thing is the concept of a state of the perceiving organism which

(a) is of a kind which is normally brought about by white and triangular objects,

(b) is of a kind which differs systematically from those states which are normally brought about by objects of other colours and shapes,

(c) is a kind which is brought about in abnormal circumstances by objects of other colours and shapes, and hence contributes to the explanation of the fact that objects viewed in abnormal circumstances seem to be other than they are.

23. Thus although the sensation is not literally white and triangular, it is of a kind which can be called white and triangular in a derivative sense of these
In Thomistic terminology, the act of sense which is a sensation of a white triangular thing must indeed have a form or species *qua* act, but this form or species does not consist of the *white* and *triangular* appropriate to material things though immaterially received; it consists of *white* and *triangular* in a different sense of these terms. By this I do not, of course, mean that 'white' as in 'a white sensation' and 'white' as in 'a white elephant' are mere homonyms. They have different but related meanings, as, in a different way, do 'healthy' as in 'healthy food' and the same word as in 'healthy man'. Thus, instead of saying that the act of sense is informed *immaterially* by the natures *white* and *triangular* in the primary sense of these terms, we can simply say that the act of sense is informed by the natures *white* and *triangular* in the derivative sense characterized in paragraph 22 above.

24. This can also be put by saying that the concepts of the various kinds of sensation are concepts formed by analogy. The Thomistic tradition makes significant use of the idea that certain of our concepts are analogical concepts; and contemporary philosophies of science stress the role of analogy in the conceptual structures of scientific theory. What is, perhaps, new in the account I am proposing is the idea that direct self-knowledge may essentially involve analogical concepts, i.e. that the concepts in terms of which we have what is often called 'reflexive knowledge' of our mental acts are analogical extensions of concepts pertaining to the public or intersubjective world of things and persons.

25. This thesis certainly runs counter to the Cartesian interpretation of the reflexive awareness of a mental act as an adequate (i.e. among other things, non-analogical) grasp of the act as being of a certain determinate kind or species. But, I think we must say, so much the worse for Descartes. It is a serious mistake to suppose that merely by virtue of having sensations we experience sensations as sensations (do animals experience sensations as being sensations?), and that from this experience, by an act of so-called abstraction, the intellect can acquire a non-analogical understanding of what it is to be a sensation. I shall shortly be arguing that the same situation obtains in the case of our concepts of intellectual acts, which I shall also construe as analogical concepts the *fundamentum* of which are concepts pertaining to meaningful speech.

26. I suggested a moment ago that the concept of a sensation of a white triangular thing is the concept of an act which is white and triangular in a derivative sense of these terms. It is, to repeat, a white and triangular act *not* by being immaterially white and triangular in the sense of 'white' and 'triangular' appropriate to material things, but by simply being white and triangular.
in a derivative sense. Let me now remind you that on the account I am proposing, the analogy between the two *whites* and the two *triangulars* involved in the idea that the various species of visual sensation form a family of resemblances and differences which corresponds to the family of resemblances and differences which is the system of sensible qualities in the basic sense, the sense which pertains to material things. It is in this way that the isomorphism of acts of sense and material things is to be understood. The place of *derivative white* and *derivative triangular* in the system of the species of sense acts is isomorphic in the *structural sense* (explained by contemporary relation theory) with the place of *basic white* and *basic triangular* in the system of the perceptible qualities of material things.

27. I won't stay to criticize in detail the abstractive theory of concept formation, for once the supposed intentionality of acts of sense has been exposed as a pseudo-intentionality, i.e. once it is clearly recognized that acts of sense are intrinsically non-cognitive and do not present anything to us as being of a kind—e.g. white or triangular—the abstractive theory has been undercut, and can be left to wither on the vine. One or two points are worth making, however, which supplement the above argument, and lead into the second half of this essay.

28. The first is that the intellect in first act has logical words in its vocabulary. Some of these logical words are, in the contemporary phrase, ‘truth-functional connectives’ (e.g. ‘and’ and ‘not’), the most significant feature of which is that if a sentence or group of sentences is about the real order, the sentence which is formed from them by the use of these connectives is also about the real order. Thus *Socrates is not wise* is as much about the real order as *Socrates is wise*. Other logical words, e.g. ‘implies’ in the sense of logical implication, are such that sentences involving them are about the logical order, as is shown by the fact that these sentences require abstract singular terms (e.g. ‘Triangularity implies trilaterality’).

29. Now, abstractive theories notoriously have trouble with both kinds of logical word. The idea that acts of sense are informed by *not* as well as by *white*, by *implies* as well as *triangular* is rooted in the fact that whiteness is what it is by virtue of belonging to a family of competing qualities (what is white is *ipso facto* not red) and that triangularity is what it is by virtue of im-

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3. It is perhaps worth noting that the above account of the derivation omits an essential step, in that the expression ‘white and triangular sensation’ presupposes the expression ‘sensing whitely and triangularly’ so that the introduction of the adverbs ‘whitely’ and ‘triangularly’ would be the basic analogical move.
plying trilaterality. Thus if the mental words "white" and "triangular" are in the act of sense so also must be "not" and "implies". The alternative I am recommending is to say that none of these words are present in the act of sense, for it does not belong to the intentional order. To which it can be added that the predicative word "white" doesn’t make sense apart from statement; "white and triangular thing" presupposes "(this) thing is triangular". Predicates cannot be in sense unless judgment is there also.

30. One cannot have one intellectual word in one’s vocabulary without having many, including logical as well as non-logical words. The possible intellect is put in first act by virtue of being informed by a whole, if rudimentary, language. Philosophers have been fascinated by the fact that one can’t have the concept of white without being able to see things as white, indeed, until one has actually seen something as white. But this can be explained without assuming that sensation is a consciousness, for example, of white things as white. For it demands only that the coming-to-be in the intellect of the word "white" coincides with a second act of the intellect which is the perceptual judgment that some (perceived) object is white. And this is compatible with the idea that a complicated process of language training (involving the exhibition of objects of many colours and shapes) is a necessary condition of both.

II. The Isomorphism of the Intellect and the Real

31. I have argued above that there is a sound core in the Thomistic contention that the act of sense is isomorphic with its external cause, but that rightly understood both terms of this isomorphism belong to the real order, i.e. neither term, and specifically the act of sense, belongs to the intentional order. My present purpose is to argue that there is an isomorphism in the real order between the developed intellect and the world, an isomorphism which is a necessary condition of the intellect’s intentionality as signifying the real order, but is to be sharply distinguished from the latter.

32. In other words, I shall draw a sharp distinction between what I shall initially characterize as two dimensions of isomorphism between the intellect and the world:

(a) an isomorphism in the real order,
(b) an isomorphism in the logical order.

I shall use the verb ‘to picture’ for the first of these ‘dimensions’ and the verb ‘to signify’ for the second. I shall argue that a confusion between signifying
and *picturing* is the root of the idea that the intellect as *signifying* the world is the intellect as informed in a unique (or immaterial) way by the natures of things in the real order.4

33. I claimed above that although the intellect *signifies* the world by virtue of *picturing* it, nevertheless signifying and picturing are radically different relations, to which I will now add that they take radically different terms. Thus, when we say

\[ X \text{ pictures } Y \]

both X and Y belong to the real order, i.e. neither belongs to the order of intentionality; and when we say

\[ X \text{ signifies } Y \]

both X and Y belong to the logical order, i.e. the order of intentionality.

34. Thus the two statements

(a) The intellect *pictures* the world

(b) The intellect *signifies* the world

though closely related, belong to different orders of discourse; and while the terms 'intellect' and 'world' as they occur in (a) are not mere homonyms by simple ambiguity with the same expressions as they occur in (b), they nevertheless have different (though related) meanings in the two statements.

35. As I pointed out above, a basic feature of the position I wish to defend is the idea that the concept of a mental word, or, better, of a mental language, is a derivative concept formed by analogy from the concept of the spoken word. The exact nature of this analogical extension of the concept of meaningful speech is a topic for a separate chapter of at least equal length. It is discussed, in general terms, in Chapter 35 and there is to be found such cash as I can muster to back up what for the present must remain a promissory note. Fortunately, the main point I wish to make can be appreciated without subscribing to my views on this particular matter, for my primary purpose is to explore the distinction between picturing and signifying as it applies to the spoken word. For, I would argue, just as the concept of the mental word is an

4. I argue in Chapter 6 ["Truth and 'Correspondence': Science, Perception and Reality"] that this same confusion is the source of some of the more obscure features of Wittgenstein's *Tractatus*.

extension by analogy of the concept of the spoken word, so the distinction between picturing and signifying as it applies to the mental word is an extension by analogy of the corresponding distinction as it applies to the spoken word.

36. But this is not the end of the liberties I shall take. For instead of proceeding directly to a discussion of the spoken word, I shall present the distinctions I have in mind as they appear when projected into discourse about computing machines, guided missiles, and robots. There are many facets to the question ‘Can machines think?’ on which I shall not touch; indeed, strictly speaking, I shall not discuss it at all. I shall simply sketch two different ways in which we would be willing (in one case with a certain measure of reluctance) to talk about the anthropoid robots of the future, as a means of throwing light on what I mean by the contrast between signifying and picturing in connection with human speech, and, therefore (promissory-note-wise) in connection with the mental word.

37. Suppose such an anthropoid robot to be ‘wired’ in such a way that it emits high frequency radiation which is reflected back in ways which project the structure of its environment (and its ‘body’). Suppose that it responds to different patterns of returning radiation by printing such ‘sentences’ as ‘Triangular object at place p, time t’ on a tape which it is able to play over and over and to scan. Suppose that, again by virtue of its wiring diagram, it makes calculational moves from ‘sentences’ or sets of ‘sentences’ to other ‘sentences’ in accordance with logical and mathematical procedures (and some system of priorities) and that it prints these ‘sentences’ on the tape. Suppose, furthermore, that in addition to logical and mathematical moves the robot is able to make inductive moves, i.e. if its tape contains several ‘sentence’ pairs of the form

\[
\text{lightning at } p, t \quad \text{thunder at } p + \Delta p, t + \Delta t
\]

and no ‘sentence’ pair of the form,

\[
\text{lightning at } p, t \quad \text{peace at } p + \Delta p, t + \Delta t
\]

6. This scanning will be analogous to the robot’s scanning of its external environment. It will involve a printing on the tape of higher order sentences, i.e. sentences which record the presence of first order sentences on the tape. I shall not attempt to characterize the ‘programming’ and the role of this tape scanning save by stressing the fundamental analogy of tape scanning to environment scanning, and the analogy between the way in which environment (and ‘body’) scanning is involved in the robot’s ‘actions’, and the way in which tape scanning is involved in the robot’s ‘computing actions’. The reader will find a discussion of some related issues in Chapter 11 [“Some Reflections on Language Games,” Science, Perception and Reality—Chapter 2 of this book].
it prints the 'sentence'

whenever lightning at p, t; thunder at p + Δp, t + Δt.

Clearly the wiring diagram must provide for the cancelling of such 'inductive generalizations' when a subsequent pair of 'observation sentences' turns up which is inconsistent with it.7

38. Let us suppose, finally, that the wiring diagram provides for the printing of certain general resolutive 'sentences'—'sentences' of the form 'Whenever I am in circumstances C, I shall do A' and that whenever the robot prints 'I shall now do A' it is so set up that it proceeds to 'do' A.8

39. Suppose such a robot to wander around the world, scanning its environment, recording its 'observations', enriching its tape with deductive and inductive 'inferences' from its 'observations' and guiding its 'conduct' by 'practical syllogisms' which apply its wired in 'resolutions' to the circumstances in which it 'finds itself'. It achieves an ever more adequate adjustment to its environment, and if we permitted ourselves to talk about it in human terms (as we have been) we would say that it finds out more and more about the world; that it knows more and more facts about what took place and where it took place, some of which it observed, while it inferred others from what it did observe by the use of inductive generalizations and deductive reasoning.

40. But let us stop talking about the robot in human terms, in terms of what it thinks or knows—in short in terms of the framework of intentionality—and let us consider it from the standpoint of the electronic engineer. For while we can talk about the items on the tape as 'sentences' and assimilate them by analogy (and with hesitation) to the logical order, we can also consider the states of the robot in mechanical and electronic terms; and the point I wish to make is that in these terms it makes perfectly good sense to say that as the robot moves around the world the record on the tape contains an ever more complete and perfect map of its environment. In other words, the robot comes to contain an increasingly adequate and detailed picture of its environ-

7. Actually the matter is far more complicated than this, as is ordinary inductive reasoning. For sometimes we keep the generalization and reject the observation. Indeed, the above account of the robot's 'observations' is equally oversimplified, for whether it responds to a certain stimulus with 'Triangular object at p, t' or with 'Apparently triangular object at p, t' will be a function of what it already has on the tape, e.g. it will record the latter if it has recorded 'Mirror at p+p, t'. But my aim is not to give directions for making an anthropoid robot, but to suggest a piece of science fiction which each of you can write.

8. As was suggested in note 6, some of these 'resolutives' will concern circumstances which are the presence of first order 'sentences' on its tape and 'actions' which are the printing of further 'sentences' on the tape.
ment in a sense of 'picture' which is to be explicated in terms of the logic of relations. This picturing cannot be abstracted from the mechanical and electronic processes in which the tape is caught up. The patterns on the tape do not picture the robot's environment merely by virtue of being patterns on the tape. In Wittgenstein's phrase, the 'method of projection' of the 'map' involves the manner in which the patterns on the tape are added to, scanned, and responded to by the other components of the robot. It is a map only by virtue of the physical \textit{habitus} of the robot, i.e. by virtue of mechanical and electronic propensities which are rooted, ultimately, in its wiring diagram. A distant analogy to this picturing is the way in which the wavy groove of a phonograph record pictures the music which it can reproduce. This picturing also cannot be abstracted from the procedures involved in making and playing the record.

41. Now it must be confessed that the above account of the isomorphism between the physical state of the robot and his environment is meager and metaphorical. The task of characterizing the robot in such a way that you would really be prepared to say that it was 'almost human'; that it could 'almost' be said to observe, think, reason, deliberate, decide, and act, would not only take far more time than I have at my disposal, it would take me out of my depth. My purposes, however, will have been served if you can conceive of such a robot, and if you can see in general terms what would be meant by saying that the robot contained a 'picture' of the world. For the important philosophical point is that this 'picturing' would be an isomorphism in the real order.

42. Thus the robot would contain a picture of the occurrence of a particular flash of lightning \textit{not} by virtue of the absolute nature \textit{lightning} existing immaterially in the robot's electronic system, but by virtue of the correspondence of the 'place' of a certain pattern on the tape in the system of patterns on the tape to the 'place' of the flash of lightning in the robot's spatiotemporal environment. Since this isomorphism is an isomorphism in the sense of contemporary relation theory which falls completely within the real order, there would be no temptation to say that the robot's environment had 'immaterial being' in the physical \textit{habitus} of the robot.

43. Suppose it to be granted, then, that the robot is isomorphic in the real

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9. It is, strictly speaking, the 'singular sentences' on the tape, whether printed in 'observation' or by 'inference' which picture the environment. A discussion of the way in which the robot pictures what is printed on its tape would require additional distinctions. The central theme would be that the 'language' of picturing is truth-functional.
order with its environment (and, for that matter, with itself, for it can picture itself—within certain limits—and must do so if it is to be as like a rational being as we want it to be). The point I now wish to make is that there is another way in which we can come to think of certain items on the robot’s tape record as isomorphic with the real. And even if this line of thought involves an analogical extension to the robot of categories appropriate to rational beings proper, the drawing of the distinction between these two isomorphisms in the case of the robot will prepare the way for a corresponding distinction in the case of rational beings proper.

44. The isomorphism we have been considering has been defined in the framework of electronic theory. Let us now abandon this austere approach and succumb to the tendency to think of the robot as almost a human being; let us permit ourselves to talk about it in terms of the categories of logic and intentionality. In this context we might say, for example, that the tape pattern ‘::’ signifies lightning; that the more complex pattern ‘::, 9, 15’ signifies lightning at place 9 and time 15. Let us suppose, in short, that we talk about patterns on the tape as symbols which have meaning, which belong to the order of signification, and that we can say what they signify.

45. But instead of exploring this way of talking about patterns on the robot’s tape, I shall explore instead the way of talking about human speech which is being stretched to cover the robot. Thus, instead of discussing what it means to say that

in Robotese ‘::’ signifies lightning

let us consider

in German ‘Mensch’ signifies man

for if we can give a correct account of the latter, we will understand what we are doing when we extend this way of talking to the robot. Once again I shall give promissory notes instead of hard cash. Since the task I have set myself is to draw a large scale contrast between two interpretations of knowledge as involving an isomorphism of the intellect and the real, the hard core of a theory of signification will suffice.

46. It is tempting to suppose that

‘Mensch’ signifies man

asserts a relation between an item in the order of signification (the German word ‘Mensch’) and an item in the real order (the—supposed—absolute nature man). Actually nothing (according to the theory of signification I
am prepared to defend) could be further from the truth. The statement in question is about two items in the order of signification, the German word ‘Mensch’ and the English word ‘man’, and says that the one is the counterpart of the other. It says, in effect, that the German word ‘Mensch’ has the same use as the English word ‘man’.

47. Actually this won’t quite do, and to see why it won’t do is to understand the temptation to suppose that the statement in question affirms a relation between a word and an absolute nature. For there is an obvious difference between

‘Mensch’ signifies man

and

‘Mensch’ has the same use as ‘man’.

This difference is that the former won’t achieve its purpose of explaining the ‘Mensch’ unless the hearer knows the use of the word ‘man’, whereas the latter can be fully appreciated by one who does not know this use. Thus these two statements are not equivalent. This, however, can be remedied by interpreting the former statement as presupposing that the word ‘man’ is in the hearer’s vocabulary, and hence as equivalent (roughly) to

‘Mensch’ (in German) has the same use as your word ‘man’.

48. It is this asymmetry between the ways in which the words ‘Mensch’ and ‘man’ are referred to which is misinterpreted as the difference between ‘Mensch’ as German word and man as absolute nature. The word ‘man’ is either used predicatively or mentioned. There is no such thing as its use to stand for an absolute nature in the real (extra-linguistic) order.

49. Another source of this misconception lies in the fact that ‘signifies’ is not univocal. For we can say not only that

‘Mensch’ signifies man

but that

‘Mensch’ signifies (the formal universal) Manhood

\[10 \text{ The statement 'Man is mortal' can be interpreted as having the force of 'Men as such are mortal', an explication of which might show it to involve both a use and a mention of the word 'man'.} \]
which I shall not discuss on this occasion, and, which is of more direct concern,

‘Mensch’ signifies Socrates, Plato, etc.

Since Socrates, Plato, etc., belong to the real order, the temptation to construe “‘Mensch’ signifies man” as affirming a relation between something in the logical order and something in the real order is reinforced. But can we not construe

‘Mensch’ signifies Socrates, Plato, etc.

as an ellipsis for

‘Mensch’ signifies man, and Socrates, Plato, etc., are men?\(^{11}\)

50. The heart of my contention, thus, is that the basic role of signification statements is to say that two expressions, at least one of which is in our own vocabulary, have the same use.\(^{12}\)

51. Now all this is not only sketchy, but highly controversial. I believe that I could elaborate the above remarks into a fairly persuasive theory of signification, but for present purposes I hope the reader will grant for the sake of argument that it could be done. For if what I am saying is correct, some interesting consequences follow, consequences which throw new light on the idea that in cognition we have an assimilation of the intellect to the real.

52. The primary consequence is that whereas what we have called picturing is a relation between items both of which belong to the real order, signification is a relation between items both of which belong to the order of signification.\(^{13}\) Let me elaborate this point by returning to the robot. In the framework of physical theory we can say that a subset of the patterns on the tape constitute a picture of the robot’s environment. Here is an isomorphism between physical realities. If, now, we make such statements as

the tape pattern ‘::’ signifies lightning,

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11. A more accurate account would read:

‘Mensch’ signifies something which is true of Socrates, Plato, etc., where, “man” is true of Plato is to be understood in terms of “Plato is a man” is true, and hence in terms of ‘Plato is a man’.

12. This is often misleadingly put by saying that ‘the meaning of a term is its use’.

13. From a more penetrating point of view, signification statements are of the form

The design ‘...’ (in L₁) plays the role played in L₂—our language—by the design ‘—’
etc., another isomorphism is being elaborated, this time between the tape patterns \textit{accepted as a language} and our own language.

53. And if this is so, we see that even though these two isomorphisms are quite distinct and belong to two universes of discourse, there is nevertheless an intimate connection between them which can be put by saying that our willingness to treat the pattern ‘:’ as a symbol which \textit{translates} into our word ‘lightning’ rests on the fact that we recognize that there is an isomorphism in the real order between the place of the pattern ‘:’ in the functioning of the robot and the place of lightning in its environment. In this sense we can say that isomorphism \textit{in the real order} between the robot’s electronic system and its environment is a presupposition of isomorphism \textit{in the order of signification} between robotese and the language we speak.

54. Let me conclude this chapter by applying these considerations to the mental word. I have suggested that the notion of mental words is an extension by analogy of the notion of the spoken word, or, to put it somewhat differently, that acts of the intellect (thoughts) are conceived by analogy with speech, i.e. as something which is \textit{like} speech but, as we say, ‘goes on inside’. That the analogy is not perfect—involves disanalogies—is as essential to the notion of an \textit{act of the intellect} as the fact that it is an analogy. Thoughts, after all, are not patterns of ‘inner sounds’ produced by the wagging of a hidden tongue; nor are they verbal imagery—though they may be reflected in verbal imagery. On the other hand, they are conceived to be analogous to patterns of overt speech and related to the give and take of man’s relation to himself and his environment as are the patterns of overt speech.

55. It must be granted that we \textit{explain} the correspondence between overt speech and the real order in terms of the idea that overt speech is but the manifestation at the overt level of inner patterns and connections, but this is compatible with the idea that we conceive of these inner patterns and connections in terms of their manifestations. After all, we explain the behaviour of perceptible things in terms of imperceptible objects (electrons, positrons, and refer to two designs as role-players. Thus in the case of signification statements about intellectual acts, we would have

\begin{quote}
The kind of inner state which finds its overt expression in an utterance which signifies —, plays a role in ‘inner speech’ which is analogous to that played by the design ‘—’ in our language.
\end{quote}

Thus, the ‘relationship’ of the logical to the real order is, in the last analysis, a matter of certain items in the real order playing roles. Compare the ‘relationship’ of the chess order to descriptive matter of fact. What the items might be which play the role of ‘words’ in ‘inner speech’ is discussed in the concluding sections of this chapter.
etc.); but this is compatible with the fact that we conceive of the imperceptible by analogy with the perceptible.

56. Now if one confuses picturing with signifying and if one takes signifying to be a relation between a word and a real—to use a simple illustration, if one confuses between

tokens of the word ‘man’ picture men

(more accurately, are constituents of statements which picture men) and

tokens of the word ‘man’ signify men

and take the latter to involve a relation between the word ‘man’ and the absolute nature man, then, since both signifying and picturing are isomorphisms, one will think of the actualities which token the word as isomorphic in the Aristotelian sense with the physical actualities which embody the absolute nature man, i.e. individual men. And one will put this by saying that the actualities which token the word embody the absolute nature man—though in a unique way (‘immaterially’); and while this would be a puzzling view with respect to the spoken word, the fact that the concept of the mental word is a concept by analogy leaves enough logical space to make it plausible with respect to the mental word. The spoken word would then be said to be informed in a derivative sense by the absolute nature man by virtue of expressing a mental word which is this nature as (immaterially) informing acts of the intellect. This conception of the mental word is, of course, the primary ground for the Thomistic contention that the intellect is immaterial.

57. What of the Cartesian arguments to prove that the intellect is immaterial? I pointed out above that Descartes assumed that if we have direct (non-inferential) knowledge of an inner state, e.g. the sensation of a white triangle, then this something must present itself in propria persona, i.e. in a non-analogical guise. In Cartesian language we must have an adequate idea of it. I argued that this principle is without foundation, and that our direct, ‘reflexive’ knowledge of our sensations (when we have it) involves concepts which are formed in a complicated way from concepts pertaining to the perceptible qualities of physical things. Let me make the same point in the present context. Our direct knowledge that the thought that it is raining has occurred to us involves the concept of an occurrence which is analogous to the statement that it is raining, i.e. it involves the concept of the mental sentence ‘It is raining’ and of a certain act as a token of the mental sentence as a statement event is a token of the English sentence ‘It is raining’.

58. Now if this is correct, we can see that the concept of the mental word
carries with it both dimensions of isomorphism. Thus we can say that the mental sentences which inform the intellect in its first and second acts are the counterparts of sentences in the vocabulary of overt speech. Thus the mental sentence •It is raining• is the inner counterpart of our English sentence ‘It is raining’. This is an isomorphism in the order of signification and is the analogue of translation. And if the argument to date is sound, this isomorphism implies that qua belonging to the real order the intellect pictures the world, i.e. is related to the real order as the electronic state of the anthropoid robot is related.

59. But what sort of thing is the intellect as belonging to the real order? I submit that as belonging to the real order it is the central nervous system, and that recent cybernetic theory throws light on the way in which cerebral patterns and dispositions picture the world. Descartes argued that the intellect cannot be a physiological entity because we can have direct knowledge that we are thinking and of what we are thinking without knowing that there is such a thing as a nerve. This argument presupposes, as was pointed out above, that direct knowledge must present what is shown in propria persona. Once this principle is abandoned, there is no absurdity in the idea that what we know directly as thoughts in terms of analogical concepts may in propria persona be neurophysiological states. To show that this is not only not absurd, but is actually the case, however, is a task for another occasion. And with the addition of this promissory note to the many I have already issued, I bring this large-scale contrast between two theories of the mental word to a close.
I

1. The lever in question is, of course, that with which, provided that an appropriate fulcrum could be found, Archimedes could move the world. In the analogy I have in mind, the fulcrum is the given, by virtue of which the mind gets leverage on the world of knowledge.

2. I have argued at great length and on many occasions that construed as it has been classically construed, this fulcrum no more exists than the phantom which Archimedes desired.

3. In lectures given some twenty years ago, I explored various forms taken by what I called the "myth" of the given. As the years have passed I have had, of course, second and third thoughts on this matter. The views I expressed are so central to my way of thinking that if they were to fall apart the result would be a shambles. Fortunately for my peace of mind—if nothing else—these afterthoughts invariably turned out to be variations on the original theme.

4. Yet I have become increasingly aware that as first presented the argument was not without flaws. Relevant distinctions were either not drawn at all, or drawn poorly. Some formulations were at the very least misleading, and, in general, the scope of the concept of the given was ill-defined.

5. In any event, I propose, in this opening lecture, to reformulate and defend some of the characteristic features of my views on the given.

6. Otherwise put, I shall be concerned with a number of issues which lie at the heart of recent controversies over foundationalism in the theory of
knowledge. My ultimate aim will be to formulate, more clearly than I have hitherto been able to do, the complex interplay in empirical knowledge of the two dimensions which epistemologists have sought to capture by the concepts of the given on the one hand, and of coherence on the other.

7. I shall take as my point of departure a text from Roderick Firth's important paper "Coherence, Certainty and Epistemic Priority." It poses with great clarity and distinctness the issues I wish to discuss, and takes a stand which is so eminently sensible that to disagree with it can only be to place it in a larger context which relocates the truth it contains. I have already discussed it on a previous occasion, but my treatment was not sufficiently perceptive. I was puzzled by things which should not have puzzled me, and, in general, failed to put an excellent opportunity to good use. I shall try to make amends.

8. Firth was concerned to explore the contrast between those epistemological theories which stress the "given" and those which stress "coherence." He begins by pointing out that in the context of epistemology a "coherence theory" is either a theory of truth, or of concepts, or of justification, or some blend of these.

9. His central concern is to be with coherence theories of justification. He does, however, pause to comment briefly on what he calls "the coherence theory of concepts." The latter, he notes, "might seem at first sight" to be "incompatible with Lewis's analysis of the 'sense meaning' of statements about physical objects," and even with "the more moderate view of Locke and many other philosophers that some material object predicates (e.g., 'red') can be analyzed by means of simpler predicates (e.g., 'looks red') which we use to describe sense experiences."

10. According to Firth, these philosophers are "assuming that 'looks red' is prior to 'is red', i.e., that it is at least logically possible to have the concept 'looks red' before we acquire the concept 'is red'". He comments that

    if the coherence theory of concepts is correct and we can not fully understand "looks red" unless we possess the contrasting concept "is red," then it would seem that it is not logically possible to have the concept "looks red" before we have the concept "is red." (p. 547)

11. Firth refers to the consequent of this conditional as a "paradox," and writes that it "might even lead us to wonder . . . whether the conceptual interdependence of 'looks' and 'is' is enough to undermine Lewis's basic assumption that we can make 'expressive judgments' (e.g., 'I seem to see a door-

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2. Ibid., p. 546.
It is these expressive judgments, according to Lewis, that enable us to escape the coherence theory of justification; and if it should turn out that these judgments all make some covert reference to physical objects, then—depending on the kind of "covert reference"—it might no longer be possible to make the epistemological distinction which Lewis requires. (p. 547)

12. As Firth sees it, however, the above "paradox" is "easily resolved, if we do not confuse concepts with the words used to express them." He argues that the child has a "primitive form of the concept 'looks red,'" and that when the child "calls" things 'red,' or "applies" the word 'red' to things in the course of learning grown-up vocabulary, it is this primitive concept which he is expressing. This primitive concept does not contrast with the concept 'is red,' for as yet the child draws no such distinction.

It is [he tells us] a genetic fact, but a fact with philosophical implications, that when a child begins to use the word 'red' with any consistency, he applies it to things which look red to him, whether these things are, as we should say, "really red" or whether they are merely made to appear red by abnormal conditions of observation. (p. 547)

13. Subsequently the child acquires a new concept of 'looks red' which does contrast with 'is red.' We are not, however, to suppose that on doing so he loses the old, or, as I shall put it, ur-concept of 'looks red.' The expression 'looks red,' indeed, stands for the new concept, but we can use this expression to "baptize" the "sense experiences" which were (and still are) conceptualizable by the ur-concept.

14. In his previous state the child "consistently identified things that looked red to him," but followed the "semantical rule" of saying "red" when something looked red to him. Now he identifies the same situation but can join us in using language which involves the contrast between 'it looks red' and 'it is red,' and between 'I see a red object' and 'I seem to see a red object,' to refer to them.

If [he continues] we do not confuse baptismal rules with semantical rules (e.g., the semantical rule followed by the child who says "red" when something looks red to him) the coherence theory of concepts would not seem to be incompatible with Lewis's theory of meaning and knowledge. (p. 547)

15. Now these brief Firthian remarks need some unpacking if we are to find out exactly what is going on. I shall therefore attempt a sympathetic exegesis.
16. To begin with, exactly what does the child conceive to be the case when he “calls” something red or “applies” the word ‘red’ to something? One thing seems to be clear. The child has an experience and is conceptually responding to it.

17. The situations in which such “sense experiences” occur are situations which grownups would describe by saying that an object looks red to somebody. The grownup’s language expresses concepts which distinguish between cases in which the object is really red and cases in which it merely looks red, and between normal and abnormal circumstances.

18. Grownups use this language to describe the child’s perceptual state. Thus, when they say

O looks red to Junior

or

Junior has a something-looks-red-to-him experience

they are “baptizing” Junior’s experience by using phrases which express concepts which Junior does not have, e.g., the concept of looking red which involves the distinctions drawn above. Junior does not yet conceptualize his own experience in these terms. Yet he does make use of some related, if more primitive, concepts.

19. Which? Because of the brevity of Firth’s remarks it is not easy to determine exactly what he has in mind. But supplementing what he does say with what he has had to say on other occasions, and taking into consideration the ground he is trying to secure, I believe him to be making something like the following claim:

The child has an ur-concept of an experience of red.
The child has an ur-concept of an object’s being responsible for an experience of red.

20. Notice that this claim ascribes two ur-concepts to the child. Of these the latter can with some plausibility be characterized as an ur-concept of an object’s looking red, if we think of the concept which the grownup has, and which is expressed by the grownup use of the phrase ‘looks red’, as the concept is responsible for an experience of red in circumstances which are either normal or abnormal.

21. For the child would have the concept expressed by the first part of the italicized phrase, and hence a concept which would only need to be supple-
mented by the conceptual distinction between normal and abnormal circumstances to generate the full-fledged adult concept.

22. Now to have the first of the above ur-concepts, i.e., that of an experience of red, obviously requires having a concept of red. Furthermore, to have the concept of an experience of red obviously requires having a concept of experience. Unfortunately, the word ‘experience’ is notoriously ambiguous in ways which touch upon the essence of our problem. The same is also true of the genitive phrase ‘of red’. I shall not, however, pause to botanize the alternatives these ambiguities make available. Instead, I shall move directly to the one I believe Firth has in mind. Thus, I believe we are to think of the child as conceiving of red as the character of an experience. The child’s ur-concept of an expanse of red is the ur-concept of a red experience.³

23. To take this line would be to flesh out the child’s primitive conceptual apparatus as follows:

The child has an ur-concept of a red experience.
The child has an ur-concept of an object being responsible for a red experience, i.e., of an object’s looking red.

24. Having these concepts, the child, in Firth’s phrase, “follows the semantical rule” of saying “red” when he believes an object to be responsible for his red experience.

25. Notice that the child’s ur-concept of an object’s looking red could also be regarded as an ur-concept of an object’s being red—that is, if we think of the adult concept of being red as the concept

would be responsible for an experience of red whenever looked at in standard conditions.

As in the previous case, the child’s ur-concept would develop into this adult concept when the child acquires the conceptual distinction between normal and abnormal circumstances.

26. It is of particular importance to notice that the child’s ur-concept [of an object’s being red], i.e., the concept of an object’s being responsible for an experience of red, would not, unlike the above adult concept of being red, contain a predictive component.

27. Yet if Junior’s environment is appropriately stable, he can come to believe, to change our example, that if an object is responsible now for an expe-

³ Or, we should perhaps say, of experiencing redly.
rience of white, it will continue to be so. Thus we can imagine the child to form a richer ur-concept of an object's being white, i.e., the concept would be responsible for an experience of white whenever looked at.

28. This concept would contain a predictive component, and would be a useful concept provided that white objects continued to present Junior with experiences of white when looked at, or that when they failed to do so, he was able to correlate what he conceives to be a change of color (e.g., from being white to being red) with an "intrinsic" physical change, such as that of being covered with red paint, or ripening, as in the case of apples. Objects would change their color in intelligible ways. A problematic situation would have been resolved.

29. Suppose, however, that instead of this comfortable environment, Junior is perversely exposed to white objects which are successively and randomly illuminated by red, white, blue, etc., lights. With the original ur-concept of an object's being of a certain color, C, Junior could without puzzlement think of the object as now red (as responsible for an experience of red) and now white (as responsible for an experience of white), etc.

30. But with the predictive ur-concept of an object's being defined in paragraph 27, such a sequence of exposures might indeed generate puzzlement. This puzzlement might in its turn be resolved along the lines of paragraph 28, if, noticing the change in lighting, the child comes to believe that a change in illumination changes an object's color.

31. Needless to say, this belief would not be without problems of its own. But without pausing to consider them, let us turn our attention to a radically different source of puzzlement. Suppose that Junior has come to "follow the semantical rule" of saying 'C' when he believes that an object is presenting him with a C experience. He will certainly be puzzled if, when the illumination changes from white to red and he now says 'red' the adult says "No! Not red, it's still white!" The child wouldn't know what to say.

32. The adult suggests "It merely looks red; it still is white." Obviously, to acquire this new way of talking Junior must learn, as before, the relevance of the changes in lighting. In the previous case we supposed Junior to resolve his puzzlement by coming to think, on his own hook, that a change in lighting brings about a change in an object's color. In the present case, however, the adult has blocked this path.

33. Given the concepts he has available, what can he come to believe about the object which would fit with what his betters have to say? He believes that the object is presenting him with, say, a red experience. He also believes that
if the object were white, it would present him with an experience of white. It is the latter belief which must somehow be modified.

34. But surely, we might be inclined to say, Junior has both the resources and the occasion to form the adult concepts looks C, is (really) C, and merely looks C, along the following lines:

O presents me with a C experience. (O looks C.)

O would present me with a C experience, if looked at in white light. (O is really C.)

O presents me with a C experience, but would present me with an experience of another color if looked at in white light. (O merely looks C.)

35. To which we might add that if Junior does indeed form these concepts he is surely within shooting distance of being able to wear the clothes of grownup color talk.

36. Now I think that something like the above account of the child’s garden of concepts is lurking in Firth’s claim that although the phrases ‘[object] is red’, and ‘[object] looks red’ form a contrastive pair, each member of which depends for its meaning on its relation to the other, there is a primitive concept of looks red which is independent of the concept is red.

37. Notice that I implied, in the previous paragraphs but one, that Firth is thinking of the adult’s contrastive concepts is red and looks red as though they were the concepts is (really) red and (merely) looks red, for he clearly thinks that the adult also has a noncontrastive concept of O looks red (to S, at t) which is essentially the same as the child’s ur-concept of an object’s looking red. The latter or more primitive concept continues to exist in the richer milieu of adult concepts of the perceptual world. After all, what Firth has been trying to do is to explain how we might overlook this fact.

II

38. It will be remembered that the purpose of Firth’s excursus into child psychology was to defend the idea that we have available a concept pertaining to experiences of red which is independent of the concept of an object’s being red. For, he has granted, unless there is such a concept, Lewis’s attempt to analyze concepts pertaining to perceptible objects in terms of phenomenal experiences can not get off the ground.

39. Against this, I want to argue that while there is, indeed, a concept pertaining to red which is prior to the pair of contrastive concepts, it is a concept
of *is red*. It is not the concept of a *kind* of experience or a *manner* of experiencing, but of something which is an *object* of experience.

40. Furthermore, I want to argue that there is a legitimate sense in which this concept of *is red* is "prior" to the concept of a *physical object's* being red, without being the concept of something *other than* a physical object being red.

41. But before I embark on this enterprise, let me remind you that the Firthian account of the child's conceptual garden hinged on the idea that the child's ur-concept pertaining to *red* was that of an experience of red, where this was taken to be an item which is (a) an experience, (b) red. We briefly considered the possibility that 'experience' was to be taken in the sense of *experiencing*, so that to have a red experience would be to experience in the red manner, i.e., in the currently fashionable terminology, to sense redly.

42. But why should the *child's* conceptualization of his sense experience be thought to have the form

[subject] [verb] [verb modifier]

rather than the form of adjectival or, say, sortal predication? The construal of 'red' as an adverb is so obviously a sophisticated theoretical maneuver—a rational reconstruction—that it is worth expostulating that if ordinary language contains anything like an expression which does the job of 'redly', it would be the phrase 'of red', a fact which strongly suggests that the root concept expressed by 'red' does *not* have the form of an adverb.

43. Thus the idea that our ur-concept of red is that of a manner of experiencing strikes me as most implausible. I can only account for the fact that philosophers have talked themselves into it by attributing to them the following line of thought

When a child has an experience of the kind which it is useful to baptize by saying that "O looks red to Junior," *what is really going on* is that O is causing Junior to sense redly. Junior is *directly aware* of this sensing redly. Therefore, he is aware of it *as* a sensing redly.

44. This line of thought involves the principle

If a person is directly aware of an item which has categorial status C, then the person is aware of it *as* having categorial status C.

4. *Object*, that is to say, *in that sense of the term in* which there is a real distinction between the experience (experiencing) and its object, as opposed to the intransitive sense in which a dance is an object danced.
This principle is, perhaps, the most basic form of what I have castigated as "The Myth of the Given."

45. If we reject it, we open up the possibility that even if these philosophers are right in thinking that what the child is directly aware of is, from the standpoint of an ideal theory of perceptual consciousness, a state of sensing redly, nevertheless the child forms a concept which has quite a different grammar. To reject the Myth of the Given is to reject the idea that the categorial structure of the world—if it has a categorial structure—imposes itself on the mind as a seal imposes an image on melted wax.

46. Thus I shall argue that the phenomena can be saved by supposing our basic concept pertaining to red to have the form of a mass term, the predicative concept is red having the form is an expanse of red.

47. It is most important to note, in view of the systematic grammatical ambiguity of color words, that to make explicit the categorial status of the term 'red' in the phrase 'an expanse of red', the latter should be reformulated as 'an expanse of red stuff', where 'stuff' carries with it implications concerning the causal role of determinate portions of stuff in the physical world.

48. If we continue for a moment to put claims about conceptual priority into the language of genetic psychology, we could say that the child's ur-concept of red is not, as such, the concept of a kind of experiencing. If, however, the child also has the concept of experiencing, or, shall we say, awareness, then the child can conceive of an expanse of red as being experienced, or, to get to the heart of the matter, as an object of awareness.

49. Let me hasten to add as a crucial point, the full significance of which will emerge later, that the awareness I have in mind is to be construed as an awareness of an expanse of red as an expanse of red. It is to be construed, in other words, as, in a sense to be explored, a cognitive awareness. If we think of the child's concept of such an awareness as the ur-concept of seeing an expanse of red, we will be construing the concept of seeing as ab initio cognitive.

50. If we use these resources to construct an account of the child's conceptual equipment which parallels that which I have attributed to Firth, we would get something like the following:

Junior has an ur-concept of an expanse of red.

Junior has an ur-concept of seeing an expanse of red.

Junior has an ur-concept of an object's being responsible for his seeing an expanse of red.
When Junior believes an object to be responsible for his seeing an expanse of red he calls the object ‘red’.

51. But what, more precisely, is the child believing about the object when he calls it ‘red’? On the Firthian account, the child has the concept of an object, and believes that the object is responsible for a red experience. The experience itself is, presumably, not a cognitive state. It is simply a state of the perceiver which is red in the basic sense of red.

52. We might be tempted to say, on our alternative approach, that the child believes the object to be responsible for the existence of an expanse of red. This, however, would imply that Junior thinks of the expanse of red as one item and the object as another. But we don’t seem to find even the vestige of such a belief in our perceptual experience; though we do find such beliefs in theoretical accounts of perception.

53. I suggest, instead, that we think of Junior as believing that the object is responsible for his experience of the expanse of red, i.e., for his seeing this expanse to be an expanse of red.

54. If, however, Junior does not think of the expanse of red as one item and the physical object as another, how does he conceive them to be related? Why not bite the bullet and say that as far as Junior is concerned, the expanse of red simply is the object.

55. This, of course, won’t do as it stands, for it might be taken to imply that the ur-concept of an expanse of red is identical with that of a red object. But unless ‘object’ is being used in the weak sense of “entity” or “something” it would not be true.

56. Thus if we suppose the child’s concept of an object to be the ur-concept of a physical object, we should rather say that the expanse of red is the object for the child, in that he thinks of it as having properties which individuate it and make it belong to some thing-kind or other.

57. If it is remembered that in this context ‘red’ is equivalent to ‘red stuff’ it will be seen that what is at stake here is the Aristotelian distinction between a mere portion of matter and a materiate individual substance. In the child’s proto-theory of the world, it is volumes of color stuff which are objects by virtue of interacting with other objects in specific ways and by so impinging on him that they are responsible for the fact that he comes to see them.

58. Thus, if Junior was originally exposed to translucent objects only, we could conceive of him as passing through a stage in which he responded to the portions of color stuff of which he was aware, e.g., cubes of pink, with some such concept as that of a cube of pink which has certain causal properties among which is that of being responsible for his experience of seeing it.
59. Of course, when Junior’s experience subsequently broadens, and he encounters opaque objects, he is in a position to distinguish between the object he sees and what he sees of the object. At any one time one sees of an opaque object its facing surface, but not its inside or its other sides.

60. Thus whereas the ur-concept of an object’s being red would be that of an object’s being a volume of red stuff, the concept of an object being red in the adjectival sense in which we think of an apple as red although white inside, would be a more complicated notion. Expanses of different colors could be constituents of one and the same object.

61. Given these resources, the alternative to the Firthian account might be fleshed out as follows:

1. Junior has an ur-concept of volumes and expanses of red stuff.
2. Junior has an ur-concept of seeing a volume of red stuff.
3. Junior has an ur-concept of a physical object as an individuated volume of color stuff which is endowed with certain causal properties.
4. Junior has an ur-concept of seeing a volume or expanse of red stuff not only as a volume or expanse of red, but as a constituent of a physical object.
5. Junior has an ur-concept of what it is to see of a physical object a volume or expanse of red which is one of its constituents. If the constituent is the surface of an opaque object, e.g., an apple, it is the very redness of the apple.
6. Junior has an ur-concept of what it is to see the very redness of an object.

62. Notice that the above ur-concept of red is prior to the concept of a physical object’s being red, not in the sense that the redness of physical objects is defined in terms of the ur-redness of something which is not a physical object, but in the sense that the concept of a red physical object is simply that of an individuated volume of red stuff which behaves in generically stuffy ways; and, specifically, in the manner characteristic of a determinate thing-kind.

III

63. What light does this alternative account of ur-concepts throw on the problem with which we began? It will be remembered that the point of Firth’s excursus into child psychology was to explain how (some) philosophers have come to make a mistake about the phenomenology of perceptual conscious-
ness by assuming that the existence at the linguistic level of the contrastive expressions 'is red' and 'looks red' and, hence, the possession by the adult language user of the corresponding contrastive concepts, entails that our concepts pertaining to red are essentially contrastive, so that there is no concept of looks red which is independent of the concept is red.

64. Now I called the concepts listed at the end of the preceding section ur-concepts because they, like the ur-concepts of the Firthian alternative, are taken to be "prior to," i.e., conceptually more basic than, the contrast between physical object (merely) looks red and physical object is (really) red.

65. Notice, however, that whereas the Firthian account explicates this contrast in terms of an ur-concept of red in which it is experiences rather than physical objects which are red, the ur-concept of red which I have sketched is the concept of a redness which, along with other colors, is the very stuff of which physical objects are made.

66. Thus my ur-concept of red is prior to the concept of a physical object's being red only in the sense in which the concept of a slab of marble is prior to the concept of a marble tabletop.

67. Whereas Firth introduces an ur-concept of

physical object looks red

which is prior to the contrast

physical object merely looks red—physical object is really red

by explicating the former as

physical object is responsible for my red experience

I am committed to the claim that there is an ur-concept of

physical object is red

which is prior to the contrast in question, and, therefore, to the concept looks red. How, then, is the latter concept to be introduced?

68. At this point let me abandon the, by no means unuseful, framework of armchair child psychology, and, to switch metaphors, don the trappings of the phenomenologist. I shall assume, however, that the fruits of the psychologizing are available as phenomenological resources; which is only fair, since Firth's enterprise was from the beginning a projection of conceptual analysis into a genetic frame.

69. Now the basic phenomenological fact from which I shall take my point of departure is that when an object looks red to S, and S is, so to speak, "taken
The Lever of Archimedes

in"—I make this stipulation only to put irrelevancies aside—S has an experience which is intrinsically like that of seeing the object to be red.

70. The experience is intrinsically like that of seeing an object to be red in the sense that if certain additional conditions were realized the experience would in fact be one in which S sees an object to be red. Among these conditions are (a) that the object be in fact red; (b) that the object be appropriately responsible for the experience. Let me call such an experience ostensibly seeing an object to be red.

71. Now my strategy, in essence, is going to be that of equating

(1) O (at t) looks red to S

with

(2) S (at t) ostensibly sees O to be red.

In other words I will be putting the concept looks red on the level—not of is red—but rather of is seen to be red,5 or, to put it in a different way, I shall be equating (1) with

(3) S (at t) seems to see O to be red,

where 'seems to see' functions as the ordinary language counterpart of the technical 'ostensibly sees'.

72. I qualified the statement of my strategy with the words 'in essence', because I must immediately introduce a caveat. It is a familiar fact that

(4) S (at t) sees that O is red

entails neither 'S sees O' (one can see that a plane is going overhead without seeing the plane), nor 'O looks red to S' (knowing that the illumination is abnormal one can see that O is white, although it looks red). Now

(5) S (at t) sees O to be red

has the former implication, but not, or at least not clearly, the latter.

73. Thus a moment's reflection suggests that I am confronted by a dilemma. Either (A) I so use

(5) S (at t) sees O to be red

5. Notice that according to this strategy, the concept looks red is ab initio a cognitive concept and, indeed, an epistemic concept in that broad sense in which a mental state is epistemic or cognitive, even if it is not as such a knowing or cognizing, provided that the concept of that state is to be analyzed in terms of propositional form and the concepts of truth and falsity. The term 'cognitive' has long been used in this broad sense in which a judgment or belief would be a cognitive fact. I shall not hesitate to make a similar use of 'epistemic'.
that it doesn’t entail

(1) O (at t) looks red to S

in which case, it would seem,

(2) S (at t) ostensibly sees O to be red

could be true even though (1) were false, which it could not be if my analysis
is correct. Or (B) I so use (5) that it does entail (1), in which case, it would
seem, the analysis is circular.

74. Clearly, I can escape this dilemma only if I can so interpret (5) that it
is true only if (1) is true, without its being the case that (1) is part of the analysis
of (5).

75. This I do as follows, drawing on the resources of the previous section.
According to the account given in paragraph 61,\(^6\) an opaque object (e.g., an
apple) is red in the adjectival sense, if it has an expanse of red stuff as an in­

gredient in the relevant way, thus at the surface. Let us, as suggested there,
speak of this expanse of red as ‘the apple’s very redness’. And let us so use (5)
that it entails

S sees O’s very redness.

76. In other words, we now give (5) the sense of

(5’) S sees O to be red and, indeed, sees its very redness

and, correspondingly, (2) the sense of

(2’) S ostensibly sees O to be red and, indeed ostensibly sees its very red­

ness.

The promised analysis of the concept of *looks red* can now be formulated by
equating (1), i.e.,

O (at t) looks red to S

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6. It will be noted that the account I am giving of physical objects as individuated volumes of
color stuff is essentially what I there called the child’s proto-theory of the objects of visual percep­
tion. This proto-theory is part and parcel of what I have called the Manifest Image of Man in the
World. That this essay moves largely within the categories of the Manifest Image must be borne in
mind throughout what follows. It must also be borne in mind, however, that it also moves within
the framework of a theory of categories which denies the authoritative status of the categories of the
Manifest Image, i.e., it works within the framework of a theory of categories which rejects the Myth
of the Given.
S (at t) ostensibly sees O to be red and, indeed, ostensibly sees its very redness.

IV

77. The distinction between seeing and ostensibly seeing is called for by such facts as that one can have an experience which is intrinsically like seeing a physical object when there is no physical object there, and that one can have an experience which is intrinsically like seeing the very redness of a physical object when either no physical object is there to be seen, or the redness which one sees is not the very redness of a physical object.

78. But what is the status of the redness which one sees when it is not the very redness of a physical object? Phenomenologically speaking, the normal status of expanses and volumes of color is to be constituents of physical objects. What are we to say of expanses and volumes of color stuff which are not constituents of physical objects? Here we must bear in mind what I have had to say about the Myth of the Given. Thus, we must not suppose that if the true theory\(^7\) of the status of expanses and volumes of color stuff is one according to which they have categorial status C, then they present themselves phenomenologically as having this status.

79. Thus we should not suppose that if the truth about color expanses and volumes is that they are evanescent objects in a private visual space, then they present themselves as such to one who scrutinizes them in an ontological frame of mind; or that if, in truth, they are mental states of sensing cube-of-pink-ly, etc., that they so present themselves.

80. It might be thought that were we to concentrate on the expanse or volume of red stuff and ask what it is in its own right, we would soon find an unassailable category to which it belongs, that of a particular. Now the concept of a particular does indeed belong to a network of concepts of essential con-

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7. I am well aware that the phrase 'the true theory' will arouse suspicion and resistance. Let me attempt to disarm this reaction by saying that what I have in mind is the theory which, whether or not it is ever actually developed, would effectively explain all of the relevant facts with which it was confronted. The concept of such a theory is obviously a problematic one, the problematic features being indicated by the expressions in italics. Not the least problematic feature is that of uniqueness. That the concept of such a theory is a coherent one would have to be argued, in large part, I presume, by rebutting objections to the contrary. Since, although such arguments are available, there is no time to canvass them here, I must, I'm afraid, beg the reader to indulge me with a temporary suspension of disbelief.
cern to metaphysics. But in the absence of a theory with factual content, i.e., a theory which characterizes its objects in terms of extra-logical concepts—to which I should; perhaps, add extra-set-theoretical concepts—is tacitly presupposed, the concept of a “particular” is the empty or “formal” concept of an ultimate subject of predication, and is of a piece with Kant’s unschematized category of substance.

81. The categories to which the entities which form the subject matter of a theory belong are generic features of the concepts of the theory. Categories in general are classifications of conceptual roles. And while the thinnest categories are subject matter independent, categories which are not bloodless are functions of the factual content of theories.

82. To put it bluntly, the fruits of painstaking theory construction in the psychology and neuro-physiology of sense perception cannot be anticipated by screwing up one’s mental eye (the eye of the child within us) and “seeing” the very manner-of-sensing-ness of a volume of red.

83. I argued in the previous section that there is an ur-concept of red which is prior to the concept of a physical object’s being red. This might have been interpreted to mean that there is an ur-concept of red which belongs to a determinate category prior to that of the physical. On Firth’s analysis this would indeed be the case, the ur-category being that of a manner of experiencing.

84. On my account, however, there is no such determinate category prior to the concept of red as a physical stuff, as a matter for individuated physical things. We, as phenomenologists, can bracket the concept of an expanse of red in that radical way which involves an abstraction from all those implications involved in its being the concept of something physical. But by so abstracting we do not acquire a concept of red which belongs to a more basic determinate category—we simply abstract from such determinate categorial status it has, and construe it merely as a particular having some determinate categorial status or other. Our phenomenological abstraction no more reveals a new determinate category than the concept of some color or other generates the concept of a new shade of red.

85. In the grip of the Myth of the Given, a C. I. Lewis might be tempted to say that to the careful mind the expanse of red presents itself as a quale, the latter being the one and only basic category which is above the pragmatic competition of the market place. Did expanses of red present themselves to Peirce as firstnesses?

86. What should be said, as I see it, is that with respect to color we have no determinate category prior to that of the physical. The latter is our point of
departure. We approach the problem of constructing \textit{new forms of concept} pertaining to color not by throwing away concepts of the colors of physical objects, but by transposing our concepts into a new key.

87. Needless to say, when we respond to an expanse of red with a concept of having a new categorial structure, we do not, \textit{eo ipso}, change that to which we are responding. There are items, e.g., expanses of red \textit{sub specie Peirceii}, to which we respond is a dimension of givenness (or takenness) which is not in dispute.

88. The one thing we can say, with phenomenological assurance, is that whatever its "true" categorial status, the expanse of red involved in an ostensibly seeing of the very redness of an apple has \textit{actual existence} as contrasted with the \textit{intentional in-existence} of that which is believed in \textit{as believed in}. But notice that the family of concepts to which \textit{this} contrast belongs consists of \textit{transcendental} concepts, i.e., concepts which apply across categories. An expanse of red could be something \textit{actual} and be \textit{either} a sense datum in visual space, a manner of sensing, or a spatial constituent of a physical object.

89. Phenomenology nears the end of its descriptive tether when it points out that when we ostensibly see the very redness of an apple, we see an \textit{actually existing} expanse of red which, if circumstances were normal, would be part of the surface of a physical object, and, indeed, part of its very redness.

90. If circumstances are not normal, we do not have another category than that of the physical to fall back on. All that is available is such transcendentals as \textit{actual}, \textit{something} and \textit{somehow}. The red is something actual which is \textit{somehow} a portion of red stuff, \textit{somehow} the sort of item which is suited to be part of the content of a physical object, but which, though \textit{somehow} that sort of item, is not, in point of fact, a portion of physical stuff.

91. As I put it some years ago, in an essay on perception,\textsuperscript{8} \"When one ostensibly sees an object which is red and triangular on the facing side\textit{ something}, in \textit{some way} red and triangular is in \textit{some way} present to the perceiver \textit{other than as thought of}.\"".

92. Its being \textit{somehow} the facing surface of a physical thing is a matter of the fact that in developing a proto-theory to explain the possibility of seeming to see the very redness of a physical object, when no physical object is there to be seen—or if there is, it has no very redness—the only available determinate concept in terms of which to grasp the redness which is \textit{somehow} present in

\textsuperscript{8} "The Structure of Knowledge" (the 1971 Machette Foundation Lectures at the University of Texas), in Hector-Neri Castaneda, ed., \textit{Action, Knowledge and Reality: Studies in Honor of Wilfrid Sellars} (Indianapolis: Bobbs-Merrill, 1975). See p. 310.
the experience, is that of redness as a physical stuff, the redness of physical objects in the spatial-temporal-causal order.

93. The latter concept must serve as the *fundamentum* from which analogical thinking can form a proto-concept of red which has a *new categorial structure*. It does this by forming a proto-theory in which items which satisfy an axiomatics of shape and color play roles which promise to account for the fact in question.

94. Let us call such items 'quasi-expanses of color stuff' or 'quasi-stuffs' for short. Our proto-theory might characterize these quasi-stuffs as states of the perceiver which satisfy an axiomatics of shape and color and which are brought in standard conditions by physical objects which actually consist of volumes of color stuff and, in nonstandard conditions, by physical objects of other colors, or by bodily states with no external cause.

95. Such a state could be, for example, an of-a-cube-of-pink-stuff state, where the genitive phrase of classification encapsulates the process of analogical concept formation.

96. In developing such a theory, a tension inevitably develops between the idea that the quasi-stuffs are functionally dependent on the perceiver, among other things, for their determinate character as, for example, a quasi cube of pink stuff, and the idea that in veridical perception what one is directly aware of is, for example, the very pinkness of a pink ice cube.

97. A natural move by a proto-theory which is uncontaminated by the Myth of the Given would be to hold that in perception items which are in point of fact, for example, quasi cubes of pink stuff (of-a-cube-of-pink-stuff states of a perceiver) are conceptualized (i.e., responded to perceptually) as cubes of pink stuff *simpliciter* having the causal properties of ice.

98. Such a proto-theory, under Cartesian pressures, might develop into a sense datum theory according to which the quasi-stuffs seen are not themselves states of the perceiver, though the *seeing* of them is.

99. I shall not stop, on the present occasion, to develop alternative proto-theories of perception and perceptual error. Readers familiar with the literature on the subject can readily do so on their own. Nor shall I embark on the companion task of revising the proto-theory of physical objects to compensate for the removal of the ostensibly seen rednesses, pinknesses, etc., of physi-

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9. How, it might be asked, can conscious states of a perceiver satisfy an axiomatics of shape? The confusions which stand in the way of a straightforward 'why not?' are the very stuff of perception theory.
cal objects from the external world. The histories of scientific realism and of phenomenalism provide excellent sources for this enterprise.

100. Instead, I shall turn my attention to the epistemological views to which Firth's excursus into child psychology was but the briefest prelude. After all, the topic with which he was essentially concerned was that of perceptual givenness and, in particular, the possibility of a perceptual given which is prior to the contrast between *is red* and *looks red*.

101. Now if one were to suppose that the elaborate account of the child's ur-concept of *looks red* which was constructed in the first two sections of this essay and ascribed to Firth (or at least called Firthian) on the basis of a few scraps of evidence, is related in any simple way to his theory of the perceptual givenness, they would be very much mistaken.

102. Thus it might be thought that what is given in perception is, for example, that one has a red experience, i.e., an experience of the kind which is captured by the child's ur-concept of red. If so, then the "experience," although *conceptualized* by the child would not be in and of itself a conceptual state. It would be an object of a conceptual awareness, rather than an act of awareness. A red experience, a state of *sensing redly*, is not an awareness of a red item *as a red item*. It may, indeed, be said to be an experience *of red*, where the phrase 'of red' is a genitive of classification, but the expanse is not, as such, an awareness of a red item *as a red item*; it is not, so to speak a classifying awareness.

103. Notice, therefore, that on the Firthian account, the child's ur-concept of *object looking red to me* is not the concept of a conceptual state; it is the concept of an object's being responsible for his having a red experience, which latter is not a conceptual state.

104. But notice that Firth speaks not only of a concept of *looks red* which is prior to the contrastive concepts *is (really) red* and *merely looks red*, but also of a concept of *seeming to see* which is prior to the contrastive concepts *I (really) see* and *I (merely) seem to see*.

105. Now Firth might be thinking of the ur-concept which we baptize as Junior's *seeming to see a red object* as the same as that which we baptize as *an object's looking red to Junior*. If so, then the ur-concept in question would be the concept of a nonconceptual state in spite of the fact that the word 'see' has a use in which seeing *is* a conceptual state or at least has a conceptual component.

106. On the other hand, it is barely possible that whether or not he is aware he is doing so, Firth has been led by the intuitive connection between
O looks red to S (at t)

and

S (at t) seems to see O to be red

which I exploited in my analysis of 'looks', to introduce a conceptual element into the experience which the child's ur-concept is of.

107. If this is what has happened, then Firth is thinking of the child's ur-concept looks red as the concept of an experience which is an experience of a red item as a red item and which is, therefore, in part at least a conceptualizing experience.

108. In effect, Firth would be ascribing to the child an ur-concept of seeing a red object as red which is prior to the contrastive concepts (really) seeing something red as red and (merely) seeming to see red as red.

109. Notice that in my first and, until now, dominant interpretation of Firth, I took it for granted that he would not confuse the way in which a sensing redly is an experience of red—by virtue of being an experience of a certain kind, a red experience—with the way in which an experience of red is of red by being an awareness of a red item as a red item. The latter is clearly a conceptual state, and an experience which has it as a component is, at least in part, a conceptualizing experience.

110. Now if we were to assume it is "sense experiences" in the former of nonconceptual sense which are the "data" of perception, then the given to which he appeals in his analysis of perceptual knowledge would be Chisholm's sensings, and Chisholm's argument to the effect that a "criterion" of perceptual knowledge which relies on sensings (supplemented by memory) leads to the "coal pit" of skepticism would have to be taken more seriously than Firth seems to have taken it.

111. Now the very suggestion that Firth might hold this alternative may seem absurd. After all, in his brilliantly argued polemic against sense datum theories he has contrasted the "thickness" and "richness" of what on any reasonable phenomenological account is given in perception, with the thin-ness and poverty of sense data.

112. Yet one could argue, for example, that what we sense is not two-dimensional (though bulgy) expanses of red, but, even in the case of opaque objects, tomato-shaped volumes of color—color solids with variegated internal

Furthermore the phenomenon of *synaesthesia* might be appealed to, so that, to return to our pink ice cube, what is sensed is a smooth cubical volume of cool pink (pink coolth).

113. The distinction between what we "really sense" and what is *added* by the imagination would be construed as the result of some form of "perceptual reduction." One could make this move while granting to the sense datum theorist that the distinction between the *actual* presence of the sensed volume of red and the *conceptual* presence of the tomato *qua* tomato (its intentional inexistence) is of the essence.

114. And, indeed, the distinction between being experienced in the mode of sensing and being experienced in the mode of conceptualization is of crucial epistemological significance.

115. One might be tempted to go so far as to claim, flatly, that the data which support perceptual knowledge claims must be *actual* existents which, so to speak, are present *in their character as actual* rather than as items (like the tomato) which, though they may *in fact* be actual (the tomato may not be hallucinatory), are not present *in their character as actual.*

116. There is clearly something to this expostulation, though, as we shall see, its edge can be turned—not however without taking us to the very heart of the theory of knowledge.

117. In spite of the attractiveness of the above line of thought, I am inclined, at least as a working hypothesis, to ascribe to Firth *something like* the second alternative. I can not make sense of many of his phenomenological insights, unless he is thinking of his ostensible physical objects as (at least in part) experienced in the mode of conceptualization. If so, then to the extent to which ostensible physical objects are the data of perceptual knowledge, the latter would be experienced, at least in part, in the mode of conceptualization.

118. This poses a serious problem which, in one form or another, will be central to the argument which follows. Firth emphasizes the "seamlessness" of ostensible physical objects, i.e., of what there seems to be or what we seem to see. If we take this seamlessness to imply that the perceptual object is not a mixture in which *some* items are experienced in the mode of sensing and *others* in the mode of conceptualization, then we seem forced to choose between

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saying that what is *given* is what is *sensed*, which would take us back to the first account; and saying that what is *given* is ostensible physical objects simply as *conceived*.

119. The latter alternative might, with caution, and as a first approximation, be expressed as the view that the perceptual given is what is *believed* in perception to be the case, or to exist. One would hasten to add that the believing in question is an occurring believing of a special kind, perhaps what followers of Cook Wilson have described by phrases as "thinking without question that . . . ," and "being under the impression that . . . ." Philosophers of perception have, by and large, settled on the verb "to take (something to be the case)," and I shall follow this usage without committing myself, for the time being, to any particular account of what a taking takes to be the case.

120. Thus, adding the requirement of seamlessness would seem to put Firth in a position of having to choose between: (1) What is given is what is sensed (or, what is the same thing, the sensing of it),\(^\text{12}\) the given being (perhaps) *accompanied by* and somehow intimately related to a taking; (2) What is given is what is *taken*; the taking being (perhaps) *accompanied by* and somehow intimately related to, a sensing.

121. An example of the former would be the view that what is given is, for example, a sensing of a cool smooth cubical volume of pink. This sensing might be accompanied by the perceiver's taking there to be a cube of cool pink ice over there.\(^\text{13}\) An example of the latter would be the view that what is *given* is a belief content,\(^\text{14}\) thus, *There is a smooth cool pink ice cube over there*. According to this alternative the believing of this content *would* be accompanied by the sensing of a smooth cubical volume of cool pink.

122. Note that on the second alternative, to be "given" is a special case of being *believed*, so that, presumably, the given is something which need not be the case.

123. Those who take the first alternative *typically* hold that to be "given" is to be a self-presenting *actuality*. Yet it is possible to find some who hold that

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12. Remember that in this usage the *sensing* is not to be construed as a cognitive act of being aware of an item as being of a certain kind or character. The being *given* of the sensing (or, equivalently, what is sensed), on the other hand, would be its being the object of such an awareness.

13. A more subtle form of this view is one according to which although what is given is in point of fact the *sensing* of a cool smooth cubical volume of pink, we take this volume of pink (of which the esse is being sensed) to be a pink ice cube. Something like this view was held by H. A. Prichard. But to make this move (as we shall see) involves a subtle shift in the concept of what it is to be given. For according to it a sensing can be "given" and yet (*niis*)taken to be something quite other than a sensing, namely a physical object.

14. Which, it should be noted, need not mean that it is given as a belief content.
even where what is given is a *sensing*, the latter is given by virtue of the fact that the perceiver has a belief with a special content, thus: *I am experiencing* \(^{15}\) a cubical volume of cool pink.

V

124. Now it is often thought that the whole point of givenness is that when it is *given* that something is the case, one has an authoritative *awareness* that something is the case—an awareness which is not just a special case of *believing* something to be the case.

125. Thus many philosophers have distinguished between the "direct apprehension" of a fact, which is not mediated by "ideas" or "concepts," and the thinking or believing which is. A believing, if true, *corresponds to* a fact; and even if it is adequately justified, believing remains at best a second class form of knowledge, as contrasted with direct apprehension. \(^{16}\)

126. Those who draw this sharp distinction have built a form of foundationalism around it as follows. There is, they argue, a level of beliefs—basic beliefs, they might be called—which derive their epistemic authority from the fact that what they *believe* to be the case has just been, or is being, directly apprehended to be the case. Thus the idea that certain facts, e.g., that one is in a certain occurrent mental state, are directly apprehended, has been brought to explain how certain *beliefs* can have an epistemic authority which is not a matter of their inferential relation to other *beliefs*.

127. Thus, on *directly apprehending* my occurrent state of believing that Albuquerque is the capital of New Mexico, I may come to *believe* that I occurrently believe Albuquerque to be the capital of New Mexico. This meta-belief would acquire its epistemic authority from the direct apprehension of the fact (the first order believing) which makes it true.

128. How the epistemic authority which is built into the concept of direct apprehension is transmitted to the basic belief is by no means clear. Are we to accept a principle to the effect that a belief that-p which occurs in the context of an apprehension that-p has epistemic authority?

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15. If I had written 'sensing' instead of 'experiencing', I would have aroused the anxieties which hover around the Myth of the Given. The ambiguities of 'experiencing' hold them momentarily at bay.

16. In addition to having first-class epistemic status, the direct apprehension of facts has often been regarded as being a primary source of conceptual abilities. One acquires the idea of what it is to be red, the ability to think or believe that there is something red, by virtue of having directly apprehended something to be red.
129. And what, after all, would be the exact difference between the authoritative direct apprehension of the fact that \( p \) and the justified true belief that \( p \) which accompanies it?

130. One is inclined to say that direct apprehension involves an existential confrontation of the apprehending by that which is apprehended—whereas in a typical case of true belief there is no confrontation of the believing with that which is believed.

131. But might not the concept of a direct apprehension simply be the concept of a true belief which confronts the state of affairs believed?

132. Notice that the concept of direct apprehension was introduced to be the concept of a cognitive act which (a) has intrinsic epistemic authority; (b) involves a direct relationship which I have referred to as “confrontation” with the apprehended state of affairs. The confrontation is supposed to explain the authority.

133. If we refer to the apprehended state of affairs as self-presenting, we can begin to see the outlines of two diverse accounts of the connection between the concepts we have been exploring:

SP-1: A self-presenting state of affairs is a fact (an obtaining state of affairs) which (a) belongs to a certain category (usually the category of occurrent mental states), and (b) is, more specifically, to the effect that a certain person is in occurrent mental state \( \phi \), of which the following is true: that if the person were to query ‘Am I in state \( \phi \)?’ they would directly apprehend the fact that they were in \( \phi \). Direct apprehension is a unique cognitive act which is more basic than any believing, no matter how warranted. Direct apprehension is the fons et origo of the epistemic authority of beliefs.

134. Now it is clear that the proponent of this concept of a self-presenting state need not hold that the beliefs to which direct apprehension give epistemic authority are beliefs in the occurrence of the self-presenting states themselves. It is, he might hold, beliefs with certain other contents which acquire authority by virtue of their relation to directly apprehended facts.

135. Thus, on apprehending that I ostensibly see a red object in front of me, it may be reasonable for me to believe that there is a red object in front of me.

136. Notice that one who takes this line might also hold that if I am in a self-presenting state, I would be justified in believing that I am in such a state. But the believing that I am in the state need in and of itself play no indispensable epistemic role. That would be played by the direct apprehension.
137. Thus one who thinks that the believing that one is in a state of the self-presenting kind does have an indispensable epistemic role, is likely to have a different concept of what it is to be a self-presenting state; one, indeed, which rejects the idea of an absolute distinction between direct apprehension and belief.

138. According to this new account,

SP-2: A self-presenting state of affairs is one which is such that if the relevant person at the relevant time were to believe it to obtain, the belief would be noninferentially warranted or self-warranting.

139. Notice that this alternative is compatible with the idea that self-presenting states of affairs need not obtain (be facts). It is also compatible with the idea that when a self-presenting state of affairs does obtain, it is a factor which contributes to bringing about the occurrent belief that it obtains.

140. The distinctive feature of this account is that the self-presentingness of a state of affairs is defined, at least in part, in terms of the “evidentness” or “warrantedness” of the belief that it obtains.

141. On the first account, (SP-1), the self-presenting state is defined in terms of the concept of direct apprehension. A self-presenting state is one which is capable of being directly apprehended. If it is directly apprehended, this apprehension is properly assigned a high degree of epistemic warrant.17

142. Now it seems clear to me that Firth rejects the radical distinction between beliefs and direct apprehensions which is central to the first account of self-presenting states. One would expect, therefore, that if he finds a use for a concept of self-presentingness, it would be along the lines of the second alternative, (SP-2). As for Chisholm, I simply do not know what to say—but on the whole I am inclined to say that he is at least implicitly committed to the first alternative. Let me call such a Chisholm, Chisholm-Descartes.

VI

143. At this point it will be worthwhile to pause for a look at a topic which may throw light both on Firth’s difficulty in explaining the phenomenological seamlessness of an experience which involves both sensings and takings, and

17. On some accounts, while direct apprehension is the source of the epistemic value of beliefs, it is a “prime mover unmoved” (to borrow Chisholm’s useful metaphor) of epistemic authority, in the sense that the direct apprehension of a fact is a source of warrant but itself neither warranted nor unwarranted.
on Chisholm's tendency to espouse the direct apprehension account of self-presentingness.

144. Let us suppose someone to ask: What does the distinction you were drawing between sensing as a nonconceptual state and taking as a conceptual state really amount to? Why should we not construe sensing-in-a-certain manner as a "special case of" or "in a continuum with" conceiving of an object or state of affairs? For, indeed, if sensing a cube of pink beyond a cube of blue were simply a special case of (and, therefore, belonged in the same mentalistic category as) believing there to be a cube of pink beyond a cube of blue, then the "seamlessness" which characterizes Firth's ostensible physical objects would be compatible with the idea that the latter are blends of items experienced in the mode of sensing and items experienced in the mode of conceiving.

145. Does the difference between sensing and conceiving consist in the specifics of what is sensed? We describe what is sensed in terms of proper and common sensibles, stressing the determinateness of what is sensed. (Could there be a merely determinable sensing?) The objects of belief are not so restrictive. Nevertheless we characterize both sensings and takings by a use of the vocabulary in which we describe perceptible states of affairs.

146. Now there is a reasonably straightforward sense in which one can be said to be aware of something merely by virtue of believing it to exist, without in any way perceiving it. Thus one who believes in the Straits of Bosphorus can be said to be aware of them. As we speak of the objects of sensation, so we can speak of the objects of belief. Would not the objects of sense and the objects of belief fit together seamlessly, if sensings and believings belong to a common genus—awareness of something—and if the terms 'object of sensation' and 'object of belief' fell under a common proximate category?

147. Of course, the Straits of Bosphorus do not stand to the believing in the same way in which, on the adverbial theory, blue stands to the sensation of blue; but we can patch this up by drawing a distinction between the "immanent object" or "content" of the act of belief and the "transcendent" or "actual" object which, in the case of successful belief, is picked out by the belief. And we might well argue that it is the immanent object or content which parallels the object of sensation.

148. And indeed there are many who would be willing to hold an adverbial theory of the immanent object of belief. Propositions are sometimes construed as kinds of believings. To believe that Tom is tall is to believe in the that-Tom-is-tall manner.

149. Sensing a cube of pink is sensing in a certain manner. Believing in a cube of pink ice is believing in a certain manner. How seamless can you get!
150. Yet surely something is wrong. To see what it is, it is necessary to examine in more detail certain points I have been taking to be noncontroversial. (One soon discovers, however, that nothing is noncontroversial. Nothing is ever completely nailed down. Ghosts are never completely laid.)

151. I have been attempting to use the verb 'to sense' in such a way that it both (a) stands for a noncognitive state of a perceiver; (b) has approximately the same meaning as it does for contemporary proponents of the adverbial theory. This, it turns out, is not easy to do.

152. As I have used the term, to sense bluely is no more to be aware of something as blue (roughly: that something is blue) than to breathe sneeze-ily is to be aware of something as a sneeze. As I have constructed this concept of sensing bluely, it is an ontological interpretation of what it is for there to be a case of blue, just as the concept of breathing sneeze-ily is an ontological interpretation of what it is for there to be a case of sneezing, i.e., a sneeze.

153. Just as it is logically possible for a sneezing to occur without there being an awareness of the sneezing as a sneeze, so it is logically possible for a sensing bluely to occur without there being an awareness of a case of blue as a case of blue.

154. As I see it, G. E. Moore was almost dead on target when he argued that even if in some sense a case of blue is a blue experience or a blue consciousness, for the case of blue to enter the cognitive or epistemic domain there must also be an experience or consciousness of blue. A case of blue may in some justifiable sense be a blue consciousness or a blue awareness, but the case of blue is not in the cognitive or epistemic domain unless one is conscious of or aware of a case of blue.

155. To this I hasten to add that to nail down his point Moore should have used the more elaborate phrase 'awareness of a case of blue as a case of blue'.

156. Thus even if the esse of blue is percipi in the sense that blue is a manner of sensing, and even if we so use 'awareness' or 'consciousness' that blue is a manner of being aware or of being conscious, we must be careful not identify the concept of a case of blue with the concept of an awareness of a case of blue as a case of blue.

157. If 'sensing' is used as a term for the awareness of a sensible item as having a certain sensible character, then it should not also be used for the generic state which stands to bluely as dancing stands to waltzily. Exactly this conflation is characteristic of much of the literature on the adverbial theory.

158. Now the relevance of all this to Firth's account of the phenome-
nological seamlessness of perceptual objects is that, as I see it, he is entitled to this seamlessness only if he can succeed in assimilating the manner in which blue or a cube of pink is involved in a sensation of blue or a sensation of a cube of pink to the manner in which a mountain or a cube of ice is involved in the perceptual taking of a mountain or of a cube of ice. A taking reveals its distinctive character, however, by always being a taking there to be something, a taking something to be somehow, and hence to involve propositional form. The taking expressed by 'this cube of ice' takes something to be a cube of ice. The sensing which accompanies this taking may be of a cube of pink, but it is not an awareness of something as a cube of pink.

159. The relevance of all this to the previous discussion of self-presenting states is as follows: Suppose that experiences of blue are self-presenting states. If one parses 'experience of blue' as 'case of sensing bluely', then, if one is clear about the above distinction, one will find it possible to take either interpretation of the concept of a self-presenting state, i.e., to hold either that for an expanse of blue (a sensing bluely) to be self-presenting is for it to be available for a logically distinct act of direct apprehension (i.e., an apprehension of it as a case of blue), or that for it to be self-presenting is for it to be available for a logically distinct act of believing it to be a case of blue.

160. On the other hand, if one is not clear about the above distinction, and conflates the ontological concept of sensing bluely with the epistemic concept of sensing a blue item as blue, then it would seem absurd to suppose that the self-presentingness of an experience of blue involves a logically distinct conceptual act of believing it to be a case of blue. The self-presentingness would seem to be internal to the experience itself; the sensing bluely which is a case of blue, and which is not a case of belief, would nevertheless be in itself an awareness of a case of blue as a case of blue; which is the whole point of self-presentingness.19

161. Thus one who conflates the ontological and the epistemic concepts of sensing will reject the belief interpretation of self-presentingness (SP-2). He will gravitate toward the direct apprehension interpretation (SP-1)—though clarity and distinctness are not to be expected in a position which arises out of a confusion.

162. Chisholm seems to me committed to the idea that if Jones senses

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19. For an account of the adverbial theory of the relation of blue to the sensation of blue which is guilty of this conflation, see C. J. Ducasse, "Moore's Refutation of Idealism," in The Philosophy of G. E. Moore, ed. P. A. Schilpp (Evanston, IL: Library of Living Philosophers, 1942; now published by Open Court, La Salle, IL). See particularly pp. 245ff.
bluey, there is an actual case of blue—not, of course, physical blue, but sensible blue. It is an actual case because the esse of sensible blue is percipi (i.e., being sensed). Similarly, if Jones feels a pain, then there is an actual pain, even though the esse of pain consists in being felt.

163. On the other hand, it is a characteristic feature of things that are conceived, that their esse is not concipi. ‘Someone conceives of a centaur’ can not be paraphrased as ‘a centaur exists’, unless ‘exists’ is used in the technical (and Pickwickian) sense in which it stands for intentional in-existence.

164. But if I am strongly inclined to think that Chisholm does not take sensing to be a special case of conceiving, I have a nagging doubt, a minority inclination to think that he does. For it seems to me obvious that in describing sensings, the use of spatial locutions is just as appropriate as the use of color locutions, and that when one senses in a manner appropriately characterized by the use of the expression ‘a blue triangle’, thus sensing in the a blue triangle manner, the blue and the triangle are seamlessly joined and in the same ontological boat. But does Chisholm want to say that when one senses in this manner there is an actual case of a triangle, of “sensible” triangularity?

165. As I see it, he should be willing to say this, and to argue that the word ‘triangle’ in this context has a derivative meaning which is as semantically appropriate to sensings as its primary meaning is semantically appropriate to physical objects.

166. But if this is a correct account of the triangle we sense, it must also be true of its seamless associate, sensed blueness.

167. If, on the other hand, one wishes to deny that when Jones senses a triangle, there is an actual case of a triangle, one way of doing this would be to say that sensing a triangle is a special form of believing there to be a triangle, or of thinking of a triangle. A triangle would indeed “in-exist” as the “content” of the thinking or believing—but so did the Fountain of Youth in the mind of Ponce de Leon. And seamlessness would reappear to remind us that what is sauce for the triangle is sauce for the blue. And what of pain?

168. Now Chisholm holds that sensing bluely is a self-presenting state. Is he willing to say that sensing a blue triangle is a self-presenting state? Can states of mind present themselves in false guises? Does he find sensings of blue triangles to be unproblematic? If so, can he explain the existence of a problem?

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20. Perhaps Mary Baker Eddy merely scratched the surface of false ideas.
I

1. The initial framework of the following discussion is provided by the classical theory of 'ideas' which, at its best, distinguished clearly between

(a) representings,

(b) contents of representings, i.e. that which exists 'in' representings as so existing,

(c) that which exists _simpliciter_ as so existing.

An item (to use a neutral term) may exist, or be capable of existing, 'in' a representing without existing _simpliciter_.

2. Pre-Kantian philosophy took as its paradigm example of contents, _general_ contents, e.g. the content _triangular_ and the content _wise_. Kant's most striking innovation was his insistence that the class of contents should be expanded to include irreducibly _individual_ contents. He also broke away from the simple-complex paradigm, and re-focussed attention on what might be called 'logical contents', though Kant himself would have preferred, of course, to call them 'forms' rather than 'contents'. We must, in any case, be careful to distinguish, at least initially, between the form of _the content_ of a representing and the form of the representing _qua_ act.

3. Kant's phrase, "form of judgment" runs together items which must be given quite different treatments. Thus, logical contents (e.g., _not_) must be dis-
tinguished from the form (e.g., concatenation) which, by combining them with judgmental content, enables them to do their job. I shall therefore, pace Kant, speak, for example, of the content not, the content or, the content all, and the content necessary.

4. Finally, Kant insisted correctly on the irreducibility of judgmental to non-judgmental contents. This, indeed, was the very heart of his insight. This irreducibility is a function not only of the irreducibility of logical contents, but of the irreducibility of the subject-predicate nexus which I have explored on another occasion.¹

5. In the case of individual contents, our original three-fold distinction works reasonably well, thus we have:

acts: a representing of Socrates, a representing of Plato, a representing of Pegasus, ... contents: the content Socrates, the content Plato, the content Pegasus, ... existents an sich: Socrates, Plato, ...

The fact that Socrates, unlike Pegasus, exists simpliciter as well as ‘in’ our representings, finds its expression in the fact that in the third list above we find ‘Socrates’ but not ‘Pegasus’.

6. It is much less obvious, however, what the third category should include in the case of other types of content. For example, when the content is the content wise, should we have existents an sich: wise?

" " " : wisdom?
" " " : wise people?
" " " : the wisdom of Socrates, the wisdom of Plato, etc?

Or should there be no third category, as the Parmenidean tradition would have it in the case of the content not?

7. But I have been getting ahead of my story. My first step must be to translate this vocabulary of ‘representings’, ‘contents’, and the like into a terminology which relates the above distinctions I have drawn more perspicuously to contemporary problems. To do this is to raise the question: ‘What, after all, does it mean to say that contents exist ‘in’ representings?’

8. If we take seriously the idea that one and the same content can exist in

¹. *Science, Perception and Reality* (London and New York, 1963), Chapters 6 and 7. [Chapter 7 of *Science, Perception and Reality* is reprinted as Chapter 5 of this volume.]
many representings by many minds, which seems to be an implication of the inter-subjectivity or public character of what we conceptually represent, we introduce a platonic theme—the contrast between a one which is shared and the many which share it. This theme develops of its own accord into the following line of thought:

We need not only ones to be shared by many representings (to do justice to the intersubjectivity of thought), we also need ones to be shared by many things. We have already noted that even for Kant some general contents must be not only intersubjective, but objective in the strong sense that they are true of (or capable of being true of) things in the independent world; true, that is, of things-in-themselves.

9. Why, then, strain at the gnat and swallow the camel. If we admit one content 'in' many representings, why not admit one attribute 'in' many things: platonism for things as well as platonism for thoughts? Let us then countenance triangularity.

II

10. Platonism is notoriously a heady draught and we must be cautious. We began with the content wise and the content triangular. We recognized them to be ones in manys. We have just countenanced wisdom and triangularity and recognized them to be ones in manys. Indeed, we were on the point of declaring them to be the same ones. And why not? Why not say that the triangularity which is 'in' many triangular things is identical with the content triangular which is 'in' many representings?

11. This suggestion has the obvious merit of affirming the closest of connections between the intersubjectivity of representings and their objectivity, their capacity for truth. Sober reflection, however, calls to mind that we have begun the attempt to clarify one metaphorical use of 'in'—the in-esse of contents 'in' representings only to add another, the in-esse of attributes 'in' things. For it is clear that the sense of 'in' in which triangularity might be in thoughts can scarcely be the same as that in which it is 'in' things. Thus, if we persist in identifying the content triangular with triangularity as an attribute of things, we must distinguish two ways in which a single one might be 'in' different manys.

12. We might seek to mitigate this dualism by finding a generic in-esse of which the above are determinate forms, thus assimilating, without identifying, our two 'in's. Thus we might distinguish two attributive ties, one of which
ties triangularity to material things (making them triangular), the other tying it to representings (making them representings of triangular things). Such a move, whatever its ultimate merits, has no immediate intuitive foundation, for there seems to be no special copula in actual usage which can join the predicate 'triangular' with expressions referring to thoughts, without committing us to the absurdity of triangular thoughts.

13. As an alternative we might, with early Russell and Moore, abandon the 'in' metaphor altogether and speak of a unique relation, the 'of' relation (as contrasted with attributive tie), between representings and, in our example, triangularity. I shall assume that the dialectic which concludes that the subjective term of such a relation must be a mental act rather than a mind—or for that matter a person—is familiar and compelling. I shall also take for granted that the concept of a diaphanous act, an act which, as far as its epistemic value is concerned, is characterized only by its 'of' relations to such items as triangularity, is unsatisfactory. We are thus led to the notion of a counterpart attribute.

14. To use this model is to say that corresponding to triangularity as an attribute of things there is an attribute of mental acts which is such that mental acts which have it stand in the 'of' relation to triangularity, and, hence, are representings of triangular things. If, in a promissory-note-ish way we use

$$\phi_{\text{triangular}}$$

to be the predicate of mental acts which corresponds to

'triangular'

as a predicate of material things, and correspondingly in the case of other predicates of material things. We can say that \(\phi_t\) acts, which exemplify \(\phi_t\)-ness, are 'of' \(f\)-ness, which in its turn, is exemplified by \(f\) things.

15. We can generalize this procedure. We begin by noting that triangularity belongs to the sort of thing which philosophers of logic call 'intensions' (note the 's') and either countenance or try to discountenance. We then identify the various types of content we have so far recognized—individual contents, general contents, state of affairs contents (though not, for reasons which will emerge in a moment, logical contents)—with the corresponding intensions. Thus our list of intensions would include

2. It should be noted that although my topic is intentionality (note the 't'), the term 'intention', though by no means irrelevant, will not occupy the center of the stage.
Intensions:                      Diagnostic statements:

individual
{ Socrates
  Pegasus

universal
{ triangularity
  diangularity

state of affairs
{ that Socrates is wise
  that Aristotle is foolish

Corresponding to these intensions* we would have another set of intensions, this time all attributes, which are, in accordance with our hypothesis, their counterparts and are attributes of the mental acts original which are ‘of’ the original intensions. Thus, for example; \( \phi_{\text{Socrates is wise}} \) acts, which exemplify \( \phi_{\text{Socrates is wise}} \)-ness are ‘of’ that-Socrates-is-wise, which, in turn, ‘obtains in’ the actual world. And, to generalize, \( \phi_{\text{___}} \) acts, which exemplify \( \phi_{\text{___}} \)-ness are ‘of’ the intension of which \( \phi_{\text{___}} \)-ness is the counterpart, and which, depending on the kind of intension it is, exists (not in), is exemplified in or obtains (not) in the actual world.

III

16. Having turned most of our contents into intensions, thus mobilizing one range of logical and ontological overtones, let me now turn them into senses, thus mobilizing themes from Frege. For although our initial move away from contents was in a bluntly platonistic direction, introducing triangularity and other intension as though they were the sort of thing which is altogether independent of thought, i.e. the esse of which is in no sense concepi, the use of the word ‘sense’ may rekindle the hope that somehow the objectivity of intensions, illustrated by the facts, for example, that triangularity is exemplified, that the state of affairs that Socrates is wise obtains and that Socrates exists (though Pegasus does not), can be reconciled with a reinterpreted claim that the job of intensions is to be ‘in’ representings, that their esse is, af-

* [Correction of ‘intentions’ in original printing.]

3. It is now time to notice the notion of sense is broader than that of intension. Logicians tend to use the latter expression only where it is appropriate to speak of an extension. Thus, triangularity but not negation would be spoken of as an intension. I shall, however speak indifferently of senses or intensions save where I am explicitly discussing the senses of expressions which cannot be said to denote an extension.
ter all, *conci pi vel conci pi posse*. Thus although Frege insists that the entities he calls senses have a being which is independent of being conceived by particular minds on particular occasions—thus correctly insisting on their public character—he does not seem to take the tough early Russell line that they are independent of thought altogether. That he nowhere spells out their dependence on thought is an indication of the difficulty of the problem; and he certainly realized that to say that they depend on *Bewusstsein überhaupt* or Objective Spirit is scarcely illuminating.

17. But more than this, the adoption of Frege's terminology implies that, properly understood, our original idea-contents turn out to be the sorts of things which serve as the senses of linguistic expressions (as contrasted with their reference or denotation, where these are appropriate). This implication carries with it two interesting programmatic corollaries:

1. An attempt should be made to construe the relation between mental acts and their intensions or senses as a form of the relation between linguistic episodes and their intensions or senses. In other words the first programmatic corollary is to the effect that conceptual episodes are to be construed as in their way standing for senses or intensions.

2. The second programmatic corollary is that the counterpart attributes of conceptual episodes, by virtue of which they in their own way, stand for their senses, are to be construed on the analogy of whatever it is about linguistic episodes by virtue of which they stand for their senses.

These programmatic corollaries are, of course, guidelines rather than theses. Yet they unfold in such a way as to indicate certain demands which must be satisfied if the program is to be achieved.

18. But before undertaking this program, it will be helpful to stand back and view it in the setting which gives it point. The idea that conceptual episodes are analogous to speech is an ancient one. It can be traced to Plato and, perhaps, to the Sophists who began the study of language and its powers. The interpretation of thought as 'inner speech' has taken different forms, and has been used to clarify a variety of problems,—thus problems pertaining to the
logical forms of thought and the connection of thought with things. All these problems retain their vitality, but to each age its paradigmatic problem, and to our generation it has been that of the public and the private, the conceptual relationships and, in particular, priorities involved in the existence of epistemic privilege in the public domain.

19. Thus, in the days before "other minds" and "one's own case" became phrases to be reckoned with, it would have been possible for an 'inner speech' philosopher to interpret the analogy between thought and speech as a discovered analogy, as one might discover analogies between colors, sounds and tastes. A cartesian might have articulated these analogies in great detail, but turned things upside-down by claiming that our primary concepts of those features which are common to thought and speech pertain to thought. He might, indeed, concede that in practice we describe thoughts by using, in a derivative way, the language in which we characterize verbal episodes, but he would insist that this is a purely practical matter, based on the fact that language, being public, provides a common reference point for discourse about private thoughts. His thesis would be the counterpart of the contemporary view which finds our use of the vocabulary of physical objects to characterize the impressions of sense to be a convenience which implies no conceptual priority of discourse about physical objects to discourse about sense impressions.

20. A post-'other minds' philosopher might make rather similar remarks, but deny the conceptual priority of categories pertaining to inner episodes. Beginning with the sound phenomenological points that the world contains both thought and language as it contains both pains and wounds, and that certain forms of linguistic behavior are logically adequate criteria for the occurrence of certain conceptual episodes, as certain forms of behavior are logically adequate criteria for the occurrence of pain, he might go on to insist that there is here no question of conceptual priority. It is, for him, a conceptual truth that thoughts are the sort of thing which find their expression in linguistic behavior, and that, ceteris paribus, linguistic behavior is the expression of thoughts. The tie between the 'overt' and 'covert' is 'logical' rather than 'empirical', yet 'logical' in a way which involves no commitment to logical behaviorism. He insists that his difference from the logical behaviorist does not simply consist in his generous use of such notions as open texture and cluster concept, as contrasted with jointly sufficient and separately necessary conditions. As he sees it, the connections between the private and the public are logical without being even in principle, or from the point of view of God, substitution instances of subject matter independent logical truths.
21. But if this approach is sound phenomenology, it is, like most sound phenomenology, a doctrine of synthetic necessary truth—if we mean by the latter phrase, as I believe we must, necessary truth which is subject matter dependent. And this, surely, is what proponents of synthetic necessary truth have intended, more or less clearly, all along. This core notion of synthetic necessary truth must not be confused with attempts to explain its possibility in terms of 'intuition', 'Wesensschau' or the like. On the other hand, those who defend the idea of synthetic necessary truth are surely responsible for giving us some account of the status of such truths. In a sense the present paper is an effort in this direction.

22. It was a major step forward to see that the connection between mental episodes and behavior cannot be understood on the model of either instantial induction or even sophisticated forms of reduction. It was also a major step forward to show convincingly that this is so, by making it clear that retail doubts about particular cases presuppose general connections which, since they are neither inductive nor reductive must be synthetic necessary connections.5

23. Now since, to come to the heart of the matter, it is clear that the idea that there are conceptual episodes does serve as a means of explaining what people say and do, and since it is clear that the models of instantial induction or of the 'corroboration' provided by surviving instantial tests do not work, the suggestion naturally arises that the relation of the framework of conceptual episodes to what people say and do can be compared, though not in all respects, to that of a framework of microphysical entities to such perceptible things as trees, tables, and chunks of refined pitchblende.

24. For the latter connection is

(a) subject matter dependent, yet,

(b) in an interesting sense, a matter of conceptual truth.

The suggestion has the additional merit that, as in the case of the framework of sense impressions, the fact that analogy with publicly observable phenomena is a striking feature of conceptual episodes would be accounted for by the essential role of analogy in theoretical concept formation.

5. If we take into account (as I believe we must) the fact that synthetic necessary connections can be statistical as well as universal, we see that the skeptic, when he is not arguing invalidly from the absence of contradiction to physical possibility, is arguing invalidly from the consistency of 'exceptions' with statistical necessity to the consistency of the latter with a hypothetical 'universal exception'.

25. The suggestion, then, is that just as in the theory of sense impressions, the predicates of physical objects are given a new use in which they form sortal predicates pertaining to impressions, thus

an (of a red rectangle) impression;

a use which, imbedded in informal principles, contributes to the explanation of the correlations of our perceptual responses with the environments to which we respond—so certain predicates which apply to linguistic episodes are given a new use in which they form sortal predicates pertaining to conceptual acts, and are imbedded in informal principles which contribute to the explanation of rational (and irrational) behavior.

26. In each case, the analogical predicates, combined with informal principles concerning the connection (causal in a very broad sense) in the one case impressions and, in the other, conceptual episodes with overt behavior, make possible the fuller understanding of a certain range of phenomena.

27. In the case of conceptual episodes or mental acts (in the proper sense of this phrase) the analogical predicates are, if my program is sound, the cash for the promissory note issued above, when it was suggested that it is

\( \phi_{\text{triangular}} \) acts

which stand for triangularity as somehow both the sense of an expression ('triangular') and an attribute of things;

\( \phi_{\text{Socrates}} \) acts

which stand for Socrates as both a sense (or, more realistically, one or other of a family of senses) and an individual intension which was realized in Athens some two and one-half millennia ago;

\( \phi_{\text{Socrates is wise}} \) acts

which stand for the sense that Socrates is wise which is also a state-of-affairs intension which obtained in the same place and period; and last, but by no means least, in the series of examples,

\( \phi_{\text{not}} \) acts

which stand for the sense negation. ‘Not’ stands for an operator rather than an attribute, but the understanding of its status will turn out to be the key to

---

6. I leave aside the filagree which, as indicated in connection with the previous example, a finer grained analysis would display.
7. I have already pointed out that although ‘not’ has a sense, it does not have an ‘intension,’ when
understanding the status of all other senses and intensions, a fact which Plato grasped in the Sophist, and a program which has been on the philosophical agenda since Parmenides.

IV

28. Now since it is obvious that the idea that there are conceptual episodes or mental acts (and corresponding capacities, dispositions and propensities) did not arise as a formally proposed and deliberated hypothesis, and equally obvious that it is not the sort of thing we would normally put in a box labeled 'highly confirmed theories,' the suggestion we have been nibbling at has a very odd ring to it. One is put in mind of the status of 'contract' theories in political philosophy. And, indeed, the program on which we are embarked amounts to an attempt to 'reconstruct' the conceptual framework of mental acts in such a way as to show how it might have achieved its present status by a series of steps none of which violates accepted standards of rationality, and none of which, in particular, involves those moves (e.g., the argument 'from one's own case') which have so convincingly been shown to be incoherent. Success along these lines would escape between the legs of the trilemma:

- logical behaviorism
- the synthetic a priori
- the *global* argument from analogy

29. We can readily spell out two demands which must be met if such a program is to be realized:

1. It requires that a form of linguistic behavior be described which, though rich enough to serve as a basis for the explicit introduction of the framework of conceptual episodes, does not, as thus described, presuppose any reference, however implicit, to such episodes. In other words, it must be possible to have a conception pertaining to linguistic behavior which, though adapted to the above purpose, is genuinely independent of concepts pertaining to mental acts, as we

the latter term is used in the specialized way in which it contrasts with 'extension.' Some, but not all, senses are intensions. I must now add that, strictly speaking,

\[ \phi_{\text{not acts}} \]

should be said to stand for not-ness, since what stands for negation is rather the concatenation of a 'not' with a statement. However, in the context of this paper, the distinction is not essential to the argument, though its importance will grow.
actually can conceive of physical objects in a way which is genuinely free of reference to micro-physical particles. Otherwise the supposed 'introduction' of the framework would be a sham.

(2) It requires that an account of how a framework of mental acts adopted, as an explanatory hypothesis, could come to serve as the vehicle of direct or non-inferential self-knowledge (apperception). In spite of appearances, this second requirement is, from a philosophical point of view, the less interesting of the two, for even a logical behaviorist must give some account, in principle, of privileged access, in other words, of how language pertaining to behavioral dispositions and propensities can acquire the use by which one's possession of such dispositions and propensities is avowed. Since, as will emerge, I believe that logical behaviorism does reconstruct a dimension of our concept of mind, I shall stipulate that the acquisition of the avowal role by the framework of mental episodes proper is of a piece with the acquisition of this role by a framework of behavioral dispositions and propensities.

30. What these demands amount to, spelled out in concrete terms, is the possibility of describing a community whose initial concepts of rationality coincide with concepts pertaining to overt linguistic behavior and the corresponding capacities, dispositions and propensities. We, of course, making use of the Strawsonian framework we learned at our mother's knee, know that the members of this community have a rich inner history of which they are totally unaware, though they are aware of certain related episodes which we (though not of course they) can confuse with this history. The latter confusion is the essence of logical behaviorism as an account of not just one dimension of the concept of mind, but of the concept of mind sans phrase.

31. For the term 'episode' is elastic enough to cover a great deal of territory. If anything which occurs or takes place is to count as an episode, then whenever an object changes from having one disposition to having another, the change is an episode. Thus the logical behaviorist can correctly point out that he, too, believes in 'conceptual episodes'—though for him this means, for example, that a person may change from having the propensity at 5 P.M. to say 'It will rain tonight' if asked to forecast the weather, to having the propensity at 5:02 P.M. to answer 'It will snow'. It is clear that logical behaviorism cannot even get off the ground unless it grants (as of course it does) that waking life is a steady stream of such changes in one's verbal propensities. Dreams provide additional problems, as witness Norman Malcolm's pressing of the
brow, and even the dreamless sleep of mathematicians is not unproblematic, for mathematical thinking in sleep is no more dreaming than mathematical thinking when awake is perceiving.

32. Clearly the episodes in which we are interested are not shifting behavioral propensities; they are connected with such shifts, but the connection is synthetic, as is the connection of molecular motion with the shifting propulsive propensities of a volume of gas.

33. Again, even when an episode is an episode in a tougher sense which precludes that it is a mere shift in propensity, a shift, in Peirce's phrase, from one would-be to another, it may be described in a way which carries a burden of hypotheticals. Ryle makes this point in connection with publicly observable episodes, but it obviously holds in the case of covert episodes proper—if such there be. Thus it should not be assumed that one who defends the notion of mental episodes in a non-Rylean sense is thereby committed to the view that their character as conceptual is, so to speak, a purely categorical character. On the contrary, I shall argue, almost everything that can be said about the conceptual character of conceptual episodes is as mongrel, as fraught with hypotheticals or would-be's, as Ryle could wish. But not everything, for to bear the burden of these hypotheticals, they must have a determinate episodeishness which, however, as I have argued elsewhere, they need not wear on their sleeves.

V

34. The crux of a philosophical argument often appears to be a Dedekind* cut between a series of 'as I will show's and a series of 'as I have shown's. In a sense the preliminaries are the argument, and there is no crux apart from their perspicuous deployment. A few more introductory remarks, therefore, and my job will be done.

35. The concept of linguistic performances is very much in the air, and rightly so. Yet the importance of the concept should not blind us to the fact that not every linguistic episode is an act in a sense of performance or piece of conduct. The role of language in the articulation of social relationships should not blind us to the foundation of essentially unperformable episodes which supports this role,—which is not, of course, to say that the performatory and non-performatory aspects can be separated as with a knife.


*[Correction of "Dedikend" in original printing.]
36. The importance of this point is, or should be, obvious. It would be a radical mistake to construe mental acts as actions. There are, indeed, such things, as mental actions; thus, there is deliberating, turning one's attention to a problem, searching one's memory, to mention some clear-cut cases. An action is the sort of thing one can decide to do—though, of course, in particular cases one may do it without deciding, as one may salute an acquaintance without the question whether or not to do so crossing one's mind. But mental acts, in the basic sense, though they may be elements of mental actions, are not themselves actions. Thus, perceptual takings, e.g. taking there to be a book on the table (and I have in mind not the dispositional but the occurrent sense of 'taking' to which there corresponds the achievement word 'notice') are not actions. It is nonsense to speak of taking something to be the case 'on purpose'. Taking is an act in the Aristotelian sense of 'actuality' rather than in the specialized practical sense which refers to conduct. A taking may be, on occasion, an element of a scrutinizing—which latter is indeed an action in the practical sense. To take another example, one may decide to do a certain action, but it is logical nonsense to speak of deciding to will to do it; yet volitions, of course, are mental acts. Again, when one draws a conclusion from given premises, there occur mental acts which may be elements of thinking about a problem, yet, if the process has been correctly described, the act which is the thinking of the conclusion is not, in that context, at least, the sort of thing one can be said to decide to do.

37. If one construes all linguistic utterances on the model of actions, then, since actions are essentially the sort of thing which can be done 'on purpose', one will think that every linguistic utterance is the sort of thing which can be done 'on purpose'. A possible source of confusion is the fact that every linguistic episode falls under a description such that an episode of that description can indeed, be a performance. One may also be misled by the fact that, after reaching years of discretion, a person's utterances just might all be actions, performed in the presence of his auditors to achieve perhaps devious, perhaps noble, ends.

38. I say, "after reaching years of discretion," because it is a familiar fact, though not always taken as seriously as it should be, that we must learn to lie. The point is a more general one, and I shall immediately put it to use by characterizing my hypothetical community as one for which the basic concept pertaining to linguistic behavior is that of what we might call spontaneous or candid 'thinking-out-loud'; where the phrase is hyphenated, and its equivalent in their language would not suggest to them, as it does to us, that in thinking-out-loud covert conceptual episodes proper are, so to speak, coming to the surface and finding their appropriate expression in speech.
39. Thus, corresponding to our concept of, for example, such a mental act as perceptual taking, would be their concept of what we would call 'taking-out-loud', that is, of spontaneous verbal responses to perceptual situations. The latter are no more to be construed as actions than are the mental episodes which we conceive to find expression in such spontaneous and candid speech. Our primitive community, which belongs to what I shall call the Rylean age, also has such concepts as 'willing-out-loud'; 'concluding-out-loud'; and, of course, concepts pertaining to linguistic actions proper, thus 'deliberating-out-loud'; 'searching-ones-memory-out-loud', not to mention such other-oriented actions as 'telling', 'stating', 'promising' etc., which, of course, can only be done out loud.

VI

40. The topic of linguistic performances not unnaturally introduces the topic of linguistic rules. This concept has come in for some hard knocks, some of them deserved. Linguistic rules, as contrasted with the uniformities they promote are, in a familiar sense, metalinguistic. Thus, those of our Fregean senses which are rule-senses are 'stood for' by meta-linguistic practical sentences and by the meta-linguistic practical thoughts which, in our terminology, find expression in them. That there are linguistic rules, and that they are 'stood for' by both thoughts and speech episodes will, in the present paper, be taken for granted. My present concern is the vital distinction between rules for doing and rules for criticizing. The distinction is essentially akin to that which has been drawn between 'ought to do' and 'ought to be'. Thus the two kinds of rule are internally related in a way which parallels the fact that ought-to-be's imply (with additional premises) ought-to-do's, and ought-to-do's imply ought-to-be's.

41. To use a hackneyed example, one ought to feel gratitude for benefits received, though feeling grateful is not something which one does, save in that broad sense in which anything expressed by a verb in the active voice is a doing. (One thinks of the 'act of existing' on which Thomistic Existentialists lay such stress.) One ought, however, to criticize (an action proper) oneself for not feeling gratitude and to take steps (again an action proper) to improve one's character.

42. The point I wish to make is the obvious one that if a species of linguistic episode is not a doing in the practical sense, a performance, then the relevant rules must be rules of criticism rather than rules of performance. Ryleans do not follow rules of performance in their thinkings-out-loud, nor could they—a logical 'could'. If a Rylean child's linguistic responses are incorrect, its
parents set about improving its linguistic character, a process which can be continued by the child on his own hook after reaching linguistic maturity.

43. A final preliminary remark, which pulls together most of the foregoing considerations. Our program, it will be remembered, is that of construing the counterpart attributes of conceptual episodes, by virtue of which, in their own way, they stand for senses or intensions, on the analogy of whatever it is about linguistic episodes by virtue of which the latter stand for senses or intensions. Since it is obvious that linguistic episodes do not stand for their senses merely by virtue of what Carnap calls their sign designs, but rather by virtue of the patterns they make (when produced in a language using frame of mind) with other designs, with objects (in a suitably broad sense) and with actions, the counterpart attributes of conceptual episodes are to be construed along parallel lines.

44. Particular linguistic configurations are correct or incorrect (in that they are subject to criticism) in a way which is illuminated by, although not defined in terms of, these general patterns or correlations. Since we are concerned with that distinguishable (if not separable) stratum of linguistic episodes which are essentially non-performatory, the correctness we have in mind involves rules of criticism; and since we are not concerned with questions of taste, morality, perspicuity or wisdom, we can provisionally characterize the correctness relevant to ‘standing for a sense’ as semantical correctness, and the corresponding uniformities as semantical uniformities—though without the specifically Ziffian overtones of this phrase.

VII

45. Technical semantics of the Tarski-Carnap variety, because of its original orientation towards the foundations of mathematics, has tended to concentrate on extensions rather than intensions, on classes rather than properties, on truth values rather than propositions, and on truth-functional connectives rather than modal predicates. There are signs that these self-imposed limitations are being outgrown, though, to shift metaphors, some who are at home in the desert may feel that the land of milk and honey is a jungle.

46. My ultimate aim is to argue that extensions are limiting cases of intensions and cannot be understood apart from them. Thus, classes, in the logistic sense, cannot be understood apart from properties, nor truth apart from propositions. As I see it, Quine’s attempt to bypass intensions simply misses the point. He has looked for intensions in Plato’s beard, but, like the bluebird of happiness, they have always been in his own backyard.
47. I have argued elsewhere\(^9\) that ostensibly relational statements of the form

'\(\text{in L} \) stands for [sense]'

e.g.

'Schnee ist weiss' (in G) stands for that snow is white

are to be construed as classificatory statements. Thus the example just given has the 'depth' grammar of

'Schnee ist weiss's (in G) are •snow is white•s

The reconstruction involves the interpretation of

that snow is white

as

the •snow is white•

which is a 'distributive singular term', which parallels

the lion

as in

the lion is a tawny beast.

48. The contrived common noun '•snow is white•' applies to tokens in any language which play the role played in our language by 'snow is white'. With this apparatus we are able to construe the expression 'stands for' as a specialized form of the copula 'to be' tailored to fit contexts which are (a) linguistic, (b) in which the predicate, and usually also the subject, is a distributive singular term. Thus

'Schnee ist weiss's (in G) stand for that snow is white

and

The 'Schnee ist weiss' (in G) stands for that snow is white

stand to

'Schnee ist weiss's (in G) are •snow is white•s

---

as

Germans love the brimming glass

and

The German loves the brimming glass

stand to

Germans love brimming glasses.

49. If this reconstruction is correct, it follows at once that semantical statements of the Tarski-Carnap variety do not assert relations between linguistic and extra-linguistic items, though, in the case of expressions which stand for senses which are intensions, it will also be true (and necessarily so) that these expressions involved in semantical uniformities (actual or potential) with the appropriate extra-linguistic items. Thus in order for it to be true that

‘Dreieckig’s (in German) stand for triangularity

i.e. that

‘Dreieckig’s (in German) are •triangular•s

German ‘Dreieckig’s must participate in uniformities with triangular things, uniformities which parallel those involving our word ‘triangular’. But this does not mean that these statements themselves have the form

(Linguistic) R (non-linguistic)

50. In the case of

‘Niet’s stand for negation,

on the other hand, the semantical information conveyed by virtue of the function (as we are construing it) of the abstract singular term ‘negation’ is intra-linguistic or syntactical, and only surface grammar makes it look as though, by countenancing such a statement, we were growing a beard.10

51. It may be objected to the above that whereas I may have made my case with respect to the schema

(expression) (in L) stands for (sense)

10. This metaphor appropriately enough is not as pejorative as it once was.
Some Reflections on Thoughts and Things

I have not yet shown that the same is true of statements belonging to semantics of the Carnap-Tarski type. For, it will be pointed out, the latter concerns not what it is to 'stand for' a Fregean sense, but rather what it is to 'denote' or be 'true of' an extension. After all, I will be reminded, Carnap-Tarski semantics doesn't even consider such statements as:

'Und' (in German) stands for conjunction

though it does, of course, throw light on the sense of truth-functional connectives by specifying the truth conditions for statements involving them. Surely, it will be said,

'Rational animal' (in E) denotes featherless bipeds

and, even more obviously,

'Plato' (in E) denotes the teacher of Aristotle

do have the form

(Linguistic) R (non-linguistic).

52. The general lines of the answer can be sketched as follows. We introduce a variable 'S' (read 'sense') which takes as its substituends common nouns formed by dot quoting. We use this variable to make such quantified statements as

For some S, 'niet's (in Russian) are Ss

i.e.

For some S, 'niet' (in Russian) stands for S

Other examples would be

For some S, 'Plato' (in English) stands for S
For some S, 'rational animal' (in English) stands for S.

53. We also introduce the form

S, is materially equivalent to S,11

examples of which would be

•Rational animal• is materially equivalent to •featherless biped•

which is true if and only if

(x) (x is a rational animal ↔ x is a featherless biped)

and

•Plato• is materially equivalent to •the teacher of Aristotle•

which is true if and only if

(f) f(Plato) ↔ f(the teacher of Aristotle)12

54. In this framework we can explicate

'Man' (in E) denotes featherless bipeds

as

For some S, 'rational animal' (in E) stands for S, and S is materially equiv­

alent to •featherless biped•

and

'Plato' (in E) denotes the teacher of Aristotle

11. Note that all substituends for 'S,' and 'Sj' make sense in this context. For example, we would
want to rule out all statements beginning

•not• is materially equivalent to . . .

and, presumably, such statements as

•Socrates• is materially equivalent to •featherless biped•

We could do this by subdividing senses into propositional senses, connective senses, predicate
senses, individual senses, etc., and laying down appropriate formation rules in terms of these dis­

tinctions.

12. Note that this object language statement can be rewritten, using the Leibniz-Russell defini­
tion of identity as

Plato = the teacher of Aristotle
For some $S$, 'Plato' (in E) stands for $S$, and $S$ is materially equivalent to "the teacher of Aristotle"

55. This analysis amounts to the idea that the difference between

'. . .' (in L) stands for - - -

and

'. . .' (in L) denotes - - -

is not a matter of what goes on the right hand side, for in each case it is an expression for a sense, but rather in the diluted character of 'denotes' as contrasted with 'stands for'. Thus, surface grammar notwithstanding,

'Rational animal' (in E) denotes featherless bipeds

has the form

'Rational animal' (in E) $R_1$ •featherless biped•

and

'Rational animal' (in E) stands for featherless biped

has the form

'Rational animal' (in E) $R_2$ •featherless biped•

Of these two statements only the former is true, given the usual zoological assumption. It unpacks into

For some $S$, 'Rational animal's (in E) are $S$s, and $S$ is materially equivalent to •featherless biped•

which is true because

'Rational animal's (in E) are •Rational animal•s, and •rational animal• is materially equivalent to •featherless biped•

where the second clause is logically equivalent to

$(x) (x$ is a rational animal $\Leftrightarrow x$ is a featherless biped).
On the other hand

'Rational animal' (in E) stands for *featherless biped*

falsely tells us that

'Rational animal's (in E) are •featherless biped•s

56. I claimed early in this paper that extensions would be found to be a variety of sense, indeed, a variety of intension. This was, I hope, not too misleading a way of saying that it is intensions which are denoted as well as stood for. It was misleading, in that it seemed to imply that not every intension can be denoted. But while not every *sense* can be denoted, every intension can stand to an expression in a weaker 'relation' (defined with reference to material equivalence) than being stood for, and it has become customary to use 'denote' in such a way that to the examples already given we can add the pair

'Snow is white' (in E) stands for (the sense) that snow is white

'Snow is white' (in E) denotes (the sense) that the moon is round

Any true statement can replace "the moon is round" in the second context, for it unpacks into

For some S, 'Snow is white' (in E) stands for S, and S is materially equivalent to •the moon is round•

57. The above is a preliminary defense of the claim that the concept of an intension (as a variety of sense) is conceptually prior to that of an extension (or 'reference' or 'denotation' or 'designatum', etc.). To press the point home would require a discussion of the concept of truth along the lines developed on other occasions.\(^\text{13}\)

58. To sum up, it is, as I see it, a mistake to suppose, as Carnap does, that semantical statements in *his* sense, i.e. statements which involve such expressions as 'denotes' or 'designates', are semantical statements in the sense that they formulate (ideal) semantical uniformities. They do not have the form

(Linguistic) R (non-linguistic)

as, in the case of denoting expressions, do semantical statements in the latter sense. On the other hand, that Carnapian statements *convey*, with conceptual

necessity, information which is formulated by the latter has been an equally important part of my story. This conceptual necessity can, in our reconstruction, be traced to the fact that the criteria for the application of dot-quoted expressions ("This is a •not•" "This is a •triangular•") consist in being subject to the same semantical correctnesses as the expressions within the dot quotes.

VIII

59. Let us return to our character as members of the Rylean community pondering the fact that our propensities to think-out-loud now this, now that are constantly changing as they would have changed had we been noticing-out-loud what was going on, reasoning-out-loud in both the theoretical and the practical mode, and willing-out-loud to act in various ways. And, to cut a long story short, let us consider the hypothesis that we are the subjects of imperceptible episodes which are

(a) analogous to thinkings-out-loud;
(b) culminate, in candid speech, in thinkings-out-loud of the kind to which they are specifically analogous;
(c) are correlated with the propensities which are realized in such thinkings-out-loud.

60. Let us classify such episodes as, for example,

representings of Socrates
representings of wisdom
representings of that Socrates was wise

or, more perspicuously, by making an analogical use of 'stand for' and of dot-quoted distributive singular terms,

thoughts standing for the •Socrates•
thoughts standing for the •wise•
thoughts standing for the •Socrates is wise•

that is,

•Socrates• thoughts
•wise• thoughts
•Socrates is wise• thoughts
and let us, leaving perspicuity aside for subsequent generations of philosophers to worry about, train ourselves and our children to say

I have a thought of Socrates
I have a thought of wisdom
I have a thought of that Socrates is wise

where we now say

I have a disposition to think-out-loud of Socrates, etc.

IX

61. A concluding postscript. I introduced promissory-note predicates of the form

\[ \phi \_ \_ \_ \]

to stand for the counterpart attributes of mental acts by virtue of which they stand for the senses they do. We have just seen that, perspicuously represented, these predicates are common nouns formed by an analogical use of our original dot quotes. Thus,

\[ \phi_{\text{triangular}} \text{ acts} \]

become

\[ \_\text{triangular} \_ \text{ acts.} \]

Our argument suggests that

\[ \_\text{Triangular} \_ \text{ acts stand for triangularity} \]

should become

\[ \_\text{Triangular} \_ \text{ acts stand for the } \_\text{triangular} \_ \]

which, amounting to

\[ \_\text{Triangular} \_ \text{ acts are } \_\text{triangular}s \]

would be as analytic as one could wish. But we must be cautious, for the Rylean triangularity with which we began was

the \_\text{triangular}"
where the dot-quoted expression applies not to inner episodes, but to thinkings-out-loud. On the other hand, in

•Triangular• acts are •triangular•s

the dot-quoted expression on the right hand side is an analogical extension of its Rylean counterpart and applies only to mental acts. To avoid two triangularities we must coalesce our original and our analogical use of dot quotes to form sortal expressions which apply to both thinkings-out-loud and inner speech. Only then can we say that

•triangular• thoughts-out-loud

as well as

•triangular• inner episodes

stand for

the •triangular•

where the latter expression is unambiguous; and only then can we say, given our reconstruction, they stand for the same

triangularity.

62. It should also be noted that the counterpart attribute of mental acts, $\Phi_{\text{triangular-ness}}$

by virtue of which they stand for triangularity becomes, on our reconstruction,

•triangular•-ness

the explication of which, along parallel lines, requires a double use of dot quotes, thus

the ••triangular••.
Mental Events

I

1. I find that I am often construed as holding that mental events in the sense of thoughts, as contrasted with aches and pains, are linguistic events. This is a misunderstanding. What I have held is that the members of a certain class of linguistic events are thoughts. The misunderstanding is simply a case of illicit conversion, the move from ‘All A is B’ to ‘All B is A’.

2. It is a familiar point that if we want to understand a certain kind of phenomenon, a wise strategy is to look for paradigm cases and get straight about them. Thus, if we want to understand what it is to be a physical object, we start from chairs, trees and pink ice cubes.

3. To be sure, it is equally essential to scrutinize borderline cases and contrastive items: shadows, echos, flashes and bangs. (Every dialectical enterprise has its negative moments.) And the ultimate aim is to have a clear grasp of the whole spectrum of the physical, from the middle-sized objects of the perceptual world to the strange entities of micro-physical theory.

4. Methodologically, however, one starts with what are, at least ostensibly, clear cut cases. In Aristotelian terminology we move from the better known to us to the better known in itself. For although the manifest world—the Lebenswelt—has its own intelligibility, it also has its mysteries. It poses questions which it does not have the resources to answer. The conception of the scientific enterprise as the search for the intelligible in itself is a theme which
transcends the limits of the present occasion. I mention it simply to highlight the methodological point that in the domain of the mental, language is primary in the order of knowing.

5. In the domain of the physical, then, the middle-sized objects of the Manifest Image are prior in the order of knowing to microphysical processes. The latter, to the Scientific Realist, are prior in the order of being. In the domain of the mental, language is prior in the order of knowing. What, then, in this domain, is prior in the order of being?

6. There is no easy answer to this question, for I can think of no simple way of putting it which is not misleading. Perhaps the best way of putting it, of indicating the general character of the answer, is by saying bluntly, animal representational systems. For if the mental as linguistic is better known to us, it is in the theory of animal representational systems and, indeed, of representational systems generally that we come to grips with the better known in itself of the mental.

7. Like Chisholm, I take intentionality—with a 't'—a special case of intensionality—with an 's'—to be the mark of the mental. I agree with the classical view that there is a domain of ‘inner episodes’, properly referred to as ‘thoughts’, which are not linguistic—though they are analogous in important respects, syntactic and semantic, to linguistic structures, and are functionally connected with linguistic behavior. These episodes have properties of the kind which are articulated by a sound phenomenology of mental events.

8. It should be clear that one can agree that there is such a domain, while leaving open the question as to its ultimate ontological status—just as one can agree that there are numbers while leaving their ontological status undecided.

9. My disagreement with the classical view takes its point of departure from the fact that I construe concepts pertaining to the intentionality of thoughts as derivative from concepts pertaining to meaningful speech.

10. A language is, indeed, a means of communication. It serves as an instrument by which messages can be conveyed from speaker to hearer and our beliefs and intentions made available (or concealed from) our fellows. There are linguistic acts in the practical sense of actions. The philosophical study of linguistic actions launched by the late John Austin is flourishing.

11. But if there is a dimension in which linguistic activity serves as a means of communication, there is, as I see it, a more basic dimension, presupposed by communication in which it serves directly as a representational system, and is a medium in which we think. (In this context, of course, the con-
cept of thinking is not the sophisticated concept of the classical theory, but
the ur-concept which underlies the latter, as well as other theoretical concepts
pertaining to various levels of representational activity.)

12. The central concept of this dimension of linguistic activity is, in my
terminology, ‘thinking-out-loud’—candid, spontaneous overt verbal behav­
ior. Related concepts are those proximate, ‘tip of the tongue’ propensities to
think-out-loud, and of other propensities and dispositions of varying degrees
of remoteness (nestedness of conditionals) pertaining thereto.

13. I have developed and put to use the concept of thinking-out-loud on
numerous occasions, and defended its fruitfulness against objections and
misunderstandings I shall not do so on the present occasion. Rather, I shall
assume its intelligibility and exhibit its value as a means of clearing up puzzles
about the mental.

14. Notice, once again, that I am not claiming that thoughts-out-loud and
propensities pertaining thereto are what thinking primarily is in the order of
being. I am saying, rather, that the concept of thinking-out-loud is our pri­
mary concept of thinking and is, therefore, our conceptual point of entry into
the domain of the mental; as our concepts pertaining to the middle-sized ob­
jects of the perceptual world are our conceptual point of entry into the do­
main of the physical.

15. Our goal, of course, is to grasp what thinking is in the order of being.
And to do this is, I argued above, to construct a general theory of representa­
tional systems.

16. Such a theory, which I propose to sketch, would enable us to under­
stand how a language can contain a way of representing the world, i.e. how it
can be, in certain respects a special and sophisticated case of a representa­
tional system.

II

17. Now, of course, animals, e.g. our useful friend the white rat, also have
representational systems. They do not, however, have languages. Do they
think? Have they mental events? Are they perhaps fraught with intentionality?
Do they refer and characterize?

18. In order even to ask these questions, we must get clear about the
meaning of the intentionalistic vocabulary of our methodologically primary
domain. For if we go wrong here, our very questions will be based on a
mistake.
19. Once again I shall have to make my points briefly and dogmatically. There is no time to do otherwise.

20. If our primary concept of thinking is that of candid ‘languaging’, it follows that our primary concepts pertaining to the intentionality of thought are syntactical and semantical concepts pertaining to language.

21. Now it has been thought that if this is indeed the case, then these concepts must be capable of definition in behavioral terms. Yet attempts to provide such definitions of ‘meaning’, ‘sense’, ‘reference’, ‘denotation’—not to mention ‘truth’—have been notoriously inept.

22. This failure has appeared to many to be a mortal blow to the very idea that there can be a methodologically primary sense in which languaging is thinking. For it would seem to entail that linguistic episodes have non-behavioral properties, thus those expressed by the above semantical terms, which are nevertheless essential to them.

23. Thus, the classical theory insists that the application of semantical concepts such as reference and aboutness in their various forms to verbal behavior presupposes that the latter is the manifestation of non-behavioral episodes of believing and intending which have an intrinsic intentionality which is intelligible in its own terms.

24. I have long argued¹ that this is a mistake. The source of the mistake lies in the fact that semantical concepts have been taken to be relational, to formulate ways in which language is related to extra-linguistic reality.

25. Consider the shop-worn, but nevertheless fundamental, case of meaning. Ostensibly the contexts

\[ E \text{ (in } L\text{)} \text{ means} \ldots \]

\[ E \text{ (in } L\text{)} \text{ stands for} \ldots \]

are relational, i.e. contexts of the form

\[ x \, R \, y \]

If they are, then the question naturally arises ‘Is the relation in question definable in behavioral terms, or is it a unique non-behavioral relation?’

26. But the question does not arise, for its presupposition is false. It is easy

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¹. Most recently in Naturalism and Ontology (Reseda, CA, 1980). See also Science and Metaphysics (London and New York, 1968); “Language as Thought and as Communication” [reprinted as Chapter 3 of this volume].
to say that there is no meaning relation. The point is to understand why there seems to be a meaning relation.

27. To make a long and oft-repeated story short

'und' (in G) means and

has as its perspicuous regimentation

'und's (in G) are •and•s

where the 'means' has been replaced by the copula and 'and' has been replaced by the dot-quoted expression 'and•s'. Meaning is not a relation because 'means' is a specialized form of the copula, and, of course, the copula is not a relation word.

28. Why put the 'and' in quotes at all? Because in the meaning statement it is obviously not playing the role of a connective and one peculiar way in which words play an unusual role is when, contrary to appearances, they are being mentioned. Why dot-quotes? Because, obviously, German 'und's are not (ordinary quote) 'and's.

29. To think that quoting is simply a device for formulating illustrating names of sign-designs is to take far too myopic a view of the power of quotation marks. Quoting does form sortal predicates from linguistic exemplars. But the criteria for satisfying the sortal need not concern the design of the exemplar as such. They can obviously concern its function. Indeed the criteria can abstract from the design—though they will require that items which satisfy the sortal have a design which is capable of embodying the function.

30. What is the criterion for being an •and•? It is to be an item which functions in some language or other in a way which is relevantly similar to the ways in which 'and's function in our own, i.e. the background language.

31. Our meaning statement gives the meaning of 'und' (in German) by presenting us with an exemplar in our background language and telling us that if we understand how 'und's function in German we should rehearse in imagination the cluster of functions characteristic of 'and'. See, for example, the 'transformations' spelled out by DeMorgan's formulae.

32. Now the problem posed by the ostensibly relational character of the context

\[ E \text{ (in } L \text{) means . .} \]

---

arises in heightened form in connection with the context

\[ E \text{ (in } L \text{) stands for . . .} \]

thus

'dreieckig' (in G) stands for triangularity
'Schnee ist Weiss' (in G) stands for that snow is white.

33. Yet by an argument which begins by noting the strong equivalence which obtains between the latter statement and the meaning statement

'dreieckig' (in G) means triangular
'Schnee ist Weiss' (in G) means snow is white

it turns out that

- to stand for triangularity is to be a •triangular•
- to stand for that snow is white is to be a •snow is white•

'ity' and 'that' and a whole host of devices for forming abstract singular terms turn out to be ordinary language quoting devices which form ways of recurring to items which play in some language or other the role played by the expressions to which they are added.

\[
\text{Triangularity} = \text{the } \bullet \text{triangular•}
\]

that snow is white = the •snow is white•

and a reference to

the •triangular•

is a general reference to “triangular”s as a reference to

the lion

as in ‘The lion is tawny’, is a general reference to lions.

34. The gist of the matter is that “- - - ‘triangularity’” merely looks (to the eye bewitched by a certain picture) to be a name. It merely looks as though it refers to something non-linguistic; applying to expressions in any language which do a certain job, its inter-linguistic reference is confused with a non-linguistic reference. As in the case of ‘means’, ‘stands for’ merely seems to
stand for a relation. It is, as 'means' proved to be, a specialized form of the copula.³

35. Now if all this is correct, then our primary concepts pertaining to intentionality can be shown not to concern unique modes of relationships between mental events and reality, but rather to provide a technique for classifying mental events by reference to paradigms in our background language.⁴

36. If, therefore, there is a relevant degree of similarity between the functioning of a certain state, φ, of an animal's representational system and the function of 'this is triangular' in our own representational system, then we can appropriately say:

φ-states mean this is triangular
φ-states stand for (the proposition) that this is triangular

i.e.

φ-states are •this is triangular•s

III

37. But this functionalist theory of meaning and intentionality is but the prologue to a naturalistic philosophy of mind. It prepares the way for, but does not provide, a demystification of the place of mind in nature.

38. The crucial step is provided by a theory of predication which, taking its point of departure from the idea that for a predicate to stand for triangularity is for it to be a •triangular•, i.e. to do the job done in our background language by 'triangular', tells us what that job is—and does so in a way which gets us out of the familiar circle:

What is it to stand for triangularity?
It is to be a •triangular•.

What is it to be a •triangular•?
It is to do the job done in our language by 'triangular'.

What is the job done in our language by 'triangular'?
It is to stand for triangularity.

³ “Meaning as Functional Classification” [reprinted as Chapter 4 of this volume], *Synthèse*, 21, 1974.

⁴ For an explication of denotation in terms of meaning, see *Science and Metaphysics*, pp. 84–85.
39. The theory of predication which rounds out the dialectic is, curiously enough, a form of nominalism which can lay proper claim to the slogan 'universals are *flatus vocis*. Of course, the role of predicates in a language is not to be *pointless* gusts of air. They have a 'meaning'—let me say a *function*—but that function is radically different from what it is usually taken to be.

40. Once again I must be brief and dogmatic. There is no other way in which I can make a distinctive contribution to this debate.

41. The standard view, of which there are many varieties, looks on the subject-predicate sentence 'a is red' in the PMese regimentation

\[ \text{red } a \]

as a concatenation of two expressions 'red' and 'a', each of which has independent semantical status. 'a' denotes or refers to a; while 'red' refers to red things. According to the realist, the connection of 'red' with red things is mediated by its connection with an abstract entity—redness; according to the nominalist it is not so mediated. The contemporary nominalist is usually content to hold that the predicate 'red' is 'true of' or 'satisfied by' red things and that that is that.\(^5\)

42. In general, the nominalist holds that there is no thing which 'red' stands for because it stands for *red things* and *red things* is not a thing.

43. Now it is a truism that the concatenation of 'red' with 'a' tells us that a is red. But is this fact illuminated by the idea that 'a' is correlated with a and 'red' with red things? I think not.

44. To understand what is going on, we need a different perspective on the syntactical form of 'red a'. I submit that it is properly viewed, *not* as a concatenation of two referring expressions, but rather as a name, 'a', which has the character of being concatenated to the left with a case of the sign design (*flatus vocis*) 'red'. If we abbreviate the expression

\[ \text{Concatenated to the left with a 'red'} \]

by

\[ \text{red*} \]

we can say with respect to a token, t, of 'red a' that while superficially

\[ t \text{ is a 'red' } \Rightarrow 'a' \]

i.e. a ‘red’ concatenated with an ‘a’; its true form, its depth grammar, so to speak, is given by

\[ t \text{ is a red}^* \left[ 'a' \right] \]

(Compare ‘Fido is a white [dog], where ‘white’ operates on the sortal ‘dog’ to generate a derivative sortal.)

45. Similarly, in the case of relational statements, for example ‘a (is) before b’, ostensibly we have before us something with the form

an ‘a’ concatenated with a ‘before’ which is concatenated with a ‘b’;

but its actual grammar is more perspicuously represented by

\[ t \text{ is an ‘a’ and a ‘b’ with a case of the sign design ‘before’ (flatús vocis) between them;} \]

or, abbreviating “with a ‘before’ between them” as ‘before*’,

\[ t \text{ is an ‘a’ before* a ‘b’;} \]

(Compare ‘x is a cat on a mat.’)

46. Bluntly put

‘\( \varphi a \)’ represents \( a \) as \( \varphi \) by virtue of ‘\( a \)’ being \( \varphi^* \),

‘\( a R b \)’ represents \( a \) and \( b \) as \( R \) by virtue of ‘\( a \)’ and ‘\( b \)’ being \( R^* \)

47. This, we shall see, is the linguistic case of the more general principle

In a representational system, a symbol for an object, \( x \), represents that object as \( \varphi \) by virtue of having a counterpart character \( \varphi^* \). Symbols for two objects, \( x \) and \( y \), represent them as related in a certain manner by virtue of standing in a counterpart relation, \( R^* \).

48. Notice that in the linguistic case, the counterpart character \( \varphi^* \) involves in subject predicate languages, the presence of an additional sign design (or \textit{flatús vocis}). Thus, in our example \( \varphi^* \) is the character of being concatenated to the left with the auxiliary symbol ‘red’. But it could have been otherwise. We could say that \( a \) is red without the use of an auxiliary sign design—for example by writing ‘\( a \)’ in boldface.

49. Again in our linguistic case the counterpart relation, \( R^* \), involved the presence of an additional sign design. Thus, in our example \( R^* \) is the charac-
ter of having a 'before' between them. But we could say that $a$ is before $b$, by writing ‘$a$’ above ‘$b$’; thus,

\[
\begin{array}{c}
a \\
b
\end{array}
\]

This is not a trivial point, for the statement with the auxiliary symbol

\[
\begin{array}{c}
a \text{(is) before } b
\end{array}
\]

and the statement without the auxiliary symbol

\[
\begin{array}{c}
a \\
b
\end{array}
\]

have the same syntactical form, namely ‘$a$’ and ‘$b$’ in a counterpart relation.\(^6\)

50. With this as a background let us take a look at what linguistic and non-linguistic representational systems have in common.

IV

51. An awareness of an item as green is a response (not necessarily overt) to the item as green. But it isn’t an awareness of it as green, simply by virtue of being a response to it as green.

52. An iron filing can be said to respond to a green magnet as a magnet. It clearly doesn’t respond to the magnet as green, for it would respond in the same way if the magnet were of any other color.

53. But though the filing responds to the magnet as a magnet, we don’t say, except metaphorically, that the filing is aware of the magnet as a magnet. I shall refer to the sense of ‘responds to as’ in which the filing responds to the magnet as a magnet as the causal sense of the phrase.

54. By virtue of what is a response an awareness as? An interesting case of a response to something as something is that of a rat which has acquired the propensity to leap at panels with varieties of triangles painted on them. As in the case of the filings we can describe the rat correctly as responding to a triangle as a triangle. But we should be careful about concluding that simply by virtue of its training the rat has acquired an ur-concept of a triangle.

55. To suppose that it has reflects the common conviction that the con-

\(^6\) See Naturalism and Ontology, Ch. 3, for more on the non-triviality of this point.
nection between representational states and objects is a direct one-one corre-
lation. Obviously, the representational state (the ‘symbol’) is correlated with
what it represents—but this correlation may essentially involve other corre-
lations—thus between it and other representational states and between repre-
sentational states and actions.

56. Indeed, I propose to argue that to be a representational state, a state of
an organism must be the manifestation of a system of dispositions and pro-
pensities by virtue of which the organism constructs maps of itself in its envi-
ronment, and locates itself and its behavior on the map.

57. Such representational systems (RS) or cognitive map-makers, can be
brought about by natural selection and transmitted genetically, as in the case
of bees. Undoubtedly a primitive RS is also an innate endowment of human
beings. The concept of innate abilities to be aware of something as something,
and hence of pre-linguistic awarenesses is perfectly intelligible.

58. My point, then, is that a much greater degree of integration of re-
sponses to triangles as triangles into the rat’s RS is required before we can ap-
propriately say that the rat has even the most primitive concept of a triangle.
Primitive inferences would also be involved. Thus a rat’s \( \varphi \)-state wouldn’t be a
state of representing something as a triangle, unless it had the propensity to
move from the \( \varphi \)-state to another state which counts as a primitive form of
representing it as 3-sided or as having, say, pointed edges.

59. I have long insisted that inferential moves are an essential feature of
representational activity. It is therefore important to realize that inference is
similar to the thing Hume had in mind when he speaks of the association of
ideas. The two crucial points I want to make here are

(1) The representational states involved in primitive inference have prop-
ositional form.

(2) Propositional form is more primitive than logical form.

60. To have propositional form, a basic representational state must repre-
sent an object and represent it as of a certain character. In the case of sophisti-
cated RSs we speak of a basic representational state as referring to an object
and characterizing it as thus-and-so.

61. Given a map of, say, Michigan, it is quite proper to say that a certain
symbol of a certain shape connected by lines with other symbols of other

shapes picks out Ann Arbor, characterizes it as a large city and as related in
certain ways to other large and small cities related by a nexus of roads.
62. But, of course, the map is a parasitical RS. It depends for its mappish-
ness on its use by human RSs.
63. By virtue of what does a certain representational state, \( \rho \), of, say, a
white rat represent a certain location \( h \) in its environment? Clearly by virtue
of the fact that \( \rho \) belongs to a system of representational states \( \rho_1, \rho_2, \ldots \) so re-
lated that the system is structurally similar to the spatial structure of its envi-
ronment, consisting of \( \lambda_i, \lambda_j \).
64. But though structural similarity is necessary it is not a sufficient con-
dition for mapping. The representational states must be so connected with
each other and with the rat's locomotor activity that together they constitute
what can not too metaphorically be characterized as a strategy for finding \( \lambda \).
65. The root of the idea that symbol \( S \) represents object \( O \) is the idea that \( S \)
belongs to a RS in which it is so connected with other features of the system
(including actions) as to be the focal point of a strategy for finding \( O \).
66. Or again, by virtue of what does a representational state, \( p \), represent
an object as being of a certain character, \( \varphi \)? The answer is, perhaps surpris-
ingsly similar. The organism has a strategy for finding \( \varphi \) objects. This strategy
essentially involves inferential sequences of the form,

\[ \psi \text{ here, } \varphi \text{ nearby} \]
e.g.

Smoke here, fire nearby
67. Such inferential patterns are uniformities in the occurrence of repre-
sentational states. Certain kinds of representational states tend to be followed
(or to be followed by the absence of) certain other kinds of representational
states.
68. In addition to inferential moves, there are representational analogues
to conceptual awareness. Clearly a suitably trained RS can come to be in a
'This is a triangle' state by virtue of being irradiated by a triangular object.
69. I have also stressed that a RS can represent its own behavior. It can
represent itself as, for example, jumping. Under certain conditions the repre-
sentation of itself as jumping acquires the propensity to trigger a jumping. In
such cases the representation of itself as jumping becomes a primitive form of
'choosing to jump'. An adequate theory of RSs will discuss how the action-
triggering valence is transmitted along a chain of representational states from
'goal states' to the representation of actions. (Compare the analogy of practical inferences.)

70. Another dimension is added by memory-retention. But given the rest this seems relatively unproblematic.

71. To sum up the points I have been making in this section:

To be an RS is to be a primitive or sophisticated form of a perceiving—inferring—remembering—wanting—acting organism. These features are essentially connected. Thus each of them is essentially involved in the referential and characterizing aspects of representational states.

72. I shall conclude this schematic treatment of RS by presenting in summary form the interconnections of the themes I have been discussing.

(a) The core concept of a mental event is that of a representational event.

(b) A basic representational event is an event which has two characters: one by virtue of which it represents an object in its environment (or itself); another by virtue of which it represents that object as being of a certain character.

(c) In the case of a subject-predicate language, the referential character of the representational event involves a referential symbol and the characterizing feature of the event involves an additional symbol of which the role is typically misunderstood.

(d) The function of the referential symbol is to represent an object.

(e) The function of what might be referred to as the 'characterizing symbol', however, is not to represent something, e.g. $\varphi$ objects, such that one is R to the other, but to give the representational event of which it is a constituent a character by virtue of which it represents its object as $\varphi$ or as two objects one of which R to the other.

(f) The misunderstanding of the role of predicates as auxiliary symbols (flatus vocis) is the chief—but not the only—culprit responsible for two fundamental flaws in traditional conceptions of the mental.

1. The notion that essential to mental events is the involvement of abstract entities.

2. The notion that the presence or absence of a subject-predicate structure marks a radical difference between linguistic and non-linguistic RSs.
(g) It is the falsity of the latter notion that I have been concerned to emphasize in this paper. Its importance for the philosophy of representational systems, i.e. the philosophy of mind can scarcely be overestimated.

(h) Putting it crudely, the fundamental thesis I have been advancing is that while prelinguistic RSs do not have 'subjects' and 'predicates' they do share with subject-predicate RS the duality of the functions of referring and characterizing. The fact that in a subject-predicate language these functions involve separate subject symbols and predicate symbols is, from this standpoint superficial.

(i) All of the above is compatible with the idea that the presence in a RS of subjects and predicates makes possible degrees of sophistication which would otherwise be impossible. But to develop this point would require a discussion of logic-using representational systems.

V

73. The subject-predicate distinction has often been thought to be the key to the distinction, not only between linguistic and prelinguistic RSs, but, more abstractly, between what have been called 'propositional' and 'pre- (or sub-) propositional' RSs. Thus the concept of a basic proposition is often identified with that of a representation which consists of a subject term and a predicate term.

74. But if the argument of the preceding sections is correct, nothing of significance hinges directly on the distinction between RSs which do and those which do not involve a distinction between subject and predicate terms.

75. Furthermore, we have seen that there is a legitimate sense in which an RS which doesn't involve subject and predicate term can nevertheless contain propositions and intend states of affairs. For it can—and, indeed, to be a RS at all, must—involves representational states which perform both referential and characterizing functions.

76. A state which refers to a perceptual object and characterizes it as f, and which, therefore, can be classified functionally as a •This is f state, is the very paradigm of a propositional state, and while the sortal in terms of which we classify it is built from an expression in our background language, it must be

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8. For convenience in typing I shall, in what follows, use ordinary quotes in place of dot-quotes.
remembered that such functional sortals apply not only to *expressions* in any *language* which play in that language a *relevantly similar* role to that played in our language by the dot-quoted expression, but, as we can now put it, to representational states in any RS which play in that RS the relevantly similar role in question.

77. This extended interpretation of the dot-quoting device was implicitly appealed to in paragraph 36 above, where it was said that a certain representational state of a trained rat could be said to be a *This is a triangular* state, but not illustrated by and hence to express the proposition *that this is triangular*?

78. In order to carve nature at the joints, then, it would seem clear that the place where the cut is to be made is neither at the distinction between RSs which do and those which do not involve the subject-predicate distinction, nor between propositional and non-propositional RSs.

79. Where, then, does it lie? The answer is straightforward and should not surprise. The crucial distinction is between *logic-using* RSs and RSs which do not *use* logic, though their operations are described by *mentioning* logical operations.

80. Abstractly put, the distinction is clear. But in actual application the distinction is often blurred.

81. The logical operations in question are, in the first instance, those of propositional logic and, in second instance those of the quantificational logic which they make possible.

82. Thus we carve nature at the joint by distinguishing between those RSs which contain representational items which function as do logical connectives and quantifiers, i.e. which have logical expressions *in their vocabularies*, and those which do not.

83. If we call the former *logical RSs* and the latter *pre-logical RSs* we must bear in mind that there is a legitimate sense in which the latter contain propositions, involve the functions of referring and characterizing and, which is at least as important, the inferential role.

84. Let us take another look at the last of these points, for there is a wide-

9. Clearly an account of how different tokens can express *the* proposition that *this* is triangular—in short a theory of demonstrative propositions—is called for in order to resolve easily generated puzzles. Something like Strawson’s distinction between a *sentence* and the family of *statements* it can be used to make on different occasions must be involved. But since *proposition* has turned out to be a functional classification, this would simply amount to a distinction between a generic functional classification and a related family of more specific functional classifications. That it might not be possible to formulate the latter by the use of the dot-quoting technique serves only to remind us that the latter, however useful, is merely a useful dodge—even though it has its counterpart in the ordinary language of intentionality.
spread tendency to assimilate all inference to 'logical inference' and to assume that all representational systems in which inferences are drawn 'use logic'.

85. The point to be appreciated is that the inferences involved in a pre-logical RS have a form which is illustrated by the sequence

'Smoke here', 'fire nearby'

but not illustrated by

'If smoke anywhere, then fire nearby there'.
'Smoke here'
'Fire nearby'

86. Abstractly put, the difference between

\textit{(ceteris paribus)} whenever RS represents 'smoke here' it represents 'fire nearby'

and

\textit{(ceteris paribus)} RS represents 'if smoke anywhere, then fire nearby there'

is obvious.

87. The former tells us, in traditional terms, that the RS "associates the presence of smoke with the presence of fire", Let me therefore call the sequence

'Smoke here', 'fire nearby'

a 'Humean' inference, and contrast it with the 'Aristotelian' inference which involves the quantified premise 'If smoke anywhere, then fire nearby there'.

88. A Humean RS can get from 'smoke here' to 'fire nearby' \textit{only} by a route which involves basic representational states and no logical vocabulary.

89. On the other hand an Aristotelian RS can get from the former to the latter either \textit{directly}, by the Humean route, or indirectly, by what I shall call the syllogistic route, i.e. the route which involves, to adopt Quine's useful terminology, the \textit{standing} representation 'If smoke anywhere, then fire near-by there'.\(^{10}\)

\(^{10}\) In "Some Reflections on Language Games" [reprinted as Chapter 2 of this volume], \textit{Philosophy of Science}, 21, 1954 (reprinted as Chapter 11 in \textit{Science, Perception and Reality}), I referred to such representations as 'auxiliary positions' and contrasted the moves in which they are involved with 'material moves'.

90. Thus we can say, following Leibnitz, that a Humean RS which moves directly from ‘Smoke here’ to ‘fire nearby’ apes an Aristotelian RS which syllogizes. The former gets from its starting point to the conclusion *it would have drawn if* it had syllogized. As Leibnitz put it, “[animals have] a sort of consecutiveness which imitates reason”. He emphasizes that this consecutiveness is also found at the human level.

91. The case of negation is particularly instructive. Here the question is ‘How can a pre-logical RS ape the use of negation?’

92. Suppose that the environment of a non-(logic using) RS contains only three shapes: triangle, circle and square. Suppose, also, that there is a kind of representational state which can be appropriately characterized as rejecting a basic representation—as contrasted with failing to represent it.

93. It might look, at first sight, as though a RS which is able to reject a representation has a primitive form of negation ‘in its vocabulary’, i.e. is able to be in a primitive propositional state of the kind ‘not-\(p\)’. This, however, as we shall see, is to put the cart before the horse.

94. Suppose, now, that our Humean RS has the following propensity clusters: (*ceteris paribus*)

\[(A) \text{ if RS represents 'triangle there', it rejects 'circle there' and 'square there'.}\]

\[(B) \text{ if RS represents 'circle there', it rejects 'square there' and 'triangle there'.}\]

\[(C) \text{ if RS represents 'square there', it rejects 'triangle there' and 'circle there'.}\]

The first of these propensities would be actualized by the concurrence of the following states

RS represents ‘triangle there’, RS rejects ‘circle there’, RS rejects ‘square there’.

and similarly, *mutatis mutandis*, in the other cases.

95. Suppose, now, an Aristotelian RS which does have a symbol for negation in its vocabulary. For this to be the case, the RS in question must be

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12. Loc. cit.
13. Ibid., §28.
such that (ceteris paribus) if it represents ‘p’ it rejects ‘not-p’, and if it represents ‘not-p’ it rejects ‘p’.

96. Thus our concept ‘RS has negation in its vocabulary’ involves our concept ‘RS rejects a certain representation’ which involves our concept ‘RS does not represent a certain representation’. But instead of our concept of RS as rejecting ‘p’ being equivalent to the idea that it represents ‘not p’, the latter idea presupposes the former. The concept of rejection is more basic than the concept of negation.

97. Our Aristotelian RS also has propensities which correspond to the familiar DeMorgan entailments and their quantificational counterparts. Thus it has the propensity not to represent ‘not q’ while representing ‘p and (if p, then q)’ and the propensity to reject ‘p and not-q’ if it represents ‘if p, then q’.

98. Suppose, now, that our Aristotelian RS contains the following standing representations (for simplicity I use their translation into PMese):

(A') '(x) triangle at x .→. ~ circle at x . ~ square at x'
(B') '(x) circle at x .→. ~ square at x . ~ triangle at x'
(C') '(x) square at x .→. ~ triangle at x . ~ circle at x'

99. This RS can get from the state of representing ‘triangle there’ to the state of rejecting ‘circle there’ and rejecting ‘square there’, either by actualizing the Humean propensity cluster (A) (supposing it to have acquired it) or by actualizing the Aristotelian propensities illustrated by the sequence of representational states

(1) ‘triangle there’
(2) ‘(x) triangle at x .→. ~ circle at x . ~ square at x’
(3) ‘triangle there .→. ~ circle there . ~ square there’
(4) ‘triangle there and (triangle there .→. ~ square there’
   and ~ circle there)’
(5) ‘~ circle there and ~ square there’
(6) ‘~ circle there’
(7) ‘~ square there’

States (6) and (7) are, we may suppose, by virtue of the propensities involved in RS having negation in its vocabulary, accompanied by the rejection of the representations ‘circle there’ and ‘square there’.

100. Thus we can say that the Humean, i.e. non-(logic using) RS has, given that it represents ‘triangle there’, the representational propensities with respect to ‘circle there’ and ‘square there’ it would have had, if it were an Arist•
telian RS with the standing representation (A'). Once again we would have a Humean RS which 'apes reason'.

101. In saying this we mention the logical operations involved in syllogizing. But only by the confusion involved in what James called the Psychologist's Fallacy can we be taken to ascribe logical operations to the Humean RS.
IV

SCIENCE
AND THE
MIND
CHAPTER TWELVE

Phenomenalism

I. Introduction

The trend in recent epistemology away from what I shall call classical phenomenalism ('physical objects are patterns of actual and possible sense contents') has become almost a stampede. Once again, as so often in the history of philosophy, there is a danger that a position will be abandoned before the reasons for its inadequacy are fully understood, with the twin results that: (a) it will not be noticed that its successor, to all appearances a direct contrary, shares some of its mistakes; (b) the truths contained in the old position will be cast aside with its errors. The almost inevitable result of these stampedes has been the 'swing of the pendulum' character of philosophical thought; the partial truth of the old position reasserts itself in the long run and brings the rest of the tangle with it.

I believe that this is exactly what is happening with respect to the phenomenalistic account of physical objects. On the other hand, I also believe that the tools are at hand for a decisive clarification of traditional puzzles about perceptual knowledge, and that the pendulum can be brought to a stop. This chapter is an attempt to do just that by submitting phenomenalism to a thorough review in the light of recent achievements in the logic of conceptual frameworks. I hope to isolate the important insights contained in recent phenomenalism, so that they can remain as abiding philosophical achievements no longer periodically obscured by the confusions with which they have been associated.
In the early stages of the argument, devoted to an initial survey of the ground, I shall be distinguishing a number of ‘phenomenalisms’ all of which are variations on a common theme. This theme is the idea that the physical objects and processes of the ‘common sense’ world (i.e. physical objects as contrasted with ‘scientific objects’ such as electrons and electro-magnetic fields) actually do have the kinds of quality they seem to have. Some physical objects are red, even though other physical objects, viewed in abnormal circumstances, merely seem to be red. Notice that this common theme is an ontological one. It says nothing about the ‘direct’ or ‘indirect’, ‘inferential’ or ‘non-inferential’, character of perceptual experience. On the other hand, the reasons which philosophers have offered to support one or other variation on this ontological theme (or which have led them to reject it in toto) have stemmed largely from perceptual epistemology, meaning theory, and reflection on the bearing of the sciences, in particular physics and psychology, on the problem of what there really is.

The simplest form of phenomenalism would be that ‘naive’ realism which holds that while the verb ‘to see’ has many uses—including perhaps, that in which Macbeth ‘saw’ a dagger which was not there—its primary use is one in which a person is said to see a physical object and to see that it is of a certain colour, e.g. green, where this implies that the physical object in question exists and that it is in fact green. According to ‘naive’ realism, seeing that a leaf is green is a special case of knowing that a leaf is green. Indeed, it is a special case of direct, i.e. non-inferential, knowing. One can infer from the fact that the leaf looks black when one is viewing it in a red light that the leaf is green. To do so, however, is not to see that the leaf is green. Nor does seeing that the leaf is green consist in inferring that it is green from the fact, say, that it looks green and one knows oneself to be viewing it in daylight. This is not to say that such an inference cannot occur, but simply that it is not an analysis of seeing that the leaf is green.

‘Naive’ realism, thus understood, is not committed to the paradoxical view that ‘O appears red to S’ has the force of ‘S knows (sees) that O is red’—thus implying that things are everything they seem to be—though the label ‘naive realism’ has often been used in this sense. To avoid confusion—and the paradox of calling anything as sophisticated as an ably defended philosophical position ‘naive’—I will use the phrase ‘direct realism’ instead. According to direct realism, then, seeing that a leaf is green is not a matter of seeing that it looks green and inferring from this, together with the character of the circumstances of perception, that it is green. Nor, the direct realist goes on to say, is seeing that the leaf is green a matter of (directly) seeing that a certain item,
not a physical object, is green and inferring (or taking for granted) that the item 'belongs to' a green leaf. My immediate purpose, however, is not to explore the merits of direct realism—though I shall be doing so shortly. For before this increasingly popular view can be evaluated, we must turn to the announced task of examining classical phenomenalism.

Direct realism and classical phenomenalism share what I have referred to as the 'phenomenalistic theme'. For both are inclined to say that physical objects and processes actually do have the various sorts of quality which they can also merely seem to have. The extent of this agreement, however, must not be exaggerated, since, of course, they give quite different accounts of what it is for a physical object or process to have (or, for that matter, to seem to have) a certain quality, e.g. red. The point is a familiar one. Direct realism takes as the basic grammar of colour predicates,

\[ \text{O is (was, will be) red at place } p \]

e.g. 'This apple is red on the surface (but white inside)'. It faces the problems of explaining statements of the form 'O looks (looked, will look) red at place p to S' in terms of this 'basic' statement form. Classical phenomenalism, on the other hand, introduces in one way or another a set of entities, not themselves physical objects, which are more 'basic' than physical objects and characterized by colour in a sense more basic than that in which physical objects are coloured.\(^1\) Let us call these entities, following Ayer, 'sense contents'. We can then say that according to the classical phenomenalist the fact that a physical object is red in the appropriate sense of 'red'—red\(_p\)—is constituted by the fact that the actual sense contents which would 'belong' to it if it were viewed in standard conditions are red in the appropriate sense of 'red'—red\(_e\). On the other hand, the object merely looks red\(_p\) to S if the red\(_e\) sense contents which S is directly seeing occur under relevantly abnormal circumstances of perception.

Another way of looking at the difference between the two positions is to note that according to classical phenomenalism, whenever an object looks \( \phi_v \) to someone, whether or not it is \( \phi_p \), a \( \phi_e \) sense content exists; also that all sense contents the direct seeing of which is ingredient in the seeing of a physical object whether as it is (say, red\(_p\)) or as it merely seems to be (say, black\(_p\)) are con-

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1. What, exactly, is meant by 'more basic than' in this connection is by no means clear. Certainly it is not claimed that expressions for these entities and the colours which characterize them are learned before expressions for physical objects and their colours. Whether or not the same is true of the corresponding 'concepts' or 'recognitional capacities' is less clear.
stituents of the object. Thus a black, sense content can be a constituent of an object which is red, through and through and through (e.g. a piece of sealing wax). By contrast, the direct realist typically holds that the only entities characterized by colour which are involved in the perception of physical objects are the physical objects themselves and their *publicly observable* parts and that only those colours belong to a physical object or one of its parts which it would be seen to have by a standard observer in standard conditions. He may be prepared to say, as we shall see, that for a physical object to *be* red is for its ‘surface’ to *be* red in a more basic sense (not, of course, red,), and that for a physical object to *look* red is for its ‘surface’ to *look* red. But, as is well known, he rejects the inference from ‘x looks φ’ to ‘(Ex) x is φ’ with its correlative distinction between ‘φr’ and ‘φp’.

I pointed out above that according to the direct realist (dit ‘naive’) the basic grammar of colour predicates is illustrated by

This apple is red on the surface, but white inside.

We can, indeed, say ‘the surface of the apple is red’; but if by ‘surface’ is meant, e.g. the skin, we would merely have another statement about the colour of a physical object. Perhaps we wish to say that the skin itself is red ‘on the surface’ (and pinkish underneath). Well and good; we can still handle this in terms of the proposed basic grammar. We can even introduce in terms of this form the idea that however thin a ‘skin’ we take, that ‘skin’ would be red. We must, however, beware of making the move (which has often been made) from

This apple is red at the surface because it has a skin which is red

to

This apple (or skin) is red at the surface because it has a ‘surface’ which is red

where the quoted ‘surface’ no longer means a physical object (e.g. a skin) nor sums up a reference to ‘no matter how thin a paring were taken’ but introduces an entity of a new category, a particular without thickness. If one makes this move, he is committing himself to the idea that

O is red at the surface

entails

O has x and x is red
where x is a 'surface' or 'expanse', and while this is an ontological thesis, it is
difficult, in view of the fact that we do not see inside things (most things, that
is), to avoid concluding that 'seeing' an apple consists in seeing the 'surface' of
the apple and 'believing in' the rest.

Notice that the 'colour surfaces' of the philosopher who makes the above
move from an initial position of direct realism are not yet the counterparts of
the sense contents of the classical phenomenalist. For these 'surfaces', like the
physical objects to which they belong, are public entities which presumably
can look other than they are. In other words, a direct realist could reasonably
be expected to apply to them the distinction between being of a certain colour
and seeming to be of that colour which was originally drawn in connection
with physical objects, and to do the same with the numberless colour surfaces
which would be exposed by slicing the apple in all possible ways. The direct
realist who has embarked on this path might use some such formula as 'the
object consists of actual and potential colour “surfaces”'—which has a verbal
similarity to the thesis of classical phenomenalism. Yet there would remain
one essential difference. The direct realist would insist that each 'surface' is a
public object which can look other than it is. Thus, a certain exposed 'surface'
could be red and yet, because of differing circumstances of perception, look
red to S, black to S', and purple to S". For classical phenomenalism, on the
other hand, there would be as many actual sense contents as there were expe-
riences of the exposed surface: a red one sensed by S, a black one sensed by S',
and a purple one sensed by S".

It is worth pausing to note that the direct realist can scarcely hold that the
remainder of the apple, over and above its exposed 'surface', consists of actual
'surfaces' waiting, so to speak, to be disclosed. After all, the apple can be sliced
in many ways, and the resulting 'surfaces' have claim to be 'the' constituents
of the apple. Surely the only plausible forms of the view that physical objects
qua coloured 'consist of actual colour through and through' are those which
either think of objects qua coloured as 'colour solids' and of 'surfaces' as de-
pendent coloured particulars which have a merely potential existence until
the object is 'sliced'; or conceive of colour points as basic realities, physical ob-
jects qua coloured being three-dimensional and 'colour surfaces' being two-
dimensional sets of colour points. Of these two views the second alone would
be fully consistent with the idea that 'O is red at the surface' is analysable into
'O has a "surface" which is red', for one who thinks of colour solids as the ba-
sic mode of being of colour is unlikely to make the mistake of thinking of the
surfaces of such solids as basic particulars. The idea, however, that our com-
mon sense conception of physical objects is analysable into that of a three-
dimensional (solid) continuum of colour points is a dubious one, to say the least. While if ‘surfaces’ are highly derived abstractions pertaining to the solids of which they are the ‘surfaces’, then so far from ‘O is red at the surface’ being explained in terms of ‘O has a “surface” which is red’ the converse would have to be true.

Not only is his move an ill-considered one, the direct realist who analyses the red apple into a red ‘surface’ the seeing of which involves no supplementation by ‘belief’, and a ‘core’ which is ‘believed in’, has stepped on the slippery slope which leads to classical phenomenalism. For if the ‘surface’ is one particular related to others, there is no contradiction in supposing it to exist without the others. Why, then, should not there be unattached colour ‘surfaces’? And if the object of pure-seeing (seeing which contains no ‘supplementing belief’) is always ‘surfaces’, what inductive reason could there be for supposing that there are ‘cores’ to which they belong? Is it, perhaps, a synthetic a priori truth that every ‘surface’ covers a ‘core’? At this point the existence of hallucinations and double vision is likely to suggest that it isn’t even true.

Here we must be careful. The direct realist who eschews ‘surfaces’ will simply say that there seemed to Macbeth to be a dagger in front of him or that it seems to Jones that there are two candles on the table. But one who is sliding down the slippery slope will be tempted to say that although there merely seemed to Macbeth to be a dagger, there really was a dagger-shaped ‘surface’ which Macbeth was pure-seeing, and that although it merely seems to Jones as if there were two candles on the table, there really are two curved white ‘surfaces’ which Jones is pure-seeing. He need not, of course, make this move. It is open to him to say that there merely seemed to Macbeth to be a dagger-shaped ‘surface’; that there merely seem to Jones to be two curved white ‘surfaces’. These would be the ‘existential seeming’ counterparts of the ‘qualitative seeming’ he has already extended to his ‘surfaces’. He could, in other words, stop his drift in the direction of classical phenomenalism by keeping his ‘surfaces’ what they were to begin with, namely publicly observable closed ‘surfaces’ only part of which can be seen at one time (without the use of mirrors) and which always contain a ‘core’ though one may be mistaken as to just what kind of ‘core’ it is. Where there is no ‘core’, he will insist, there merely seems to be a ‘surface’. ‘Surfaces’ as originally introduced include back ‘surfaces’ as well as front or facing ‘surfaces’. To limit ‘surfaces’ to facing ‘surfaces’ is to take a decisive step in the direction of equating ‘surface’ with ‘seen colour surface’, preparing the way for the identification of ‘surfaces’ with the sense contents of classical phenomenalism.
Perhaps the most important single outcome of the above discussion is the recognition that there are two radically different trains of thought which might lead one to distinguish between a 'basic' and a 'derivative' sense of 'seeing x', and, correspondingly, of 'seeing that x is φ'. One of them is rooted in a distinction between physical objects and their public 'surfaces'. It is, in essence, a misinterpretation of the fact that we can see a book without seeing its back cover or its insides, and amounts to a distinction between what we see without supplementation by belief or taking for granted (i.e. a public 'surface') and what we see in a sense (see₂) which consists of seeing in the former (see₁) a 'surface' and believing or taking it to belong to a physical object of a certain kind. It is worth insisting once again that this reification of surfaces into objects of perception is a mistake. It is simply not the case that we see 'surfaces' and believe in physical objects. Rather, what we see is the physical object, and if there is a sense in which 'strictly speaking' what we see of the physical object is that it is red on the facing part of its surface and rectangular on the facing side, nevertheless the physical object as having some colour all around (and all through) and some shape on the other side is the object seen, and not an entity called a 'surface'. This mistake, however, has been endemic in modern perception theory, and has led to a distinction between two senses of 'see' each with an appropriate kind of object, the 'see₁' and 'see₂' characterized above. Notice that according to the above train of thought, items which are seen₁ (public 'surfaces') as well as items which are seen₂ (physical objects) can seem to be other than they are.

On the second train of thought, what is basically-seen (seen₁) is a sense content, sense contents being private and at least as numerous as the facts of the form 'there seems to S to be a physical object in a certain place', with which they are supposed to have an intimate, but variously construed, connection. Here, also, seeing₂ a physical object is explicated in terms of seeing, an item—in this case a sense content—and 'believing' or 'taking' it to 'belong' in an appropriate sense to a physical object. If one confuses between these two ways of distinguishing (correctly or not) between a 'basic' and a 'derivative' sense of 'see', melting them into a single contrast between what is directly seen and what is seen but not directly seen, one is bound to be puzzled (as was, for example, Moore) as to whether or not what is directly seen can be the surface of a physical object, and as to whether or not what is directly seen can look other than it is.

Before embarking on the next stage of my argument, let me pause to emphasize that I do not intend to deny that when Macbeth saw (i.e. seemed to see, thought he saw) a dagger, there existed as an element in his visual experi-
ence something that might well be called a dagger-shaped colour expanse. Indeed, I think, (and shall argue) that *all things considered* it is as certain as anything can be that there was. The point I wish to stress, however, is that unless one locates correctly the idea that there are such 'expanses', one runs the risk of other mislocations and confusions, the net result being to lessen seriously the chances of getting out of the morass of traditional perception theory.

II. Sense Contents

My exploration of classical phenomenalism will be built around a study of the key terms in the slogan 'physical objects are patterns of actual and possible sense contents'. I shall begin by examining the ways in which philosophers have used the expression 'sense content' and related technical terms. I think that three major traditions can be distinguished which differ radically in spite of verbal similarities in their formulations. I shall begin by considering the approach which is in many respects the simplest of the three, a virtue which springs from its use of a thoroughly familiar model for its technical language. This model is ordinary perception talk. Such perception-theoretical expressions as 'directly see', 'directly hear', etc., are given a logic which parallels, in significant respects, the logic of the verbs 'to see', 'to hear', etc., as they occur in everyday perceptual discourse. Thus, to such statements as

Jones *saw* a book and *saw that* it was blue

there correspond such statements as

Jones *directly saw* a bulgy red expanse and *directly saw that* it was bulgy and red.

And just as *seeing that* is a specific form of *knowing that*, a variety of observational knowledge, of *observing* or *perceiving that*, so *directly seeing that* is construed as a variety of *directly observing* or *perceiving that*, and, hence, as a specific form of *directly knowing that*. Again, just as *seeing* *x* is a form of *perceiving* *x*, so *directly seeing* *x* is introduced as a specific form of *directly perceiving* *x*, or, as the term is introduced, *sensing* *x*.

The fact that 'sensing *x*' is introduced on the model of 'perceiving *x*' as ordinarily used brings with it a number of implicit commitments not all of which can be dodged without cutting the theory off from the roots of its meaning. One such commitment rests on the fact that in ordinary perceptual discourse the consequence from
Phenomenalism

Jones saw a book
to

There was a book (i.e. the one that Jones saw)
is valid. The theory, thus introduced, brings with it, therefore, a commitment to the consequence from

Jones sensed a red and triangular expanse
to

There was a red and triangular expanse (i.e. the one that Jones sensed).

Another commitment rests on the fact that in ordinary perceptual discourse the objects of perception typically exist before they are noticed and after we have turned away; in short they can and do exist unperceived. The theory, introduced on this model, brings with it the implication that the red and triangular item which Jones sensed is capable of existing unsensed. Other implications are that items which are sensed can appear to be other than they are, and that the fact that a sensed item is red and triangular can no more depend on the fact that someone senses that it is red and triangular, than the fact that a table is round and brown depends on the fact that someone perceives that it is round and brown.

But before further exploration of this first approach, it will be useful to describe the second approach, which has a quite different background and orientation. It is a sophisticated approach, and if the influence of ordinary perception talk is clearly there, it is often curiously indirect, mediated by the influence of a certain interpretation of conceptual thinking. Indeed, it would not be amiss to say that the fundamental model of this second approach is the framework of categories traditionally used to explain the status of the objects of thought. But the point of saying this will emerge as the view itself is described.

According to this second approach, then, the esse of the red and triangular item of which one has an 'idea' or 'impression' on a particular occasion is percipi. By this is meant, fundamentally, that the inference from

S has a sensation of a red and triangular expanse
to

There exists a red and triangular expanse
is illegitimate. Why it should be construed as invalid will be taken up shortly. For the moment it will be useful to set down beside it as a supposed parallel the invalidity of the inference from

S has an idea of (i.e. is thinking of) a golden mountain

to

There exists a golden mountain.

Notice that the thesis we are considering is to the effect that the esse of the red and triangular expanse of which one is having a sensation, qua being that of which one is having a sensation, is percipi. This must not be confused with the claim that the esse of colour expanses in general and without qualification is percipi. It is perfectly possible to claim that the esse of a triangular expanse of which one is having a sensation is percipi, while insisting that there are triangular expanses the esse of which is not percipi. Thus, Locke would surely have agreed with Berkeley that the esse of the (red) triangular expanse of which, on a particular occasion, he is having a perception is percipi, while denying that the esse of all triangular expanses is percipi. And a Locke who avoided bifurcating nature would say the same of red triangular expanses as well.

In this second framework, the general claim that the esse of all colour expanses is percipi might be formulated—somewhat anachronistically—as the claim that expressions such as ‘a red triangle’?—in the sense in which they refer to what is ‘immediately’ or ‘directly’ perceived—can properly occur only in the context

S has a sensation of . . .

thus, ‘S has a sensation of a red triangle’, or, as we shall see, in derivative contexts which are introduced in terms of it. This is a stronger thesis than the above, according to which ‘S has a sensation of a red triangle’ does not entail ‘There exists a red triangle’. For, with a qualification to be developed in a moment, it insists that the latter statement is ill-formed.

In the material mode of speech, this more radical thesis might be put by saying that there are no red triangles, only sensations of red triangles. It is easy to see, however, that if one were to introduce the term ‘sense content’ in such a way that

There exists a red and triangular sense content

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2. To avoid clumsiness, as well as to join up with customary philosophical usage, I shall abbreviate ‘a red and triangular expanse’ into ‘a red triangle’.
had the force of

Someone is having the sensation of a red triangle

then, of course, one could say

There are red and triangular sense contents

as well as

There are sensations of red triangles.

But, then, these would be simply two ways of saying the same thing, and
the inference from

S is having a sensation of a red triangle

to

There exists a red and triangular sense content

would be analytic.

We are now in a position to see that whereas a philosopher who takes the
first approach might claim that red triangles cannot exist unsensed, and put
this by saying that their esse is percipi, he would (in addition to doing violence
to his model) be making a quite different claim from the above. He would, in­
deed, be claiming that

(Ex) x is a red triangle

entails

(ES) S senses x

and this claim would be a puzzling one, for it is difficult to see why the exis­
tence of an item (a red triangle) should entail a relational fact about it which
is not included in its definition. The entailment would have to be synthetic,
and either a priori or inductive, and both alternatives are not without their
difficulties. However this may be, the point I wish to stress for the moment is
that on the second approach, the idea that the esse of colour expanses is percipi
is not the claim that ‘x is red’ entails ‘(ES) S has a sensation of x’. Rather it is
the claim that ‘x is red’—unless it has the sense of ‘x is a red sense content’—is
ill-formed. And however paradoxical it may seem to say that ‘red triangle’
does not properly occur apart from the context ‘sensation of (a red triangle)’
it must be remembered that the second approach does not have as its model
our ordinary perception talk. For it would indeed be paradoxical to make the
parallel claim with respect to 'green tree' and the context 'perception of (a
green tree)' as ordinarily used.

Another significant difference between the second and first approaches
concerns the fact that whereas on the first approach sensing $x$ has a close logi-
cal connection with sensing \emph{that-}$p$—a connection which parallels the connec-
tion in its model between statements of the form ‘S saw $x$’ (e.g. ‘Jones saw the

table’) and statements of the form ‘S saw that-$p$’ (e.g. ‘Jones saw that the table

was brown’)——the second approach does not even contain the form

$S$ has a sensation \emph{that} . . .

This difference accounts for the fact that proponents of the \emph{first} approach
characteristically speak of sensing as a form of \emph{knowing}, whereas those who
take the \emph{second} line characteristically deny that having a sensation is a form of

knowing. They grant, of course, that one may know that he is having a sensa-
tion of a red triangle. But this knowing is supervenient to the sensation,

whereas on the \emph{first} approach

$S$ senses that $x$ is red and triangular

is a special case of

$S$ knows that-$p$.

And just as in the model (ordinary perception talk)

Jones sees $x$

implies that Jones has singled out $x$ in terms of some \emph{fact} about it and is in a

position to ascertain by vision \emph{more facts} about it (see that $x$ is $f$, $g$, $h$, etc.), so

in the approach built on this model there is a commitment to regard the form

'sensing $x$' as logically tied to the form 'sensing that $x$ is $f$'.

Let us leave the first and second approaches for a moment, and turn our

attention to a third. A relative newcomer to the scene, it equates

$S$ has a sensation of a red triangle

with

There appears to $S$ to be a red and triangular physical object in a certain

place.

It follows immediately that it agrees with the second approach that

$S$ has a sensation of a red triangle
does not entail

A red triangle exists

for the 'appears-' statement to which it is equivalent in sense does not entail the latter. Once again, however, it must be noted that the category expression 'sense content' can be so introduced that

A red and triangular sense content exists

has the force of

(ES) (Ex) S has a sensation of x · and x is a red triangle

in which case

S has a sensation of a red triangle

does entail

A red and triangular sense content exists.

But the important thing about this third approach is that according to it, while the fact that there appears to me to be a red and triangular physical object over there is not itself a knowing, it is facts of this kind which are directly known in sense perception.3 Or, to put the same point in the language of sensation, what one directly knows in perception is that one is having sensations (e.g. of a red triangle).

Now facts of the form 'there appears to x to be a red and triangular physical object over there' entail (or, perhaps, presuppose) the existence of x and of there (and hence Space). Of these commitments the latter is, for our purposes, the more interesting, in as much as it implies that whereas there may merely appear to be a red and triangular object in a certain place, the place itself is not something which might merely appear to be. This commitment can, however, be eliminated by rephrasing the above form to read

There appears to x to be a Space (or, perhaps, a spatial system) at a certain place in which a red and triangular physical object is located.

3. Notice that whereas on the second approach having a sensation does not seem to imply (as it does on the first account) that the subject has any knowledge, this does not seem to be true of the account we are now exploring. For while the fact that there appears to someone to be a red and triangular physical object in a certain place is not itself a knowing, it does seem to imply that the person in question has some knowledge (knowledge that-p). But this point will be discussed shortly.
But if we leave aside this refinement, and others which might be introduced, the essence of the third account can be stated as the claim that to know that one is having a sensation of a red triangle is to know that there appears to one to be a red and triangular physical object at a certain place. And while there is nothing absurd in the idea that one could directly know such a fact, it does seem absurd to combine this third conception of sensation with the thesis of classical phenomenalism. For, one is inclined to expostulate, how can physical objects be patterns of actual and possible sense contents, if to say that a φ sense content exists is to say that there appears to someone to be a φ physical object somewhere?

It would seem clear that if classical phenomenalism is to get off the ground, it must give a different interpretation of sense contents than that offered by the third approach. It is surely reasonable to say that whenever there appears to S to be a red and triangular physical object somewhere, then it is also true that S has a sensation of a red triangle.

But if classical phenomenalism is to be a live option, this cannot be taken to express an identity of sense.

Now I want to suggest that once the above indented statement is taken as synthetic, it is true (though, as we shall see, its converse is not). Whether or not its truth gives support to phenomenalism will emerge in the course of the discussion. But if sensations are not 'existential appearings' what are they? Let me say at once that it is a form of the second approach which I wish to defend. I shall begin to sharpen distinctions by exploring the differences between approaches two and three. On neither approach is having a sensation a form of knowing. On the third approach, however, but not on the second as I propose to defend it, having a sensation is a form of thinking. For having it appear to one that there is a red and triangular physical object over there is a case of thinking in that broad sense in which wondering, wishing, resolving, etc., as well as judging, reasoning, etc. are modes of thought.

Thus, just as resolving to do A is a mode of thought, even though it is not a mere matter of thinking that something is the case, so its appearing to me that there is a red and triangular physical object over there is a form of thinking, even though it is not a mere matter of thinking that something is the case. Just as resolving to do A involves having the idea of oneself doing A, so the appearing requires that the person appeared to have the idea of there being a red and triangular physical object in that place. Clearly the resolving isn't simply the having the idea of oneself doing A. Equally clearly the appearing isn't simply a matter of having the idea that there is a real and triangular object in a certain
place. Being appeared to is a conceptual—though not a merely conceptual—state of affairs. One can't be appeared to unless one has the conceptual framework of physical objects in Space and Time.

Now on the second view, in the form in which I wish to defend it, having a sensation is not a conceptual fact. Nor does the ability to have sensations presuppose the possession of a conceptual framework. To bring out the force of this claim, let us consider the following objection. 'How', it might be asked, 'can

S has a sensation of a red triangle

fail to entail

There is a red triangle

unless having a sensation of a red triangle is a matter of there appearing to be (and hence, possibly, merely appearing to be) a red triangle?' To this challenge the answer, in general terms, is that if

S has a sensation of a red triangle

had the sense of

S is in that state which is brought about in normal circumstances by the action on the eyes of a red and triangular physical object

then

S has a sensation of a red triangle

would not entail

There is a red triangle

though it would, of course, entail that there are such things as red and triangular physical objects. This fact enables me to make the additional point that if the second approach to the status of sensations made the above move, it would be precluded from holding that the esse of red and triangular items generally is percipi, for the status of 'red triangle' in 'sensation of a red triangle'

4. Knowing that one has a sensation would, of course, be a conceptual fact. I would agree with Kant that one couldn't know that one has a sensation unless one had not only the conceptual framework of persons and sensations, but also that of physical objects in Space and Time. My grounds for saying this will come out later.
would be derivative from that of ‘red and triangular’ in the context of statements about physical objects.

Let us suppose, however, that instead of contextually defining ‘sensation of a red triangle’ in terms of ‘red and triangular physical object’ as suggested above, and by so doing explaining the failure of the existential inference, we simply said that it is an irreducible fact about sensations that the existential inference is invalid. Classically the ‘non-extensionality’ of the context ‘S has a sensation of (a red triangle)’, the irreducible impropriety of the ‘existential inference’, was interpreted on the model of the logical non-extensionality of the context ‘x is thinking of a red triangle’. With a proper commentary, one which discounts the conceptual character of the latter context while highlighting its non-extensionality, the model is a useful one. Unfortunately, in its classical use the conceptual character of the model was not discounted. Thus it is worth noting that Aristotle seems to have conceived of sensation as, for example, the awareness of this white thing as white (and as a thing) thus introducing into sensation the ‘form of judgment’ $S$ is $P$. To do this, of course, is to treat sensation as cognitive and conceptual, and to construe the difference between sense and intellect not as that between a ‘raw material’ which involves no consciousness of anything as thus and so on the one hand, and any consciousness of something as thus and so on the other, but rather between perceptual consciousness of individual things as determinately thus and so, and consciousness in terms of the general ($All$ $S$ is $P$), the generic ($S$ is an animal) and the abstract ($Triangularity$ is complex).

Whether or not the ‘irreducible non-extensionality’ form of the second approach is lured by its model into conceptualizing sensation, it is not precluded, as was the form discussed above which defined sensations of red triangles as states brought about in normal circumstances by the action of red and triangular physical objects on the eyes, from holding that the esse of all red triangles is percipi, and that except in derivative senses, thus as referring to the powers of physical objects to cause sensations of red triangles, ‘red triangle’ occurs properly only in the context ‘S has a sensation of (a red triangle)’ or contexts which unpack into this.

5. The inference, that is, from ‘S has a sensation of a red triangle’ to ‘(Ex) $x$ is red and triangular’.
6. It will be remembered that the inference from ‘S has a sensation of a red triangle’ to ‘(Ex) $x$ is a red and triangular sense content’ would be valid, but trifling.
7. Vide the Cartesian classification of sensations, feelings, images, etc., as cogitationes. The influence of this model can readily be traced through seventeenth and eighteenth century thought (and subsequently) in both ‘empiricism’ and ‘rationalism’. Kant’s rejection of this assimilation of the manifold of sense to the conceptual was part and parcel of his Copernican revolution.
Such a view would be closely related to the claim, so characteristic of modern philosophy, that the esse of colours is percipi. The distinction between 'primary' and 'secondary' qualities would turn on the idea that whereas colours have only 'being-for-sense', shapes, in addition to having 'being-for-sense' quasi immediately perceived would have unqualified being in the physical world as well.

But the idea that it is a basic or underviative fact about sensations that the 'existential inference' is invalid need not be combined with the idea that the esse of all colours or shapes is percipi. And if it is not, then we get a version of the second approach to sensation according to which the statement

Sensations of red triangles are those states of perceivers which are brought about in normal circumstances by the action of red and triangular physical objects on the eyes

would not be an analytic statement, resting on a contextual definition of 'sensation of a red triangle', but would either be a synthetic statement, or, if analytic, would be so by virtue of the definability of 'red and triangular physical object' as the sort of physical object which in normal circumstances causes perceivers to have sensations of red triangles.

A few paragraphs back I made the point that if sensation talk is logically—and not merely historically or genetically—built upon the framework of physical objects, then classical phenomenalism cannot get off the ground. This consideration eliminates, as materials for a phenomenalist construction, sense contents as construed by the third—or 'appearing'—approach to sensation. It also eliminates that form of the second approach which equates

S has a sensation of a red triangle

with

S is in that state which is brought about in normal circumstances, etc.

Of the alternatives we have examined, then, the phenomenalist is left with (a) the form of the second approach which rejects the above equation and takes

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8. The idea that colours have only being-for-sense was grounded in the idea that mechanics doesn't need to mention the colours of things in explaining why they move as they do. Berkeley saw that no object, pace Descartes, can have merely the metrical and structural properties studied by geometry. Either these non-geometrical qualities are such sense qualities as colour, or we must postulate qualities which we do not sense. Classical concept empiricisms precluded the latter alternative; and taking the former, Berkeley was committed to either abandoning the esse-percipi principle for colours, or extending it, as he did, to geometrical properties.
the category of sensation to be an *irreducible* category for which the inference from 'S has a sensation of a red triangle' to '(Ex) x is a red triangle' does not obtain; (b) the first approach, i.e. the sense datum theory.

According to the first approach, it will be remembered, there simply are such things as red and triangular expanses. They are 'directly perceived' and it is directly perceived *that* they are *thus-and-so*, i.e. red and triangular. (That it may take skill and a special 'set' to discriminate these expanses and the direct perception of them within the larger context of naive experience is granted.)

It has already been pointed out above that this approach, having as it does ordinary perception talk as its model, does not readily permit of an *esse est percipi* interpretation of the objects of direct perception. The closest approximation to such a principle it can accommodate would involve a distinction between

S directly sees x; S directly sees that-p

as *cognitive* facts and, to stipulate a new use for the verb 'to sense',

S senses x

which would stand for the fact that x stands in a certain *non-cognitive* relation to S. To say that the *esse* of sense contents is *being sensed* would be to say that sense contents occur only in this *non-cognitive* relation to S. Thus, it might be held that sense contents occur only in the context of a certain kind of cortical process, or only as elements of a system of sense contents, for example in what H. H. Price has called 'somatocentric bundles'. Notice that the claim that the *esse* of sense contents is in either of these ways *being sensed* is compatible with the idea that there are or might be sense contents which are not directly perceived or 'sensed' in a *cognitive* use of this term.

III. Possible Sense Contents

Let us grant, then, provisionally, that there is available for the phenomenalist an account of sense contents which does not rule out his enterprise *ab initio*. The next step, as specified by our programme, is to explore what might be meant by the phrase 'possible sense content'. Here the essential point can be made quite briefly, though its implications will require careful elaboration. A 'possible' sense content in the desired meaning of 'possible' would be more aptly referred to as a *conditional* or (to use Mill's term)* contingent* sense con-

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9. J. S. Mill, *An Examination of Sir William Hamilton's Philosophy*, 3rd ed., Appendix to Chapters 11 and 12. This appendix is such a clear formulation and defense of the phenomenalistic position that it fails by a hairsbreadth to refute it along the lines of the following argument.
Phenomenalism

The logical structure of this concept can best be brought by an analogy. Suppose we use the phrase 'conditional skid' to refer to a skid which would take place if a certain driver were to do something, e.g. swerve. A beginning driver is constantly aware of the 'existence' of conditional skids, collisions, etc., relatively few of which, fortunately, become actualized.

Notice that the contrasting term to 'possible skid' in the sense of *conditional* or *contingent skid* will be 'actual skid' not in the sense of actually existing skid, but simply as used to refer to skids in the ordinary sense of the term as contrasted with the conditional skids which are contextually defined in terms of them. Thus 'actual skid' differs from 'skid' only by calling attention to the contrast between skids and conditional skids.

Let us, therefore, explore what it would mean to say that at a certain time and place there was a conditional skid. Obviously a conditional skid does not exist merely by virtue of the fact that the statement 'such and such a motion of such and such a car on such and such a surface occurred at this time and place' is both logically and physically self-consistent. 'Conditional' involves a reference to existing circumstances, to alternative courses of action and to the outcome of these courses of action in the existing circumstances. The sense of 'possible' (= 'conditional') which we are exploring must also be carefully distinguished from the epistemic sense of 'possible' illustrated by

It is possible that it will rain tomorrow

This sense, like the one we are defining, is also not simply a matter of the logical and physical self-consistency of the statement 'It will rain tomorrow'. It is a cousin of 'probable' and the above statement has, roughly, the sense of

The presently available evidence is compatible with the idea that it will rain tomorrow.

The sense we have in mind, on the other hand, is, so to speak, ontological rather than epistemic. It says how things stand, not how we stand with respect to evidence about how things stand.

Consider the following statements, where \( x \) is a piece of salt:

\( x \) is soluble

It is possible that \( x \) will shortly dissolve

A possible dissolving of \( x \) exists.

The first statement says simply that if \( x \) were put in water it would dissolve. It is compatible with the idea that \( x \) is in an inaccessible place miles away from water. The second statement, which involves the epistemic sense of 'possible'
claims that the available evidence is compatible with the idea that x will shortly dissolve, and hence rules out the idea that the evidence points to the above description of the circumstances. The third statement—a contrived one, obviously, but so is the language of possible sense contents—claims that the circumstances of x are such as to leave open to us at least one course of action which would eventuate in the dissolving of x, and hence rules out the above description of the circumstances.

Notice that in statements of the kind we are considering agents and circumstances do not come into the picture in the same way. Roughly circumstances come in as actualities, agents come in as having powers. Thus, returning to the example of the skid, we have

The circumstances of the driver are such, and his capacities to move his limbs are such, that there is at least one move he can make which would result in a skid.

We are clearly in the region of difficult problems pertaining to the conceptual framework of conduct. What is an action? What is the scope of 'circumstances'? Could a person ever have done something other than what he actually did? etc., etc. Fortunately these problems are tangential to our investigation. For our purpose the significant feature of the above analysis of a 'possible' or 'conditional' skid is the implied reference to general principles (laws of nature) about what circumstances are consistent with the performance of what actions and about what would eventuate if the agent were to do an action of a certain kind which he is able to do in his circumstances. For, to bring the matter to a head, to say that E would eventuate if X, who is in circumstances C, were to do A, is to imply that it is a general truth that

When A is done in C, E eventuates

10. It is perhaps relevant to note that the idea that determinism is incompatible with 'could have done otherwise' rests on a confusion between

It could not have been the case that x did A at t

and

x was not able to do A at t.

The former has the sense of

That x did A at t is physically impossible relative to the antecedent state of the universe.

In the case of minimal actions (roughly, bodily actions under voluntary control) 'x was able to do A at t' means, roughly,

If x had willed at t to do A, then x would have done A

and neither it nor its denial makes reference to the antecedent state of the universe.
This general truth may be either 'strictly universal' or 'statistical'. The important thing is that it is factual, i.e. that it is not logically true. Thus, if the belief in such a generalization is to be a reasonable one, the reasons must be of an inductive character. This points to inductive arguments of the form

In observed cases of A being done in C, E has invariably (usually) eventuated

So, (in all probability) doing A in C invariably (usually) eventuates in E.

If we transfer these considerations from the case of the possible skid to the case of the possible sense content, a number of points can be made at once. To begin with, we must distinguish between

(a) the fact that the circumstances of perception are of kind C;
(b) the fact that the perceiver can do A; and
(c) the fact that doing A in C (usually) eventuates in having a sense content of the kind in question

Now we can readily imagine that someone who, though a friend of sensations and sense contents, is not engaged in defending classical phenomenalism might well illustrate these distinctions by putting himself in a position in which he can truthfully say

(a') I am standing, eyes closed, facing a fireplace in which a fire is burning.
(b') I am not blind and can open my eyes.
(c') Opening my eyes when facing a fire usually eventuates in my having toothy orange and yellow sense contents.

He might well say in these circumstances that a possible or conditional toothy orange and yellow sense content exists.

Suppose, however, that he undertakes to defend the idea that 'physical objects are patterns of actual and conditional sense contents' where 'conditional sense content' has the sense we have been explicating. What moves can he be expected to make? The simplest move would be to start with the above model for interpreting the existence of conditional sense contents, but claim that each of the three statements, (a'), (b'), and (c'), can be reformulated in terms of sense contents. But what sort of sense contents? Actual? Or both actual and conditional?¹¹ This question probes to the heart of the matter. For if the pre-

¹¹. See the opening paragraph of this section for an explication of the sense of 'actual' in the phrase 'actual (as contrasted with conditional) sense content'. I take it that it is obvious from what has been said that the existence of conditional entities presupposes the existence of actual entities.
suppositions of statements asserting the existence of conditional sense contents are such as are ordinarily formulated in terms of physical objects, persons, sense organs, etc., as above, then the claim that physical objects are patterns of actual and conditional sense contents implies that when reformulated in terms of sense contents, these presuppositions refer to conditional as well as actual sense contents which in their turn presuppose generalizations, and if these generalizations are also such as are ordinarily formulated in terms of physical objects, persons, sense organs, etc., then we are faced with the absurdity of generalizations which are such that their own truth is presupposed by the very meaning of their terms. This vicious circularity finds its partial expression in the fact that if the reformulation from the language of physical objects to the language of sense contents were carried on step by step it would not only be an endless regress, but would involve a circulo in definiendo, 'eye'; for example, being explicated in terms of 'eye'.

The assumption that the general truths presupposed by the existence of conditional sense data are such as are ordinarily formulated in terms of physical objects, eyes, etc., also has for a consequence that those generalizations could never be supported by instantial inductions the premises of which referred to actual sense data only. For since the terms of the supported generalizations refer to actual and conditional sense contents, the premises would have to do so as well. Indeed, the truth of the premises for such a generalization would presuppose the truth of such generalizations.

The preceding argument has been based on the assumption that the general truths presupposed by the existence of conditional sense contents are such as are formulated in ordinary language by statements relating sensations to the physical and physiological conditions of perception. This consideration suggests that all the classical phenomenalist need do by way of reply is to insist that there are independent\(^\text{12}\) general truths about sense contents the terms of which involve no reference to conditional sense contents, and which can therefore be supported by instantial inductive arguments the premises of which refer to actual sense contents only. To probe more deeply into classical phenomenalism we must, therefore, examine this new claim. Are there inductively establishable generalizations about the occurrence of sense contents which make no reference to either physical objects or conditional sense contents? Can we, in short, explain conditional sense contents in terms of actual sense contents?

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12. By calling them 'independent' I mean simply that they are not supposed to be the 'translated' counterparts of common sense or scientific propositions about perception.
Now there is no contradiction in the idea that there are (perhaps statistical) uniformities which specify the circumstances in which sense contents of a certain kind occur in terms of actual (i.e. not conditional) sense contents. Are there any such? Here we must be careful to distinguish between two radically different kinds of generalization. Let us call them *accidentally autobiographical* (A-generalizations) and *essentially autobiographical* (E-generalizations) respectively. If one fails to distinguish between them, the fact that there are true generalizations of one kind may deceive him into thinking that there are true generalizations of the other.

The difference between the two kinds of generalization is that between

Whenever (or for the most part whenever) I have such and such a pattern of sense contents, I have a sense content of the kind in question

(1) where it makes good sense to suppose that the generalization remains true if ‘anybody’ is substituted for ‘I’, and (2) statements of the same form where it is clear that the generalization would not remain true if the substitution were made. The former are A-generalizations; the latter E-generalizations.

Now it is reasonably clear that there have been uniformities in my immediate sense history. It is notorious that the antecedents must be very complex in order to discount the circumstances (e.g. blinks, getting one’s hand in the way, etc., etc.) which upset simple apple-carts. But if I am guarded enough in my conception of the antecedent, it will indeed have been followed (for the most part) by the consequent in my past experience. Before we ask ourselves whether such uniformities in a person’s sense history can serve as premises for an inductive argument, and whether, if they can, the evidenced generalizations can do the job required of them by the phenomenalist, let us imagine someone, Mr. Realist, to comment on the above as follows:

I grant that such past uniformities can be discovered, but surely I have come to discover them while conceiving of myself as a person, having a body, and living in an environment consisting of such and such physical objects (my house, this fireplace, the road out front, the wallpaper, etc.). I cannot even imagine what it would be like to discover them without operating within this conceptual framework.

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13. For present purposes it is unnecessary to break up the antecedents of these generalizations into a phenomenally characterized circumstance and a (supposed) phenomenal act of the perceiver (e.g. a setting oneself to open one’s eyes) which jointly eventuate in the sense content in question.
To which we can imagine someone, Mr. Phenomenalist, to reply:

I grant that in the 'context of discovery' your coming to notice these uniformities transpired within the framework you mention; but surely in the 'context of justification' these uniformities stand on their own feet as evidence for inductive generalizations about sense contents.

Mr. Realist is likely to retort:

Surely it is paradoxical to grant that the noticing of the uniformities occurs within the conceptual framework of persons and things in space and time, while insisting that this framework is one in which physical objects are patterns of actual and conditional sense contents. For, *ex hypothesi*, the notion of a conditional sense content is to be explicated in terms of the kind of uniformity which is discovered while using the framework.

and Mr. Phenomenalist to counter with:

The *historical* or *genetic* fact that a child is taught the conceptual framework of persons and things in space and time and later uses this framework in the discovery of the complex uniformities which are presupposed by conditional sense contents is not incompatible with the *logical* claim that this framework is reducible to the framework of sense contents, actual and conditional. Surely the intersubjective conceptual framework which is the common heritage of countless generations can embody a wisdom which the individual must scratch to acquire . . .

It is at this point that the distinction drawn above between the two kinds of generalization about actual sense contents becomes relevant. For if we ask, 'Are the uniformities we have found to obtain in our past experience such that if they could serve as inductive evidence for sense content generalizations, the conditional sense contents they would make available would serve the phenomenalist's purposes?' the answer must be a simple 'No'. For the uniformities each of us finds are not only autobiographical, they are expressions of the fact that each of us lives among just these individual physical objects. The uniformities I find are bound up with the fact that my environment has included wallpaper of such and such a pattern, a squeaky chair, this stone fireplace, etc., etc. My having had this pattern of sense contents has usually eventuated in my having had that sense content, because having this pattern of sense contents guarantees, for example, that I am awake, not drugged, wearing my glasses and looking at the fireplace. And a generalization which is an expression of the contingencies of my existence can scarcely be one of the generalizations
which, in the intersubjective conceptual heritage of the race, support the pheno-
menally conditional sense contents postulated by the phenomenalist. Thus,
even granting that there are inductively warranted generalizations which per-
mit the definition of phenomenally conditional sense contents, the latter will
be logically tied to the peculiarities of my environment in such a way that
they cannot be transferred to other things in other places.

What the phenomenalist obviously wants are generalizations which will
serve the same purpose as the familiar principles about what people generally
experience in various kinds of circumstances, but which will not lead to circu-
larly or vicious regress when put to phenomenalistic use. But these principles
are *impersonal*, applying, with qualifications which allow for individual, but
in principle repeatable, differences, to all perceivers. In other words, what the
phenomenalist wants are generalizations, in sense content terms, which are
*accidentally* autobiographical, generalizations in which the antecedent serves
to guarantee not that I am in the presence of this individual thing, e.g. my fire-
place, but rather that my circumstances of perception are of a certain *kind.*

What he wants for his antecedents are patterns of sense contents which are the
actual sense content counterparts of the kinds of perceptual circumstances
which common sense expresses in the language of persons, sense organs, and
physical things. The best he can get, however, are essentially autobiographical
uniformities in which the antecedents, however complex, are the actual sense
content counterparts of the presence to this perceiver of these individual
things.

In pinpointing our argument to the effect that the phenomenal uniformi-
ties we actually can put our fingers on cannot serve the phenomenalist’s pur-
pose, we have had to neglect equally telling considerations. Thus, we have per-
mitted the phenomenalist to refer to perceivers and their personal identity in
stating his phenomenal uniformities, without raising the objection that these
concepts are part and parcel of the framework of physical things in space and
time. We could do this because it is clear that the phenomenalist would sim-
ply retreat to the idea of an actual-phenomenal counterpart of a person, and
there would have been no point in criticizing this notion until we had ex-
plored his account of the framework of persons and physical things alike. We
are now in a position to press our offensive on a broader front. For if we are
correct in asserting that autobiographical generalizations of the sort which
could find support in the uniformities which have occurred in our sense his-
tories could not authorize the conditional sense contents required by the
phenomenalist’s analysis, we can now make the stronger point that these uni-
formities are precluded from serving as instantial evidence for these putative
autobiographical generalizations. For these uniformities come, so to speak, with dirty hands. Once it is granted that the framework of physical things is not reducible to that of actual and conditional sense contents, and, in effect, this is the burden of our argument to date, we see that the very selection of the complex patterns of actual sense contents in our past experiences which are to serve as the antecedents of the generalizations in question presuppose our common sense knowledge of ourselves as perceivers, of the specific physical environment in which we do our perceiving and of the general principles which correlate the occurrence of sensations with bodily and environmental conditions. We select those patterns which go with our being in a certain perceptual relation to a particular object of a certain quality, where we know that being in this relation to an object of that quality normally eventuates in our having the sense content referred to in the consequent. Thus, the very principles in terms of which the uniformities are selected carry with them the knowledge that these uniformities are dependent uniformities which will continue only as long as these particular objects constitute one's environment, and hence preclude the credibility of the generalization in sense content terms which abstract consideration might lead us to think of as instantially confirmed by the past uniformities.

The fact that the noticing of complex uniformities within the course of one's sense history presupposes the conceptual picture of oneself as a person having a body and living in a particular environment of physical things will turn out, at a later stage of the argument, to be but a special case of the logical dependence of the framework of private sense contents on the public, intersubjective, logical space of persons and physical things.

One final remark before closing this section. It should be noticed that although the uniformities we have been considering are biographical facts about individual persons, there is a sense in which they imply impersonal truths about all perceivers. For we know that if anybody with a similar perceptual equipment were placed in our environment, (roughly) the same uniformities would obtain in his immediate experience. As is made clear by the preceding argument, however, this knowledge is not an induction from uniformities found in our immediate experience, but simply one more consequence of our framework knowledge about persons, physical things, and sense perception.

IV. The New Phenomenalism

The view we have been discussing, and which we have called classical phenomenalism, has fallen from its high estate of a few short years ago. It has
been explicitly abandoned by many of its most ardent proponents, including most of those who brought it to its present state of intricate sophistication by their successive attempts to strengthen it against ever more probing criticism. And these defections have by no means been offset by new recruits. One might therefore be tempted to conclude that the above tortuous argument was a waste of time, and that the task of exploring the whys and wherefores of classical phenomenalism should be left to the historian. There might be something to this contention if philosophers had abandoned classical phenomenalism for the right reasons and with a clear understanding of its inadequacies. That this is not the case is the burden of the present section.

The point can best be introduced by noticing that the decline of the claim that the framework of physical objects is 'in principle' translatable into the framework of sense contents has been accompanied by the rise of the claim, often by the same philosophers, that even if such a translation is 'in principle' impossible, nevertheless there is a sense in which only sense contents really exist. This new phenomenalism can best be understood by comparing it with a form of realism which is almost its twin.

In the early years of the century, certain philosophers in the Lockean tradition were wont to argue that the framework of physical objects is analogous to a theory. Just as it is reasonable to suppose that there are molecules although we don't perceive them, because the hypothesis that there are such things enables us to explain why perceptible things (e.g. balloons) behave as they do, so, they argued, it is reasonable to suppose that physical objects exist although we do not directly perceive them, because the hypothesis that there are such things enables us to understand why our sense contents occur in the order in which they do.

This neo-Lockean approach responded to the venerable challenge, 'How can evidence in terms of sensations alone provide inductive reasons for supposing that sensations are caused by material things?' by granting that substantial induction cannot do the trick and appealing, instead, to that other mode of inductive argument, so central to modern physical science, the 'hypothetico-deductive method'. I shall shortly be arguing that this appeal was in principle misguided, and that, to put the matter in the form of a paradox, a necessary condition of the success of the appeal is the viability of classical phenomenalism; which would mean, of course, that it only seems to get off the ground.

But before making a frontal attack on Hypothetico-Deductive Realism, I shall first show how closely it is related to what I have called the New Phenomenalism. The point is a simple one. The New Phenomenalism can be regarded as that variant of Hypothetico-Deductive Realism which accepts the
claim, characteristic of positivistic philosophies of science, that theoretical entities are 'calculational devices' and do not exist in the full-blooded sense in which observables exist. Just as certain philosophers of science were prepared to say that

atoms, electrons, etc. don't really exist. Frameworks of so-called scientific objects are pieces of conceptual machinery which enable us to derive observational conclusions from observational premises. Frameworks of scientific objects cannot be translatable into the framework of observable fact, not, however, because they refer to unobservable entities, but because the very idea that they refer to anything is an illegitimate extension to theoretical terms of semantical distinctions appropriate to the language of observable fact

so there is a current tendency, particularly among ex-phenomenalists of the 'classical' variety to argue that

although the framework of physical objects is not translatable into the framework of sense contents, this is not because it refers to entities over and above sense contents. It is merely a conceptual device which enables us to find our way around in the domain of what we directly observe in a manner analogous to the role played by scientific objects with respect to the domain of the observable in a less stringent sense of this word.

It is my purpose to argue that this won't do, not however, on the ground that 'real existence' should not be denied to theoretical entities—though, indeed, I agree that it should not—but rather on the ground that the relation of the framework of physical objects to the framework of sense contents cannot be assimilated to that of a micro-theory to its observation base. To see that this is so requires no more than a bringing together of certain themes from the preceding section of the paper with the standard account of the relationship between theoretical and observational frameworks.

According to what I have referred to as the 'standard' account of the role of

14. See Chapter 4 ["The Language of Theories," Science, Perception and Reality].

15. This 'standard' account is the one associated with the names of N. Campbell, H. Reichenbach, R. Carnap, and many others. A clear presentation is contained in C. G. Hempel's monograph on 'Concept Formation in the Empirical Sciences', in the International Encyclopedia of Unified Science published by the University of Chicago Press.

16. For our purposes it will be sufficient to note certain formal features of the relationship. That the standard philosophical commentary on these formal features involves serious mistakes is the burden of Chapter 4 ["The Language of Theories," Science, Perception and Reality].
theories, a theoretical framework is an uninterpreted deductive system which is co-ordinated with a certain sector of the framework of observable things in such a way that to each inductively established generalization in this sector there corresponds a theorem in the calculus, and that to no theorem in the calculus does there correspond a disconfirmed inductive generalization in the observation framework. The co-ordination is done by 'correspondence rules' which are in certain respects analogous to definitions in that they correlate defined expressions in the theoretical framework (e.g. 'average momentum of a population of molecules') with empirical constructs in the framework of observation (e.g. 'pressure of a gas'). The correspondence rules provide only a partial co-ordination (a 'partial interpretation') in that they are not strong enough to permit the derivation of rules coordinating the primitive expressions of the theory (e.g. 'molecule') with observational counterparts.

There are many interesting facets to this account of the tie between theoretical and observational discourse. The one which is directly relevant to our argument, however, is expressed by that part of the above summary statement which has been put in italics, according to which the tie between theoretical and observational discourse is a matter of coordinating inductive generalizations in the latter with theorems in the former. The significance of this point should be obvious. To claim that the relationship between the framework of sense contents and that of physical objects can be construed on the above model is to commit oneself to the idea that there are inductively confirmable generalizations about sense contents which are 'in principle' capable of being formulated without the use of the language of physical things. If the argument of the preceding section was successful, this idea is a mistake.

A few paragraphs ago I made the point that the New Phenomenalism can be construed as that form of Hypothetico-Deductive Realism which denies that theoretical entities 'really exist'. To this it can now be added that the success of the New Phenomenalism presupposes the success of the old. Hence the New Phenomenalism is either mistaken or superfluous; and if it is mistaken neither Classical Phenomenalism nor Hypothetico-Deductive Realism is available as an alternative.

V. Direct Realism: Causal versus Epistemic Mediation

What, then, is the alternative? Surely to scrap the premises that led to this impasse by affirming that physical objects are really and directly perceived, and that there is no more basic form of (visual) knowledge than seeing physical
objects\(^\text{17}\) and seeing that they are, for example, red and triangular on this side. But to make this affirmation stick it is essential to realize that it does not commit one to the view that the only items in visual experience which can be directly known are physical matters of fact. Thus it is perfectly compatible with the idea that people can directly know that there seems to be a red and triangular physical object in a certain place, and, I shall argue, with the idea that people can directly know that they are having a certain visual impression (e.g. an impression of a red triangle).

What can properly be meant by speaking of a knowing as 'direct'? Clearly the use of the modifier is intended to imply that the knower has not inferred what he knows. But this is no mere psychological point. For one only knows what one has a right to think to be the case. Thus to say that someone directly knows that-\(p\) is to say that his right to the conviction that-\(p\) essentially involves the fact that the idea that-\(p\) occurred to the knower in a specific way. I shall call this kind of credibility 'trans-level credibility', and the inference schema

\[ X's \text{ thought that } -p \text{ occurred in manner } M \]

So, (probably) \(p\)

to which it refers, as trans-level inference. The problem of spelling out the principles of trans-level inference and explaining their authority is a difficult one which far transcends the scope of this chapter. The above remarks are at best an indication of the direction in which a discussion of the 'directness' of direct knowledge would move. I cannot pass up the opportunity, however, to emphasize once again the inextricable mutual involvement of trans-level and same-level inference in the justification of empirical statements.\(^\text{18}\)

The distinction within visual perception between what is directly known and what is not must be carefully drawn if one is not to backslide into representationalism. Thus the fact that there is a sense in which my knowledge that this is a book and in all probability red and rectangular on the other side is an inference from my perception that this physical object is red and rectangular on this side, must not be confused with the idea that my knowledge that this is a book, etc., is an inference from a 'direct seeing' of a red, flat, and rectangular 'surface'. We saw in Section I that the perception that this physical object is red, flat, and rectangular on this side is a direct but limited perception of a physical object. Its limitations are characteristic of most visual perception, though they are minimized in such cases as the perception of a cube of pink ice.

\(^{17}\) Including public flashes of light, and other publicly perceptible visual phenomena.

\(^{18}\) I discuss these matters at length in Chapter 5 [''Empiricism and the Philosophy of Mind,''' Science, Perception and Reality].
Again, the fact that my knowledge that I am having a sensation of a red triangle, or that there seems to me to be a red and triangular object over there, is more secure than my perception that this physical object is red and rectangular on this side does not impugn the latter's status as direct knowledge. For (a) the fact that on occasion I can infer that there is a physical object in front of me which is red and triangular on this side from the fact that there seems to me to be a physical object in front of me which is red and triangular on the facing side, or from the fact that I am having a sensation of a red triangle, by no means requires that such knowledge is always a conclusion from such premises; and (b) the frameworks of qualitative and existential appearings and of sense impressions are parasitical upon discourse concerning physical things. The latter is obvious in the case of the framework of appearings; it is equally true, if less obviously so, in the case of the framework of sense impressions, as I shall shortly attempt to show.

But before reviewing the status of sense impressions and sense contents in the light of the above remarks, let us remind ourselves that while the direct realist rejects the view we have called classical phenomenalism, he is nevertheless phenomenalistic in the broad sense characterized in the opening paragraphs of this paper. For it holds that although things frequently appear other than they are, they are as they appear to be under advantageous circumstances. Thus, to take an example we have already used, a pink ice cube is a directly perceived, public, cold, solid, smooth, pink physical object having the familiar thermal and mechanical causal properties of ice. In advantageous circumstances it

(a) appears to perceivers to be pink and cubical;

(b) is responsible for the fact that there appears to these perceivers to be a pink and cubical physical object in front of them;

(c) causes these perceivers to have impressions of a ‘pink cube’.

Again, the phenomenal world, thus conceived, of public physical objects,

19. Much can be learned about the grammar of sense impression talk by reflecting on the fact that we speak of Jones and Smith as having impressions of a red triangle. Could it be the same red triangle? The fact that it doesn’t make sense to say that their impressions are of the same red triangle (except as an odd way of saying that they are having impressions of the same kind) is partly responsible for the doctrine of essences. We shall see that the logical form of impressions is not, to use a crude schematism,

\[ xRy, \text{i.e. (impression) R (red triangle)} \]

but

\[ fx, \text{i.e. impression of the of-a-red-triangle kind.} \]
sounds, flashes, etc., exhibits a lawfulness which is formulable in phenomenal terms, i.e. in terms of the directly perceptible qualities and relations of these objects. (Generalizations which are in this sense phenomenal must not, of course, be confused with the generalizations in sense content terms which we found to be snares and delusions.) And since there are such generalizations, it is here, rather than at the level of sense contents, that we find a pou sto for the apparatus of hypothetico-deductive explanation, the introduction of theoretical entities to explain why observable (phenomenal) objects behave as they do.

At this point it is imperative that our direct realism be sufficiently critical. And to make it so requires three steps which will be seen to be closely related as the argument proceeds. The first step is the abandonment of the abstractive theory of concept formation in all its disguises. In its simplest form this theory tells us that we acquire our basic equipment of concepts from the direct perception of physical objects as determinately red, triangular, etc. Thus, we come to be able to think of an absent object as red by virtue of having directly perceived present objects as red. Having the concept of red presupposes the direct perception of one or more objects as red, the direct perception that they are red. This is at best a misleading half-truth. For while one does not have the concept of red until one has directly perceived something as red, to be red,20 the coming to see something as red is the culmination of a complicated process which is the slow building up of a multi-dimensional pattern of linguistic responses (by verbal expressions to things, by verbal expressions to verbal expressions, by meta-linguistic expressions to object-language expressions, etc.) the fruition of which as conceptual occurs when all these dimensions come into play in such direct perceptions as that this physical object (not that one) over here (not over there) is (rather than was) red (not orange, yellow, etc.). Thus, while the coming to be of a basic empirical concept coincides with the coming to be of a direct perception that something is the case, the abstractive theory, as Kant saw, makes the mistake of supposing that the logical space of the concept simply transfers itself from the objects of direct perception to the intellectual order, or better, is transferred by the mind as Jack Horner transferred the plum. The idea that this logical space is an evolutionary development, culturally inherited, is an adaptation rather than a rejection of Kant's contention that the forms of experience are a priori and innate.

20. A more careful formulation would be 'unless it has appeared that there is a red object in front of one': for a child could be taught the use of colour words by showing him objects of the wrong colours under conditions of abnormal illumination.
We are now able to see that his conception of the forms of experience was too narrow, and that non-formal patterns of inference are as essential to the conceptual order as the patterns explored by formal logic, Aristotelian or mathematical.

To nail down this point, we must take the second step towards an adequately critical direct realism. This step consists in the recognition that the direct perception of physical objects is mediated by the occurrence of sense impressions which latter are, in themselves, thoroughly non-cognitive. Step three: this mediation is causal rather than epistemic. Sense impressions do not mediate by virtue of being known. With these remarks, we pick up once again the discussion of sensations and sense contents which was interrupted that we might lay the ghost of classical phenomenalism.

VI. Sense Impressions Again

From the point of view we have now reached, sense impressions can, as a first approximation, be construed as entities postulated by a theory (at first common-sensical, then more and more refined) the aim of which is to explain such general truths as that when people look in mirrors in front of which there is a red object, there seems to them to be a red object 'behind the mirror', and other facts of this kind.

The significance of the phrase 'as a first approximation' will come out in a moment. But before I make any other moves, I must emphasize that the following argument presupposes that the 'calculational device' interpretation of theoretical entities is mistaken.21 As I see it, to have good reason for holding a theory is ipso facto to have good reason for holding that the entities postulated by the theory exist. Thus, when I say that, as a first approximation, sense impressions can be construed as theoretical entities, I am not implying that sense impressions do not 'really' exist. Indeed, I should argue, not only do they really exist (since the theory is a good one), we can directly know (not merely infer by using the theory) on particular occasions that we are having sense impressions of such and such kinds. This ability directly to know that one is having a sense impression of a certain kind, however, presupposes the inter-subjective logical space of sense impressions as an explanation of such perceptual phenomena as those referred to in the first paragraph of this section. This fact about the logic of sense impressions also finds its expression in the fact that the training of people to respond conceptually to states of them-

21. I argue this point in Chapter 4 ["The Language of Theories," Science, Perception and Reality].
selves which are not publicly observable requires that trainer and trainee alike (they may be identical) share both the intersubjective framework of public objects and the intersubjective theory of private episodes, autobiographical sentences of which (in the present tense) are to acquire the additional role of Konstatierungen by becoming symptoms (through conditioning) of inner episodes and recognized as such.\(^{22}\)

The crucial move in understanding the logic of sense impressions talk, however, is a reprise of a point made early in the chapter when, in the course of discussing the 'of-ness' of sense impressions, it was pointed out that if

(a) S has an impression of a red triangle

had the sense of

(b) S is in that state brought about in normal circumstances by the influence of red and triangular physical objects on the eyes

then the truth of (a) would not entail the existence of anything red and triangular.\(^{23}\) Even if, as will become clear, this account of the meaning of (a) won't do as it stands, the logical point that (a) has the form

\[
S \text{ is in a state of kind } \phi, \text{ i.e. } \phi \,(S)
\]

rather than

\[
(S) \, R \,(y)
\]

remains true when it has been corrected.

What, then, is a visual impression (e.g. of a red triangle), if it is not simply that state of a perceiver which is normally brought about by the influence of a red and triangular physical object on the eye? The answer is implicit in the above characterization of the framework of sense impressions as a 'theory' certain sentences of which have been enriched by a reporting role. For even

\(^{22}\) A fuller treatment of this topic would tie it in with the discussion of trans-level inference in the preceding section. Furthermore, since the 'theory' of sense-impressions presupposes not only the framework of public physical objects, but also that of perceivers and perceptual episodes, it is clear that an adequate account of the logical status of sense impressions and our knowledge of them presupposes an account of such private episodes as seeing or seeming to see that there is a red and triangular physical object in front of one. There is a discussion of these topics in Chapter 5 ['Empiricism and the Philosophy of Mind,' Science, Perception and Reality].

\(^{23}\) Though, as was also pointed out, if the locution 'a red and triangular sense content exists' were introduced as the equivalent of 'Someone has a sensation of a red triangle' then we could say that the truth of (a) entails the existence of something red and triangular. But what he would be saying would be exciting only if misunderstood.
where a theoretical state of affairs can be given a definite description (in Russell's sense) in terms of the phenomena it is introduced to explain, this definite description cannot exhaust the sense of the relevant theoretical expression. If it did, the theory would be no theory at all, but at most the claim that a theory can be found. Clearly what gives sense to the primitive expressions of a formalized theory are in the first place the postulates which connect theoretical states of affairs with one another and in the second place the correspondence rules which connect the deductive system with the phenomena to be explained. Thus, to grasp the sense of the phrase ‘impression of a red triangle’, we must see how this phrase functions in the ‘postulates’ of the framework of sense impressions.

Here we run up against the obvious fact that the framework of sense impressions is not a formalized theory. Its ‘postulates’ are formulated in terms of analogies the force and limitations of which must be tickled out piecemeal by exploring the logic of sample uses of the framework. Such an explanation, which, if it were not for the danger of terminological confusion, might be called the phenomenology of sense impressions, is an arduous and time-consuming task which lies beyond the scope of this discussion. In any case, my concern is with broad issues of philosophical strategy, and even a large-scale map of the jungle of perceptual epistemology can bring decisive clarification. I shall therefore limit myself to a summary statement of what I take to be the outcome of such an exploration.

One item stands out above all others. Analysis reveals a second way in which the sense of ‘impression of a red triangle’ is related to the sense of ‘red and triangular physical object’. The first has already been characterized by relating ‘S has an impression of a red triangle’ to ‘S is in that state, etc’. The second consists in the fact that visual impressions of red triangles are conceived as items which are analogous in certain respects to physical objects which are red and triangular on the facing side.24 Here it is essential to note that the analogy is between sense impressions and physical objects and not between sense impressions and perceptions of physical objects. Failure to appreciate this fact reinforces the temptation to construe impressions as cognitive and conceptual which arises from the misassimilation of the ‘of-ness’ of sensation to the ‘of-ness’ of thought.25 It is also essential to note that the analogy is a

24. That only one side is relevant to the analogy accounts for the fact that the red triangle of an impression of a red triangle has no back side.

25. The correct interpretation of the ‘of-ness’ of thought does resemble, in an important respect the ‘of-ness’ of sense impressions as analysed above. To over-simplify, a thought of p turns out to
trans-category analogy, for it is an analogy between a state and a physical thing. Failure to appreciate this fact reinforces the temptation to construe

\[ S \text{ has an impression of a red triangle} \]

as having the form \( 'xRy' \), where \( y \) is a strange kind of particular\textsuperscript{26} analogous in certain respects to the facing side of a red and triangular physical object.

With these warnings out of the way, we can turn our attention to the positive analogy. It has two parts:

(a) Impressions of red, blue, yellow, etc., triangles are implied to resemble-and-differ in a way which is formally analogous to that in which physical objects which are triangular and (red or blue or yellow, etc.) on the facing side resemble-and-differ; and similarly \textit{mutatis mutandis} in the case of other shapes.

(b) Impressions of red triangles, circles, squares, etc., are implied to resemble-and-differ in a way which is formally analogous to that in which physical objects which are red and (triangular or circular or square, etc.), on the facing side resemble-and-differ; and similarly \textit{mutatis mutandis} in the case of other colours.

In effect, these analogies have the force of postulates implicitly defining two families of predicates \( \phi_1 \ldots \phi_n \) and \( \psi_1 \ldots \psi_n \), applicable to sense impressions, one of which has a logical space analogous to that of colours, the other a logical space analogous to that of the spatial properties of physical things.

In addition to these analogies, the framework of sense impressions involves a causal hypothesis, the general character of which can be indicated by saying that the fact that blue objects appear in certain circumstances to be green, and that in certain circumstances there appear to be red and triangular objects in front of people when there is no object there at all, are explained by postulating that in these circumstances impressions are brought about of the kinds which are normally brought about by blue objects (in the first case) and by red and triangular objects (in the second).

It has sometimes been suggested that the basic mode of existence of colours is 'adverbial', i.e. that the basic mode of existence of blue is expressed by

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\textsuperscript{26} See the previous note but one.
the context ‘S senses bluely’. This suggestion is typically developed into the idea that physical blue is the power to cause normal perceivers to sense bluely. From our standpoint this suggestion, although it contains an important insight, puts the cart before the horse and misconstrues as basic a ‘colour’ concept which is derived by analogy from colour concepts pertaining to physical objects. The violence done by this construction is reflected both by its paradoxical ring, and the reluctance of its sponsors to extend the same interpretation of the way in which shapes are involved in the impressions of sense.

The sound core of the adverbial interpretation of perceptible qualities consists in the fact that verbal nouns relating to inner episodes presuppose the corresponding verbs. Thus:

x has a circular impression

(where ‘circular’, is the analogical predicate corresponding to ‘circular,’) would, from the standpoint of a rational reconstruction, presuppose the form

x is impressed circularly,

or, in the active voice,

x senses circularly,

Notice that these analogical adverbs are not adverbs of manner comparable to ‘quickly’, ‘clearly’ etc. They combine with ‘senses’ or ‘is impressed’ to constitute the verb, thus ‘senses-circularly,’ and ‘is-impressed-circularly.’

VII. Beyond Direct Realism: A Kantian Critique

The argument to date has been an attempt to spell out the relations which exist between the framework of sense impressions and the framework of physical objects, and by so doing to show exactly why neither classical phenomenalism nor hypothetico-deductive phenomenalism (let alone hypothetico-deductive realism) is a tenable position. But though the primary aim of the argument has been negative, it is clear that the argument up to this point can be more positively construed as a defense of direct realism, and therefore of a position which is phenomenalistic in that broad sense which amounts to the idea that things are, in standard circumstances, what they seem to be. If it were halted at this point, it would be inconsistent with its presuppositions.
A review of the later stages of the argument discloses that on two occasions essential use was made of premises concerning the status of theoretical frameworks. On the first occasion, the point was made that the correspondence rules of a theory correlate ‘theorems’ in the language of the theory with inductive generalizations in the framework of the phenomena the theory is designed to explain. Since the point to be made was simply that if there are no inductive generalizations in sense content terms, then the framework of physical objects cannot be construed as a theory analogous to the theories of microphysics, a closer scrutiny of just what it is that theories accomplish by correlating theorems with inductions and just what this correlation amounts to was not called for. On the second occasion, however, an additional theme was introduced, namely, the idea that to have good reasons for espousing a theory which postulates the existence of unobservable entities is to have good reason for saying that these entities really exist. And this idea, as we have noted, runs up against the objection that the entities postulated by theories of this type are and can be nothing but ‘computational devices’ for deriving observation framework conclusions from observation framework premises, and that even this role is ‘in principle’ dispensable. For, it is argued, every success achieved by the theory has the form

\[ T \rightarrow (O_i \supset O_j) \]

where ‘\( O_i \supset O_j \)’ is a generalization which relates two kinds of situation definable in the observation framework, and which, though derivable from the theory (including its correspondence rules), must in principle be capable of independent inductive confirmation or disconfirmation. Now, in my opinion, it must be admitted that if the observation framework permits the formulation of inductive generalizations—statistical or non-statistical—which hold within limits which can be accounted for in terms of such concepts as accuracy of measurement and experimental error, i.e. the variance of which is purely ‘epistemic’, then the positivistic interpretation of theoretical entities is inescapable. But must we grant the antecedent of this hypothetical? Of course, if we knew that the conceptual framework of perceptible physical objects in space and time had an absolute authenticity, i.e. that the physical objects of the perceptible macro-world as conceived by the direct realist really existed, we would know that any testable consequences to which a theory could call attention would be law-like uniformities, statistical or otherwise, in the behaviour of physical objects. But do we know that the physical objects of the perceptible world really exist? And is the behavior of macro-objects even sta-
tistically lawful in a way which leaves to theories only the job of deriving these laws from its postulates and correspondence rules? I argue in Chapter 4 ["The Language of Theories," Science, Perception and Reality] that the answer to both these questions is no, and that the negative answer to the second, together with the fact that theories explain why physical objects come as close as they do to conforming to statistical laws which have a purely ‘epistemic’ variance, is what justifies the negative answer to the first.

On the view I propose, the assertion that the micro-entities of physical theory really exist goes hand in hand with the assertion that the macro-entities of the perceptible world do not really exist. This position can be ruled out of court only by showing that the framework of perceptible physical objects in space and time has an authenticity which guarantees a parasitical status for the subtle and sophisticated framework of physical theory. I argue in Chapter 5 ["Empiricism and the Philosophy of Mind"] that the very conception of such absolute authenticity is a mistake. And if this contention is correct, the premise to the effect that theoretical entities really exist, which was used in explaining the status of sense impressions, requires us to go one step further, once its presuppositions are made explicit, and argue that the physical objects, the perception of which they causally (but not epistemically) mediate, are unreal. It commits us, in short, to the view that the perceptual world is phenomenal in something like the Kantian sense, the key difference being that the real or ‘noumenal’ world which supports the ‘world of appearances’ is not a metaphysical world of unknowable things in themselves, but simply the world as construed by scientific theory.

To say that there are no such things as the physical objects of the perceptible world is, of course, to make a point about the framework of physical objects, not in it. In this respect it differs from the assertion that there are no centaurs. As long as we are in the framework of physical objects, of course, we evaluate statements about particular physical objects and the perception of them in terms of the criteria provided by the framework. Direct Realism gives an excellent reconstruction of the ways in which physical things, perceivers, sense impressions, perceptions of physical objects, perceptions that they are thus and so, privileged access to one's own thoughts, feelings, and sense impressions, etc., etc., fit together to make one framework of entities and knowledge about these entities. To say that the framework is phenomenal in a quasi-Kantian sense, as I am doing, is to say that science is making available a more

27. I.e. that to have good reason for espousing a theory is ipso facto to have good reason for saying that the entities postulated by the theory really exist.
adequate framework of entities which *in principle*, at least, could serve all the functions, and, in particular, the perceptual functions of the framework we actually employ in everyday life. It is not, of course, to say that there is good reason to put it to this use. Indeed, there are sound methodological reasons for not teaching ourselves to respond to perceptual situations in terms of constructs in the language of theoretical physics. For while this could, in principle, be done, the scientific quest is not yet over, and even granting that the main outlines are blocked in, the framework of physical objects in space and time, shaped over millennia of social evolution, provides, when accompanied by correct philosophical commentary, a firm base of operations with which to correlate the developing structure of scientific theory, refusing to embrace any stage without reserve as our very way of perceiving the world, *not* because it wouldn't be a better way, but because the better is the enemy of the best.

VIII. Beyond Sense Impressions

Let me bring this already overloaded chapter to a close by discussing a topic which will bring all of its main themes into one focus. Suppose someone to raise the following objection, 'I can understand the temptation to say that there really are such things as clouds of electrons, etc., but why conclude from this that the physical objects of ordinary perceptual experience don't really exist? Why not simply say that we must revise our conception of them and recognize that while *as perceptible physical objects* they have the qualities of sense, *as systems of imperceptible particles* they have the properties ascribed to them by scientific theory?' I reply that this won't do at all. The attempt to melt together Eddington's two tables does violence to both and justice to neither. It requires one to say that one and the same thing is both the *single* logical subject of which an *undefined* descriptive predicate (e.g. 'red') is true, and a *set of logical subjects* none of which is truly characterized by this predicate, thus raising all the logical puzzles of 'emergence'. And if, as is often done, 'red' as predicatable of physical objects is tacitly shifted from the category of *primitive* descriptive predicates (where it properly belongs) to the category of *defined* descriptive predicates by being given the sense of 'power to cause normal observers to have impressions of red', then the very stuffing has been knocked out of the framework of physical objects, leaving not enough to permit the formulation of the very laws which are implied by the existence of these pow-

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28. That the form of predication is complex ('O is now red at place p') does not impugn the undefined or primitive character of 'red'.

ers, and which are presupposed by the micro-theory which might be invoked to explain them.

The point I have in mind is essentially the same as that on which our critique of classical phenomenalism was based. For to suppose that the qualities of physical things are powers is to overlook the fact that the occurring properties of physical objects are presupposed by the laws which authorize both the ascription to 'circumstances' of powers to manifest themselves in the sense contents of percipients (stressed by power phenomenalism) and the assertion of subjunctive conditionals about the sense contents which would eventuate for a perceiver were such and such (phenomenal) conditions to be satisfied (stressed by classical phenomenalism). As a matter of fact, the subjunctive conditionals of classical phenomenalism can be reformulated in the language of 'powers' as the 'passive' counterparts of the 'active' powers of 'circumstances' to manifest themselves in the immediate experience of perceivers, i.e. as the powers of perceivers to be appeared to by the 'circumstances'.

But if the alternative to saying that physical objects are both single logical subjects for primitive predicates like 'red' and sets of logical subjects for micro-theoretical predicates is the position, defended in the preceding section, that physical objects with their occurring qualities don't really exist, where do their qualities, e.g. colour, really exist? What really exists and has them, if physical objects do not? This question requires an answer in three stages.

The first stage consists in the statement that nothing really has them. The logic of the colour predicates of the framework of physical objects is such that only a physical object could have colour in this sense of the term, and ex hypothesi there are none.

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29. The concept of the 'circumstances of perception' is eviscerated by Power Phenomenalism. 'Circumstances' serve merely as the logical subjects of powers and have no other actuality.

30. Indeed, we saw, the 'uniformities' which do obtain presuppose not only the general principles which relate impressions of sense to impact of the physical environment on the sense organs, but also particular matters of fact concerning the physical environment and sensory equipment of the perceiver in question.

31. Needless to say, only a realistic interpretation of this manifesting is entitled to the ordinary connotation of the terms 'active' and 'passive' as expressing ways of looking at causal transactions. In power phenomenalism they are to be interpreted in terms of the difference between the active and passive voices of the verb 'C manifests itself to S in (sense content) x' (i.e. 'C manifests itself to S in x' and 'S is manifested to by C in x'). Since, as was pointed out above, the circumstance, C, is merely the logical subject of the 'active' powers, power phenomenalism is in immediate danger of collapsing into solipsism.

32. The existence of public flashes of red light complicates this point, but changes nothing of principle.
The second stage consists in pointing out that our argument has led us to the idea that while visual sense impressions are not, of course, coloured in the sense in which physical objects are coloured, they do have intrinsic properties which have a logical space formally similar to the logical space of the colours of physical things. And this suggests that in the scientific picture of the world the counterparts of the colours of the physical object framework will turn out to be aspects, in some sense, of the percipient organism.

The third stage begins with the reminder that when we abandon the framework of physical objects, our conception of a person cannot remain inviolate. In the pre-theoretical framework of physical objects, living things, and persons, the situation is much as presented in classical philosophy at its best. A person is a single logical subject, not a set of logical subjects. The Aristotelian includes the physical aspects of persons in this single logical subject by attributing only a 'virtual' existence to the physical parts of the body construed as logical subjects. This requires that statements about what the legs, hands, etc., of a person are doing be construed as expressible in terms which mention no logical subject other than the person as a whole. For the Aristotelian, the term 'leg' as referring to a part of a person, and the term 'leg' as referring to amputated limbs would have radically different logical grammars. The Platonist, for a number of reasons into which we need not enter, prefers a framework in which a person consists of a person and a body, thus permitting the latter to be an actual plurality of logical subjects.33 The Platonist hesitates as to whether sense impressions belong to the body or to the psyche. On the whole, he takes the latter course, though constantly tempted to divide the psyche into a team consisting of a rational, a sentient, and (perhaps) a vital psyche. The former course, as is implied by the preceding footnote, would require an Aristotelian approach to the sentient body.

The purpose of the above quasi-historical remarks is to remind the reader that in the common sense framework of persons and physical objects as we have described it, thoughts and sense impressions are adjectival to single logical subjects (as contrasted with sets of logical subjects). What are we to make of these single logical subjects in the light of scientific theory? And, in particular, is there any reason to suppose that in a new synthesis there will be logical

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33. A consistent development of this position requires that all the primitives of the conceptual framework to which the body belongs be such as to apply to the ultimate logical subjects of the frame. A set of logical subjects can have a property (e.g. juxtaposed) which the elements do not and cannot have, but the attribution of the property to the set must be explicable, in principle, in terms of predicates applicable to the members of the set. In other words, predicates applicable to the set cannot be primitive.
subjects for yet other analogues of the colour predicates (and geometrical predicates) of the framework of physical objects? If so, these counterparts twice removed would not be adverbial (as in the last analysis are the predicates of sense impressions)\(^{34}\) and we could say with good conscience that it is these logical subjects which 'really have the colours and shapes which physical objects seem to have'. But what a difference there would be between what we would mean by saying this, and the sense it has as usually advanced.

The basic roadblock is the unity of the person as the subject of conceptual activities. To do justice to this unity we must, it would seem, take it to be ultimate and irreducible, and, in effect, commit ourselves to either a Platonic or an Aristotelian ontology of the 'I'. That this is not so is the fruit of a line of thought initiated by Kant.\(^{35}\) As in the case of the status of the framework of physical objects, he sketched the form of a solution, giving it, however, a metaphysical content which must be replaced by scientific considerations. The heart of the matter is the fact that the irreducibility of the 'I' within the framework of first person discourse (and, indeed, of 'you' and 'he' as well) is compatible with the thesis that persons can (in principle) be exhaustively described in terms which involve no reference to such an irreducible logical subject. For the description will mention rather than use the framework to which these logical subjects belong. Kant saw that the transcendental unity of apperception is a form of experience rather than a disclosure of ultimate reality. If persons are 'really' multiplicities of logical subjects, then unless these multiplicities used the conceptual framework of persons there would be no persons. But the idea that persons 'really are' such multiplicities does not require that concepts pertaining to persons be analysable into concepts pertaining to sets of logical subjects. Persons may 'really be' bundles, but the concept of a person is not the concept of a bundle.

Suppose, then, we take a neo-Hobbesian line with respect to the conceptual activities of persons, and construe these activities on the model of the computational activities of an electronic robot, one, however, which is capable of responding to its own computational activities in the language of persons.\(^{36}\) What would be the implications of this line for the status of sense impressions? The immediate consequence is obvious. By 'identifying' in the

\(^{34}\) See the concluding paragraph of Section VI.

\(^{35}\) Cf. his treatment of the 'I think' in the Transcendental Deduction of the Categories and in the Paralogisms.

\(^{36}\) The philosophical problems involved in reconciling such a neo-Hobbesian line with the meaningfulness of human speech, with the Cartesian argument that thinking cannot be a physical process because we can clearly and distinctly understand what we mean by a thought without think-
above manner a person with a plurality of logical subjects, i.e. the constituent parts of the 'computer', we have undermined the logic of sense impressions. For whether these parts be construed as material particles or as nerve cells, the fact that they are a plurality precludes them from serving either jointly or separately as the subjects of the verb 'to sense red-triangle-wise'. We must therefore either introduce another logical subject (an immaterial substance) to do this work, or turn each sensing into a logical subject in its own right, i.e. introduce a new category of entity ('phantasms' or 'sensa' we might call them) with predicates the logical space of which is modelled on that of visual impressions, as the latter was modelled on that of coloured and shaped physical objects. To one who is confronted by these alternatives, the familiar facts about the dependence of sense impressions on brain processes are bound to point in the second direction, which is, in effect, that of the epiphenomenalism of Hobbes.

Epiphenomenalism is a far more radical dualism than the Cartesian dualism of matter and mind. For the latter is, at least in intention, a dualism of interacting substances. Phantasms, being the counterparts of the having of sense impressions, are fleeting particulars with none of the attributes of thinghood. They neither act nor are acted on, but simply occur. Their impotence is logical, rather than a puzzling empirical fact. They are the prototype of the 'events' into which modern philosophers have been prone to analyse things and the interactions of things. And if these analyses reflect a misunderstanding of the place of events in the framework of things, they have far more merit if they are viewed as attempts to construct a framework alternative to the framework of interacting things; alternative, yet, in the last analysis, equivalent, a different, but philosophically illuminating mode of representation. In such a framework, changing things become genidentical patterns of 'events' and those irreducible metrical Undinge, Space and Time, become abstract forms of order.

These considerations suggest that epiphenomenalism, with its disparate
categories of things (whether the material particles of Hobbes or the nerve cells of modern Neuro-physiology) and ‘phantasms’, is a half-way house; that a unified picture requires a translation of the physiological context in which epiphenomena occur into the framework of ‘events’. With this in mind, let us strain our feeling for conceptual possibilities to the limit by raising the question which more than any other must fascinate the philosopher who takes science seriously and has not succumbed to any of the reductive fallacies exposed in earlier sections of this chapter. How are we to conceive the relationship between the sequence of micro-physical ‘events’ which constitute a brain’s being in the physical state appropriate to the occurrence of a red and triangular sensum, and the sequence of ‘events’ which is the sensum? Or, to put it somewhat differently, what would be the relation between terms for sensa and the primitive vocabulary of a micro-physics capable of dealing with inorganic phenomena? To ask this question is to realize that it is a disguised demand for the general lines of a completed scientific theory of sentient organisms. The philosopher’s task can only be that of clearing the way by exposing mistaken presuppositions and metaphysical assumptions. I shall bring this chapter to a close by examining some relevant dogmas.

In the first place, there is the dogma that sensa cannot be in physical space. This conviction seems to be a misinterpretation of the logical truths that impressions are not in physical space (which is clear) and that the pseudo-objects ‘of’ which we ‘have’ impressions are not in physical space. But if sensa are in physical space—not, of course, the space of physical objects, but of their micro-theoretical counterparts—where are they? They are, we have seen, the counterparts of impressions, those states of perceivers which are postulated to explain certain familiar facts of perception and misperception. The obvious, but crude, answer, then, is that they are ‘in the brain’. A better answer is that they are where the relevant brain events are, for the phrase ‘in the brain’ has the logical grammar of ‘thing inside thing’, e.g. lump of sugar in a sugar bowl. If it is retorted that sensa do not seem to be where these brain events are, the answer is twofold: (a) Brain events are not perceived, so that nothing could seem to stand in any relation to them. (b) If there is a sense in which sensa can be said to ‘seem’ to be on the surfaces of physical things, it is a highly derived and metaphorical sense which must not be confused with that in which red objects can seem to be black, or there can seem to be a book behind the mirror. Strictly speaking, sensa do not seem. They belong to a highly sophisticated account of the world, and simply do not belong to the framework of perceptual consciousness. It is, indeed, true, from the standpoint of this sophisticated framework that when a person sees that a physical object is red and tri-
angular on the facing side, part of what is 'really' going on is that a red and triangular sensum exists where certain micro-theoretically construed cortical processes are going on; but it would be a mixing of frameworks to say, with some philosophers, that people 'mistake sensa for physical objects', or 'take sensa to be out there'. For these latter ways of putting it suggest that sensa belong to the conceptual framework in terms of which people experience the world.

Another familiar line of thought which requires close scrutiny is the move from the premise that where there is metrical form there must be content, to the conclusion that the 'qualities of sense' are the content of physical things. The premise is true. The conclusion is true of the physical world of common experience, though awkwardly formulated. But the argument is obviously invalid unless a premise is added to the effect that the 'qualities of sense' are the only contents available to embody metrical form. Certainly they are the only contents which play this role in the framework of perceptible things. But what of the framework of physical theory? Granted that the metrical properties of the framework of perceptible things are anchored in the qualities of touch and sight (a fact which Berkeley saw, but put to bad use), must the metrical forms of micro-physical process be similarly embodied in colours and other qualities of sense? Are nuclear events 'patterns of colour which obey the laws of micro-physics' as physical objects are colour solids which obey the laws of macro-physics? Must the colour predicates of the framework of perceptible things be tacitly present (though with modified grammar) as primitive predicates of the micro-theory of inorganic things? (We have granted that they will be present in the micro-theory of sentient organisms.) To ask these questions is to answer them in the negative. A primitive predicate in a theory is meaningful if it does its theoretical job; and to do this job, as we have seen, it does not have to stand for a perceptible feature of the world.

The phrase 'partial interpretation', often used in explaining the status of micro-theories, plays into the hands of 'structuralism' by suggesting that a theory falls short of complete meaningfulness to the extent that the correspondence rules fall short of enabling a complete translation of the theory into the observation framework with which it is correlated. The picture is that of a skeleton which has some flesh on its bones. A philosopher who subscribes to the realistic interpretation of theories, but is taken in by this picture, will be tempted to cover the bones which science leaves uncovered with the qualities of sense, supplementing the 'partial interpretation' of theoretical terms given by science with a metaphysical interpretation. But all such moves rest on a failure to distinguish between correspondence rules, which do not stipulate
identities of sense, and definitions, which do. Only if correspondence rules were (partial) definitions, would the meaning of theoretical terms be incomplete. It is perhaps not too misleading to say that the meaning of a theoretical term is its use; and that if there is a sense in which there are degrees of meaningfulness for theoretical terms, it is a matter of the extent to which the theory satisfies the criteria of a good theory, rather than of degrees of translatability into the observation language.

If these contentions are sound, then there is no \textit{a priori} reason to suppose that the content for the metrical forms of micro-physical process must be the sensa of sophisticated perception theory. And to say that this content must be \textit{like} sensa is \textit{false} if it means that they must be colours which nobody has seen, and \textit{trivial} if it simply means that they are like colours in being dimensions of content.

The third and final point I wish to make is that while it would be a category mistake to suppose that sensa can be construed as a dimension of neural process as long as one is working within a framework of thing-like particulars, whether nerve cells, organic compounds, or micro-physical particles, the same considerations do not rule out the possibility that when an ideally completed neuro-physiology interprets the physical concepts it employs in terms of the spatio-temporally punctiform particulars of an ideally completed micro-physics, sensa might fall into place as one qualitative dimension among others, one, however, which exists only in neuro-physiological contexts.\textsuperscript{38} Needless to say, the idea that colours might in this sense be a dimension of neural process must not be confused with the idea that nerves are coloured inside like chocolate candies.

To sum up this final section, the scientist, in his attempt to understand perception, must oscillate between the 'Aristotelian' framework in which his problems are initially posed, and in which one logical subject, the person, has sense impressions, and a working 'Hobbesian' framework in which, the unity of the person having been broken down into a plurality of logical subjects, the impressions become logical subjects in their own right, though of an attenuated and epiphenomenal kind. A unified picture of the perceiver can be found only at the beginning and at the end of the scientific quest. It has been my purpose to show that we are not without some glimpse of the end.

\textsuperscript{38} For an elaboration of this, and related, themes, see "The Concept of Emergence" by Paul Meehl and Wilfrid Sellars, in Volume 1 of \textit{Minnesota Studies in the Philosophy of Science}. 

CHAPTER THIRTEEN

The Identity Approach to the Mind-Body Problem

I

1. My primary aim in this paper is to set the stage for a discussion of some of the central themes in the so-called "identity approach" to the mind-body problem. I have particularly in mind Herbert Feigl's elaborate statement and defense of this approach in Volume 2 of the Minnesota Studies.¹ A secondary but more constructive purpose is to bring out some of the reasons which incline me to think that the theory is either very exciting but false, or true but relatively uninteresting.

2. I shall begin with a preliminary formulation of the identity theory which will highlight the topics I propose to discuss. Roughly put, the theory claims that what it calls "raw feels"—a technical expression which is intended to cover impressions and images pertaining to the external senses, as well as bodily sensations and feelings in a more usual sense—are identical with "brain states." I hasten to add that in speaking of "raw feels" as identical with "brain states" it does not simply mean that the very same logical subjects which have "raw feel" characteristics also have "brain state" characteristics, or that "raw feel" characteristics do not occur apart from "brain state" characteristics, but rather that the very characteristics themselves are identical. As Feigl puts it, "raw feel" universals are identical to certain "brain state" universals.

3. This rough-and-ready formulation of what is actually a highly sophisti-

cated philosophical thesis blocks out three topics with which any attempt to assess the identity theory must come to grips. Each of these topics turns out on the most cursory inspection to involve highly controversial issues which are at the very center of the philosophical stage. I shall not attempt to resolve all or, indeed, any of these issues. My aim will rather be to thread my way through them in such a way as to bring out the common ground I share with the identity theory and thus make possible a meaningful joining of issues.

4. It will not have passed unnoticed in this particular climate of opinion that the identity theory as formulated above is committed to the idea that it makes sense to speak of the identity of attributes or universals. This is the first of the thorny topics on which something must be said. This may be the place, but it is not the time to develop a theory of abstract entities. I shall simply mobilize some of the pre-analytic strands which any theory must take into account, and develop them in a way which gives the claim that "raw feel" universals are identical with certain "brain state" universals at least the appearance of being in keeping with the spirit of a scientifically oriented philosophy.

5. Universals, then, are a subset of abstract entities. Their distinctive feature is that they are expressed in language by predicates (e.g. 'red') or by predicative expressions (e.g. '3 feet long', 'between red and yellow in color'). I shall say that predicates (under which term I shall usually include predicative expressions) 'stand for' or 'express' universals. Universals may be referred to as well as stood for or expressed. But predicates do not refer to universals; indeed, they are not referring expressions at all. Among the expressions which refer to universals, a particularly important role is played by those which are formed from predicates or predicative expressions which stand for or express the universals to which reference is made; thus

- Triangularity
- Being three feet long
- Being between red and yellow in color

6. Universals are public objects. They are identities not only with respect to their many instances, but also with respect to the many minds which think in terms of them, and the many languages which give expression to them. This intersubjective and inter-linguistic character must be accounted for by any adequate theory of abstract entities. Equally important, and even more

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2. For the main outlines of the view I would defend, see "Abstract Entities" [reprinted as Chapter 7 of this volume], *Review of Metaphysics*, 17, 1963.
"platonistic" in tone is the distinction which must be drawn between those universals which have been "discovered" or come to be "known" and those which have not, and, within the sphere of the former between those which are effectively taken account of by our language, and those which are not. To unpack this a bit, I shall assume that a universal is "discovered" or comes to be "known" in the course of coming to know what use a predicate would have to have in order to stand for or express it. The universal is effectively taken account of by our language if our language contains a predicative expression which actually has this use.³

7. Notice, therefore, that while we can refer to unknown undiscovered universals (I drop the quotation marks from these metaphorically used terms) and to universals which are not effectively taken account of by our language, only universals which are effectively taken account of by our language can be referred to by referring expressions formed from predicates which stand for or express them. Thus, although we can refer to the as yet unknown property of persons which would explain their telekinetic powers (supposing them to have such), our language contains no predicate which stand for or expresses this property.

8. Against this background, the following criterion for the identity of two universals can be formulated:

Two universals are identical if, were a language to contain predicative expressions which stand for or express them, these predicative expressions would either independently have the same use, or one would be a definitional abbreviation of the other.

9. Clearly, much of the burden of the above distinctions is borne by the word 'use' and the phrase 'the same use'. My general strategy is clear. It is to connect "realistic" talk about universals with "nominalistic" talk about the use of expressions. My further strategy would be to connect talk about the use of expressions with talk about uniformities in the occurrence of linguistic inscriptions, and, therefore, to build a bridge to "behavioral criteria of synonymy." But that is strategy for a war and not a battle. Here I shall limit myself to pointing out that the patterns of use I have primarily in mind are (1) the reporting or observation pattern; (2) the consequence pattern. The latter is, roughly, the pattern which would find its explicit formulation in what Carnap

³ For the difference between these two stages compare a newly minted theory which is still but a candidate for espousal, with an accepted theory which is in day-to-day use.
calls 'transformation rules,' L-transformation rules, P-transformation rules and others. I add "and others" to Carnap's list because it is not clear that it is an exhaustive classification. Other possible candidates are "bridge laws" and "correspondence rules."

10. I pointed out that we can refer to universals for which we have no corresponding predicates. There are two types of case, one of which is for our purposes uninteresting. Thus there is a sense in which it can be said that there are color universals for which we have no predicates. We can imagine that we had no predicate for the color between red and yellow. It should be noticed, however, that while we might not have had the predicate 'orange' we might well have had the predicate expression 'between red and yellow in color.' And, indeed, for a person to be in the logical space of color is for him to know how to use predicate expressions adequate to the job of introducing predicates in the narrower sense, such as 'orange.'

11. The interpretation of statements asserting the identity of universals where the logical space of the universals is in this sense familiar is relatively straightforward. Consider, for example the schema:

The universal which . . . = the universal which . . .

We can distinguish two forms the descriptions might take: (a) Each locates a universal with respect to a point outside the logical space in which the universal is located. Thus,

The color of Plato's beard = the color of your father's moustache.

Here, if we have the relevant information we can go from one of the descriptions either directly to an illustrating name of the universal, i.e. a name formed appropriately from the predicative expression which stands for it, thus

The color of Plato's beard = orange (i.e. being orange)

or to a description which locates the universal with respect to the logical space to which it belongs, thus

The color of Plato's beard = the color between red and yellow

(b) This last identity statement gives us an example of the second form the descriptions might take. In it at least one of them locates a universal in a manner internal to the logical space to which it belongs. From an identity statement of this form, for example the above, we can move, given that we have a
predicate—say, ‘orange’—which expresses the universal located as between red and yellow, to an identity statement

The color of Plato's beard = orange

in which a description is identified with a nominatum as in the paradigm of identification,

The author of Waverley = Scott.

If we do not have such a predicate, we at least have the predicate expression 'between red and yellow in color,' and could introduce a predicate having the use of 'orange'—which does not mean that the latter would be "short for" 'between red and yellow in color' any more than proper names are "short for" their criteria.

12. But the important case of referring to universals for which we have no corresponding predicates is that in which we refer to what I have called unknown or undiscovered universals. Consider, thus,

(A) The property which an adequate theory of telekinesis—if we but had it—would ascribe to persons having this power.

Contrast this with

(B) The property which the theory (current) of chemical interactions assigns to catalysts.

In (B) it is implied that we have a predicate in our language which stands for or expresses the property in question. Not so in the case (A). There the property in question is referred to by relating it to properties expressed by the predicates of the science of telekinesis at its operational and instantially inductive level. The logical space of the latter empirical constructs is not that of the properties to which access would be gained by constructing a sound theory of telekinetic phenomena.

13. In general, then, the universals which it is the task of theoretical science to "discover" are referred to via a reference to the unborn or undeveloped theory, the predicates of which would stand for or express them, and, therefore, via a reference to the logical space of the empirical properties of the phenomena to be explained by the theory.

14. Yet the predicates of even sketchily developed theories express or stand for universals. Here it is essential to note that as a theory develops, its predicates cannot, in general, be said to continue to stand for or express the same universals. This brings me to a fundamental point which adds an element of
symmetry to our previous classification of universals. To the classification (which highlights the temporal dimension)

(1) Not yet discovered

(2) Discovered or known:
   (a) Not yet effectively taken account of by our language
   (b) Effectively taken account of by our language

we must now add a third heading under (2)

(3) No longer effectively taken account of by our language

and a new major category:

(3) Lost, or, so to speak, dis-discovered universals

15. These considerations strongly suggest that the objective or “platonistic” status I am ascribing to universals might be construed in a Peircean way as relative to the continuing scientific community. Thus, if on hearing the above proliferation of universals, one is tempted to expostulate, ‘which of these universals really exist!’ I would reply by recalling Peirce’s characterization of a true proposition as one that the continuing scientific community would ultimately accept—and then changing the subject.

II

16. Now if the claims of the identity theory are placed in the framework of the above distinctions, it is clear that the theory can scarcely intend to assert the identity of “raw feel” universals with certain “brain state” universals which are effectively taken account of by existing language. For on the above analysis, this would involve that some “brain state” predicates currently have the same use as “raw feel” predicates. And this is obviously not the case. The claim must, surely, rather be that among the universals which would find expression in the predicates of a to be developed “brain state” theory, some are identical with “raw feel” universals.

17. At first sight, this is hardly much better. For, it might be urged, how could any predicates in a “brain state” theory have the same use as “raw feel” predicates? After all, the latter doesn’t even presuppose the knowledge that there are such things as brains! But before we take up this and other objections, we must explore the notion of a “raw feel” universal.
18. The "rawness" of "raw-feels" is their non-conceptual character. The sense in which "raw feels" (e.g., a feeling of warmth) are "of something" is not to be assimilated to the intentionality of thoughts. To say that they are non-conceptual is, of course, not to deny that they can be referred to and characterized by the use of concepts, or even directly responded to by concepts in direct self-knowledge. 'Non-conceptual' does not mean non-conceptualized.

19. The word "feel" in the expression "raw feel" is an extension to all sense modalities of a use of the word "feel" which has its ultimate source in such contexts as,

(1) He felt the hair on the back of his neck bristle.

In this primary context, 'to feel' is clearly a cousin of 'to see', and feeling in this sense can properly by classified as a mode of perception. Notice that feeling in this sense is conceptual: a propositional attitude. One would, perhaps, be more comfortable about this remark if the example had been,

(2) He felt that the hair on the back of his neck was bristling.

The relation between (1) and (2) is an interesting and important topic in the philosophy of perception. I shall simply assume on the present occasion that (1) is a stronger form of (2) which emphasizes the non-inferential character of experience.

20. Notice that to ascribe a perceptual propositional attitude to a person in the form,

(3) He perceived that-p

is to endorse the proposition involved in the attitude. We can, however, ascribe the same propositional attitude in a non-endorsing way by using such locutions as

(4) He thought he perceived that-p

(5) It seemed to him that he perceived that-p

(6) It appeared to him that-p

(7) He was under the (perceptual) impression that-p

None of these is completely neutral with respect to endorsement. They all tend to imply the falsity of the proposition involved in the attitude, and have other overtones which are irrelevant to my purpose. I shall make a technical use of
(7) in which it will imply neither the truth nor falsity of the proposition involved in the perceptual propositional attitude. In this usage the statements

(8) He was under the tactual impression that the hair at the back of his neck was bristling

(9) He was under the visual impression that there was a red and triangular physical object in front of him

ascribe perceptual propositional attitudes while making no commitment concerning the truth or falsity of the proposition involved in the attitude.

21. Now a classical theme in the philosophy of perception is that the truth of statements such as (9) implies the occurrence of something which is variously called a ‘(visual) sensation’ (a sensation of a red triangle) or a ‘(visual) impression’ (an impression of a red triangle), where this occurrence is understood to be a nonconceptual episode which somehow has the perceptible qualities which the corresponding conceptual episode, i.e. the propositional attitude, takes to be exemplified in the world of perceptible things. Thus the fact that a person is under the visual impression that a certain stick in water is bent is taken to imply that he is having a visual impression of a bent object. I shall assume that this is true. This does not mean that I accept the “sense datum inference,” for it should not be assumed that to have visual impression is to sense a sense datum as these terms are used in classical sense-datum theories.

22. Notice that visual impressions are classified by the use of the word “of” followed by the phrase which would appear in the statement of the propositional attitudes which imply their occurrence, thus

Impression of a red and triangular object in front of one

corresponds to

Impression that there is a red and triangular object in front of one.

The idea that there are such non-conceptual episodes was put to use in explaining, for example, how a straight stick (in water) can look bent, and a red object (in green light) look black. It was postulated that the propositional attitude expressed by

He is under the visual impression that there is a black object in a certain place

involves, among other things, (a) the occurrence of an impression of a black object, (b) the occurrence of the thought that there is a black object in a cer-
tain place, the thought (or perceptual judgment, as it was called) being evoked
by the impression. Roughly speaking, impressions that were construed as con-
ceptual responses to impressions of. To this was added the idea that while in
standard conditions viewing red objects results in an impression of a red ob-
ject, and viewing bent objects results in an impression of a bent object, in
non-standard conditions (e.g., views of a straight stick in water) the viewing
of an object that is not bent may result in an impression of a bent object, and
the viewing of an object that is not red may result in an impression of a red
object.

23. Although the examples I have been using come from vision, exactly
the same distinctions were in the case of feeling. Here 'feeling of...' are the
counterparts of 'visual impression of...'. We can therefore understand the
philosophical use of the expression "raw feel" as an extension to all modes of
perception of an expression which stands for the non-conceptual kind of epi-
sode which explains why a person can be under the impression that he is be-
ing pricked by something sharp when in fact, this is not the case.

24. I pointed out in 22 that sense impressions or raw feels are classified ac-
cording to the perceptible qualities which are ascribed to some parts of the
world by the perceptual propositional attitudes which they evoke, and which
characterize their causes. As I see it, the "of" phrases in

Sense impression of a red triangle in front of one
Raw feel of being pricked on the hand by a sharp object

are adjectives which, in addition to classifying raw feels extrinsically by their
causes and effects, also classify them with reference to their intrinsic char-
acter.

25. How are we to understand the intrinsic character of raw feels? Obvi-
ously the sense impression of red triangle is not, in the literal sense, either red
or triangular; nor is the raw feel of being pricked on the hand by a sharp ob-
ject. The most that can be said is that the families of qualities and relations
which intrinsically characterize raw feels or sense impressions correspond in a
certain way to the families of qualities and relations which characterize per-
ceptible objects and processes. I shall return to this point later. For the mo-

4. The scholastics took the different, and ultimately unsatisfactory tack of holding that the char-
acteristics are the same, but that the mode of exemplification is different. For an analysis of the
Thomist-Aristotelian approach to this question see my "Being and Being Known" [reprinted as
Chapter 8 of this volume], Proceedings of the American Catholic Philosophical Association, 1960, re-
ment I shall simply say that the logical space of the qualities and relations which characterize raw feels is, in certain respects, isomorphic with the logical space of perceptible qualities and relations of physical objects and processes. It would be useful, therefore, to introduce predicates for raw feels which are formed from predicates which stand for perceptible qualities and relations by adding the subscript ‘s’. Thus a triangular, impression or raw feel would be one which in standard conditions is brought about by viewing a triangular object and which, *ceteris paribus*, results in being under the impression that a triangular object is before one.5

26. It will have been noticed that even my characterization of the intrinsic properties of raw feels has been, so to speak, extrinsic. For I characterized them in terms of their correspondence with the perceptible qualities and relations of physical objects and processes. It might be inferred from this that I think of our access to the logical space of impressions as indirect, as based upon a prior access to the logical space of perceptible qualities and relations. I shall postpone taking a stand on my own on this matter, and limit myself for the moment to pointing out that the type of identity theory I am examining rejects this suggestion and insists that our access to the logical space of sense impressions or raw feels is direct and, indeed, is the presupposition of our access to the logical space of physical objects and processes. It insists, indeed, that the qualities and relations of “raw feels” are “directly given” and that physical objects and their properties are “existential hypotheses” whose reality is guaranteed by the fine job they do of saving the appearances.

27. Finally a categorial point about raw feels which is implicit in the preceding remarks. The are construed as “pure episodes” and are contrasted with dispositions and mongrel categorical-hypothetical states. It should be noticed that the fact that one has in some sense “privileged access” to a state of oneself doesn’t by itself imply that this state is a pure episode. Children can be trained to respond linguistically to short-term dispositional states of their organism, e.g. anger. Nor, as this point in turn suggests, need “privileged access” be construed in terms of classical theories of the given. The identity theory we are examining, however, is committed to the idea that raw feels are pure episodes and that raw feel facts are “given” in something like the classical sense.

5. For an elaboration and defense of these distinctions, see Chapter 2 [reprinted as Chapter 8 of this volume], sections 22ff., and Chapter 3 [reprinted as Chapter 12 of this volume], section VI of *Science, Perception and Reality*; also “Reply to Aune” in a forthcoming volume of essays edited by Hector Castaneda to be published by the Wayne State University Press [*Intentionality, Minds and Perception*, 1967, pp. 286–300].
IV

28. Before taking the bull by the horns, a word or two about the other terms of the identities envisaged by the identity theory. It will be remembered that according to the theory, raw feel universals are identical with certain brain state universals. Which brain state universals? Indeed, which brains?

29. For there is, in the first place, the brain as an empirical object to which empirical properties definable in observation terms can be ascribed. Can raw feel universals be identical with universals which characterize the empirical brain? They cannot, of course, be identical with any universals expressed by empirical predicates defined in terms of the publicly observable features of the brain, for raw feels are pure episodes which are public only in the sense that others can infer that which is given to oneself. (What authorizes the inference is, of course, a classic question.) Nevertheless it is important to see that there is a sense in which it is perfectly legitimate to suppose that raw feels are identical with certain states of the empirical brain. This, for the simple reason that it makes sense to suppose that they are states of the empirical brain. Imagine a person who has been defleshed and deboned, but whose nervous system is alive, intact and in functioning order. Imagine its sensory nerves hooked up with input devices and its motor nerves hooked up with an electronic system which enables it to communicate. Without expanding on this familiar piece of science fiction, let me simply suggest that we think of what we ordinarily call a person as a nervous system clothed in flesh and bones. In view of what we know it makes perfectly good sense to introduce the term "core person" for the empirical nervous system and to introduce a way of talking according to which raw feels and, for that matter, thoughts are in the first instance states of "core persons" and only derivatively of the clothed person.

30. I submit that in this sense most scientifically oriented philosophers think of raw feels and thoughts as brain states. But while the thesis that raw feel universals are, in this sense, brain state universals and therefore trivially identical with certain brain state universals is almost undoubtedly true, it is relatively non-controversial and unexciting. If the issue is put in these large scale terms, only those who demand really distinct logical subjects for the sense impressions and the material states of persons—thus Cartesian dualists—would demur. Aristotelians and Strawsonians could take it in their stride.

6. Compare the trivial move from 'shapes are properties of physical objects' to 'shapes are identical with certain properties of physical objects.'
31. For the claim that raw feels (or even thoughts) are in this sense identical with brain states simply transfers the episodes and dispositions initially attributed to persons to the central nervous system, now conceived of as a core person. All of the important philosophical problems pertaining to the relation of mental states remain.

32. These considerations give proper perspective to the fact that according to the identity theory in the more challenging form in which it is currently defended, the brain state universals which are identical with raw feel universals, are universals which would be expressed by certain predicates of an *as yet to be elaborated theory* of brain activity. Thus, instead of making the relatively unexciting claim that raw feel universals are identical with certain brain state universals, where this reduces to the claim that raw feel universals *are* brain state universals (i.e. ascribable to brains as core persons) the identity theory in question claims that raw feel universals are not only brain state universals in this unexciting sense, but are identical with certain complex micro-physical universals to be ‘discovered’ in the course of developing a scientific theory of brains.

33. Thus the question arises “Is it reasonable to suppose that the scientific study of brains will lead to the discovery of brain state universals which are identical with raw feel universals?” And to this question we are strongly tempted to answer ‘No!!’ For interpreted along the lines sketched at the beginning of this paper it becomes, “Would an adequate theory of brains contain predicates which had the same use as raw feel predicates?” And the idea that this might be so has a most implausible ring. It will be useful to formulate some of the objections which this idea tends to arouse.

34. The first is that since predicates which would stand for the relevant brain states universals are *ex hypothesi theoretical* predicates, they would not have the avowal or reporting use which is characteristic of some, if not all raw feel predicates. To this objection the identity theorist replies that once the theory was developed, people could be trained to respond to the brain states in question with the predicates of the theory—which would then gain an avowal use.

35. The second objection is that raw feel predicates do not have a theoretical use, or, to put it in the material mode, raw feels are not theoretical entities. Here the identity theorist might reply that the *other-ascriptive* use of raw feel predicates is, in effect, a theoretical use. The force of this reply will be explored subsequently.

36. The third objection is the challenge “How can a predicate (e.g., ‘having an impression of a red and triangular surface’) which applies to a single logi-
The fourth objection, however, is the most familiar and goes to the heart of the matter. "How," it asks, "can a property which is in the logical space of neurophysiological states be identical with a property which is not?" Otherwise put, "How could a predicate defined in terms of neurophysiological primitives have the same use as (be synonymous with) a predicate which is not?" To this question the inevitable answer is "It could not."

38. It might seem, as it has to many, that this is the end of the matter. The identity theory is absurd, and that is all there is to it. And, indeed, the identity theorist as we have so far described it has no obvious defense against this standard objection. Yet it is not difficult to discern the fundamental strategy of the identity theorist in the face of this objection. It consists in an appeal to a supposed analogy between the speculatively entertained identity of raw feel universals with brain state universals, and the once speculative but now established identity of chemical universals with certain microphysical universals. The story is a familiar one, and I shall not bore you with the details.\(^7\) The relevant points are quickly made. Suppose \(U_c\) is a certain universal which the predicate 'P' in the chemical theory current at time \(T\) stands for. And suppose that this chemical theory has a degree of sophistication essentially that of chemical theory today, but that micro-physics current at \(T\) is rudimentary. An 'identity theorist' puts forward at \(T\) the thesis that chemical universals will turn out to be identical with certain to-be-discovered micro-physical universals.

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\(^7\) See my paper on "Theoretical Explanation" in B. Baumrin, ed., *Philosophy of Science, The Delaware Seminar*, vol. 2 (New York, 1963); also "Scientific Realism or Irenic Instrumentalism" in the present volume (*Philosophical Perspectives* (Springfield, Ill.: Charles C. Thomas, 1967)), part 7.
sals i.e. universals which would be expressed by the predicates of a more sophisticated micro-physics. An opponent raises the following objections:

(1) How can micro-physical predicates which are not tied to Chem Lab observables have the same use as chemical predicates which are?

The 'identity theorist' replies that once the theory is developed, these defined micro-physical predicates are given this new use, and therefore acquire a chemical-theoretical role.

(2) How can predicates of current chemical theory, which have no definitional tie to micro-physical primitives have the same use as any predicates of future micro-physical theory which will have such a tie?

This objection corresponds to the fourth and most telling objection to the mind-body identity theorist. And once again the objection is, in a certain sense, decisive. But there the 'identity theorist' has available to him a move which is, at first sight, not available in the raw feel, brainstate case. He can argue that both of the universals involved in the identification are to be discovered universals, the chemical ones as well as the micro-physical ones. Roughly, the identity claim takes the form,

The universals which will be expressed at T' by the predicates of a more adequate theory of chemical processes are identical with the universals which would be expressed at T' by the predicates of a more adequate micro-physical theory.

And while the universals which the predicates of chemical theory current at T express would not be identical with micro-physical universals, the universals which would be expressed by its more powerful successor might be.

39. For just as universals can be 'discovered' and 'given effective expression in our language' by our coming to use predicates in various ways, so universals can be 'abandoned' by no longer finding expression in our language, and even lost. A chemical predicate which at T did not stand for a micro-physical universal may come to do so at T'. And the chemical universal for which it stood at T may be left in the lurch for a more sophisticated face.

40. The situation can be represented as one in which chemical theoretic predicates cease to stand for universals which are merely constantly co-exemplified with micro-physical universals ("bridge laws") and come to stand for micro-physical universals. The identification is made rather than discovered—though the possibility of identification is discovered.
VI

41. Is anything like this move possible in the raw feel, brain state case? Can the identity of raw feel universals with brain state universals be assimilated to the identity of chemical and micro-physical universals? Can raw feel predicates and brain state predicates be regarded as on the move towards a possible synonymity as was correctly predicted for the predicates of chemical and micro-physical theory? Summarily put, can raw feels be reduced to neuro-physiological states?

42. This suggestion runs up against the obvious objection that according to typical identity theories, raw feel predicates, at least in their first person use, are as untheoretical as predicates can be. Unlike the predicates of chemical theory, they are not on the move towards a more adequate logical space which they might come to express. Like the Bostonian, they are there. This is often put by saying that they “label” directly given qualities and relations.

43. And even if the identity theorist were to hold that the other-ascriptive use of raw feel predicates is to be reconstructed as involving something like a common sense theory which postulates them as inner episodes to account for the perceptual behavior (including verbal behavior) of others, so that the identification of the raw feel of others with neuro-physiological states would be immune to this objection, the latter would still apply to any attempt to identify the theoretical ‘raw feels’ of others with the (supposedly) radically non-theoretical raw feels of first person discourse. But no identity theorist worth his salt would restrict his thesis to the raw feels of others.

44. Suppose that at this point the identity theorist switches his tactics to conform to his reductionist strategy and abandons the thesis of givenness. In other words, he now argues that instead of the use of raw feel predicates being a confluence of two autonomous uses, a self-ascriptive use in which they “label given universals” and an other-ascriptive use in which they can be compared to theoretical predicates in a common sense theory of perceptual behavior; that this is an anybody-ascriptive use, and that such an avowal or reporting use as raw feel predicates have is a dimension of use which is built on and presupposes this anybody-ascriptive common sense theoretical use. Would not this complete the parallel with the chemistry-physics model? For if both raw feel and brain state predicates are in a suitably broad sense theoretical predicates, can we not conceive of a reduction of raw feel theory to brain state theory? Would not this complete the parallel with the chemistry-physics model? For if both raw feel and brain state predicates are in a suitably broad sense theoretical predicates, can we not conceive of a reduction of raw feel theory to brain state theory?
45. If the concept of reduction is construed on the model of the physics-chemistry case, then, as I see it, the answer is ‘No.’ For reduction in this sense is a special case of the identification of universals located with respect to two theoretical structures which are expected to merge. A second alternative must be taken into account. Roughly, instead of the primitive predicates of the reduced theory ending up as defined predicates in the unified theory—which is the chemistry-physics case—these primitive predicates could perfectly end up as primitive predicates once more in the unified theory. On this alternative, the to-be-discovered sense impression universals would be no more complex than the sense impression universals expressed by the current sense impression predicates; theory would have a different categorial framework, and be nomologically related to (but not analyzable into) universals expressed by other primitive predicates in the to-be-achieved unified sense impression, brain state theory. While all these predicates—including sense impression predicates—would be physicalistic in a broad sense (physical₁) as belonging to a spatio-temporal-nomological framework of scientific explanation, they would not be physicalistic in that narrower sense (physical₂) in which to be physicalistic is to belong to a set of predicates just adequate to the theoretical description of non-living matter. As I see it, then, in the never-never land of ideal brain state theory the logical space of sense-impressions would, so to speak, be transposed into a new key and located in a new context. It would not, however, have become internally more complex by virtue of their identification with micro-physical properties. That is to say, there would be no increase in complexity with respect to what might be called the factual content of sense impression universals. Such increased complexity as occurred would be of a logical character. Roughly, the new sense impression universals would be exemplified not by single logical subjects (persons) but rather by a manifold of logical subjects which might be called—borrowing a term without its philosophical commitments—sensa.

46. But if sense impression or raw feel theory is to merge with brain state theory, the latter phrase must be used in its proper sense of “theory adequate to explain the properties of empirical brains as ‘core persons’” and freed from

8. For the distinction here drawn between ‘physical₁’ and ‘physical₂’ see "The Concept of Emergence" by Paul E. Meehl and Wilfrid Sellars in Vol. 1 of Minnesota Studies in the Philosophy of Science. According to the view I would defend, the to-be-discovered raw feel universals are physical₁ but not physical₂. Feigl, on the other hand, is strongly inclined to argue that they are physical₂ and to make this claim essential to any identity theory worth the name. We have had a running controversy on this point since the early days of the Minnesota Center for the Philosophy of Science.

9. For a development of this point see Science, Perception and Reality, pp. 100–105 [pp. 344–349], 190–196.
any commitment to the idea that neurophysiological theory is of necessity a theory the scientific objects of which are nerves which are reducible, along with their properties, to systems of micro-*physical* entities in a sense which implies that all the predicates of an ideal neurophysiology would be definable in terms of micro-physical primitives none of which apply exclusively to micro-physical systems which are the theoretical counterparts of brains.\(^\text{10}\)

47. Thus, if the objects of brain state theory are conceived to be reducible to micro-physical objects (however un-thingish) by an adequate micro-physical theory, the latter phrase must connote not 'micro-theory adequate to the explanation of *inanimate* physical objects' (as it often tends to do), but rather 'micro-theory adequate to the explanation of any physical object, animate or inanimate.'

48. It is my conviction that a theory which is to explain the properties of core personas will involve a family of families of predicates which would be a categorical transformation, but not substantive reduction, of raw feel predicates, and which would apply only to systems of scientific objects which are the theoretical counterparts at the most fundamental level of empirical brains. In other words, I accept the identity theory only in its weak form according for as I see it, the logical space of raw feels will reappear transposed but unreduced in a theoretical framework adequate to the job of explaining what core persons can do. In my opinion such a theory is not yet even on the horizon.

49. The plausibility of the more radical interpretation of the reducibility of neurophysiology to micro-physics rests on the fact that if one thinks of 'sense impressions' or 'raw feels' as theoretical constructs introduced for the purpose of explaining simple 'discriminative behavior' such as is found in white rats, then one would indeed find no reason to suppose that the postulated states might not be conceived of as reducible along the lines described in 46. After all, we can conceive of—and even construct—machines which can perform these discriminations. It is therefore crucial to my thesis to emphasize that sense impressions or raw feels are common sense theoretical constructs introduced to explain the occurrence not of white rat type discriminative behavior, but rather of perceptual propositional attitudes, and are therefore bound up with the explanation of why human language contains families of predicates having the logical properties of words for perceptible qualities and relations. In this radically transformed sense, then, I would defend the thesis of concept empiricism according to which the content and structure of our

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\(^{10}\) For a development of this point see ibid.
concepts of the perceptible qualities of things is derived from the presence of the content and structure in the world—though I would reject the idea that the derivation involves an 'act of abstraction.'

50. I shall conclude with a brief mention of other facets of the problem. Perhaps the most important of these is the fact that the logical space of perceptible qualities and relations of physical things and processes on which that of the attributes and relations of raw feels is modeled, is, in an important sense, closed. Perceptible qualities and relations are, as the identity theory indirectly acknowledges, pure occurrent qualities and relations. They are neither dispositional nor mongrel states. To say of a physical object that it is red and triangular is not to ascribe a power or disposition to it, though it is, in a very strong sense, to imply that it has certain powers and dispositions. Now it is not the 'internal structure' of the families of occurrent perceptible qualities and relations which generate the demand for theoretical explanation, but rather the nomological structure of the changes and interactions of the physical things and processes to which these qualities and relations belong. Roughly, it is not such facts, expounded in a 'phenomenology' of sensible qualities and relations, as that to be orange is to be between red and yellow in color which demand scientific explanation, but rather such nomological facts as that black objects sink further into snow than white objects when the sun is shining. And when physical theory explains the powers and dispositions of perceptible things and processes by 'identifying' perceptible things and processes with systems of micro-physical objects, the "identification" is not to be construed as involving a reduction of perceptible qualities and relations to the qualities and relations of scientific objects, but rather as a correlation of these two sets of qualities and relations by means of "bridge laws." On the other hand, a realistic interpretation of theoretical entities—such as has been presupposed throughout the argument of this paper—requires that physical objects and processes be reducible to, i.e., identifiable with (rather than merely correlated with) systems of scientific objects.

51. But how can it be maintained that perceptible things but not the perceptible qualities and relations in terms of which all their empirical properties are defined are, in the strict sense reducible? The answer, surely, must be that once again the chemistry-physics paradigm is inadequate.

11. For an elaboration of this point see section III of "Philosophy and the Scientific Image of Man" [reprinted as Chapter 14 of this volume] in Robert Colodny, ed., Frontiers of Science and Philosophy (Pittsburgh, 1962), reprinted as Chapter 1 in Science, Perception and Reality.
52. Scientific Realism maintains the *in principle* replaceability of the framework of perceptible things by a framework of scientific objects which contains highly derived counterparts of the inductively established *causal properties* of the former. But while Scientific Realism grants that the framework of scientific objects also contains highly derived counterparts of the *occurrent perceptible qualities* of perceptible things, it need not and, if my argument is correct, must *not hold* that these qualities are *reducible* to, i.e. replaceable by, their counterparts in micro-physical theory—as in the chemistry-physics case. The intrinsic structure of their 'closed' logical space (§50) requires rather that they be relocated. This relocation involves a simultaneous move on the sense-impression front. For the qualities and relations which are irreducible to their counterparts in the micro-physics of the objects of perception, are reducible, i.e., identifiable with, the qualities and relations which, I have contended (§§45–48) must be postulated in an adequate theoretical explanation of the nature and function of sense impressions or 'raw feels.'

13. I have explored the conceptual problems involved in this 'relocation' of the perceptible qualities of commonsense things in a number of places, most recently in the essay referred to in note 11 above. See also the concluding sections of Chapter 3 ('Phenomenalism' [reprinted as Chapter 12 in this volume]) in *Science, Perception and Reality*, as well as my second essay in the present volume [*Philosophical Perspectives*].
CHAPTER FOURTEEN

Philosophy and the Scientific Image of Man

I. The Philosophical Quest

The aim of philosophy, abstractly formulated, is to understand how things in the broadest possible sense of the term hang together in the broadest possible sense of the term. Under 'things in the broadest possible sense' I include such radically different items as not only 'cabbages and kings', but numbers and duties, possibilities and finger snaps, aesthetic experience and death. To achieve success in philosophy would be, to use a contemporary turn of phrase, to 'know one's way around' with respect to all these things, not in that unreflective way in which the centipede of the story knew its way around before it faced the question, 'how do I walk?', but in that reflective way which means that no intellectual holds are barred.

Knowing one's way around is, to use a current distinction, a form of 'knowing how' as contrasted with 'knowing that'. There is all the difference in the world between knowing how to ride a bicycle and knowing that a steady pressure by the legs of a balanced person on the pedals would result in forward motion. Again, to use an example somewhat closer to our subject, there is all the difference in the world between knowing that each step of a given proof in mathematics follows from the preceding steps, and knowing how to find a proof. Sometimes being able to find a proof is a matter of being able to follow a set procedure; more often than not. It can be argued that anything which can properly be called 'knowing how to do something' presupposes a body of knowledge that; or, to put it differently, knowledge of truth or facts. If
this were so, then the statement that ‘ducks know how to swim’ would be as metaphorical as the statement that they know that water supports them. However this may be, knowing how to do something at the level of characteristically human activity presupposes a great deal of knowledge that, and it is obvious that the reflective knowing one’s way around in the scheme of things, which is the aim of philosophy, presupposes a great deal of reflective knowledge of truths.

Now the subject-matter of this knowledge of truths which is presupposed by philosophical ‘know-how’, falls, in a sense, completely within the scope of the special disciplines. Philosophy in an important sense has no special subject-matter which stands to it as other subject-matters stand to other special disciplines. If philosophers did have such a special subject-matter, they could turn it over to a new group of specialists as they have turned other special subject-matters to non-philosophers over the past 2500 years, first with mathematics, more recently psychology and sociology, and, currently, certain aspects of theoretical linguistics. What is characteristic of philosophy is not a special subject-matter, but the aim of knowing one’s way around with respect to the subject-matters of all the special disciplines.

Now the special disciplines know their way around in their subject-matters, and each learns to do so in the process of discovering truths about its own subject-matter. But each special discipline must also have a sense of how its bailiwick fits into the countryside as a whole. This sense in many cases amounts to a little more than the unreflective ‘knowing one’s way around’ which is a common possession of us all. Again, the specialist must have a sense of how not only his subject-matter, but also the methods and principles of his thinking about it fit into the intellectual landscape. Thus, the historian reflects not only on historical events themselves, but on what it is to think historically. It is part of his business to reflect on his own thinking—its aims, its criteria, its pitfalls. In dealing with historical questions, he must face and answer questions which are not, themselves, in a primary sense historical questions. But he deals with these questions as they arise in the attempt to answer specifically historical questions.

Reflection on any special discipline can soon lead one to the conclusion that the ideal practitioner of that discipline would see his special subject-matter and his thinking about it in the light of a reflective insight into the intellectual landscape as a whole. There is much truth in the Platonic conception that the special disciplines are perfected by philosophy, but the companion conception that the philosopher must know his way around in each discipline as does the specialist, has been an ever more elusive ideal since the
scientific revolution began. Yet if the philosopher cannot hope to know his way around in each discipline as does the specialist, there is a sense in which he can know his way around with respect to the subject-matter of that discipline, and must do so if he is to approximate to the philosophic aim.

The multiplication of sciences and disciplines is a familiar feature of the intellectual scene. Scarcely less familiar is the unification of this manifold which is taking place by the building of scientific bridges between them. I shall have something to say about this unification later in this chapter. What is not so obvious to the layman is that the task of 'seeing all things together' has itself been (paradoxically) broken down into specialties. And there is a place for specialization in philosophy. For just as one cannot come to know one's way around in the highway system as a whole without knowing one's way around in the parts, so one can't hope to know one's way around in 'things in general', without knowing one's way around in the major groupings of things.

It is therefore, the 'eye on the whole' which distinguishes the philosophical enterprise. Otherwise, there is little to distinguish the philosopher from the persistently reflective specialist; the philosopher of history from the persistently reflective historian. To the extent that a specialist is more concerned to reflect on how his work as a specialist joins up with other intellectual pursuits, than in asking and answering questions within his specialty, he is said, properly, to be philosophically-minded. And, indeed, one can 'have one's eye on the whole', without staring at it all the time. The latter would be a fruitless enterprise. Furthermore, like other specialists, the philosopher who specializes may derive much of his sense of the whole from the pre-reflective orientation which is our common heritage. On the other hand, a philosopher could scarcely be said to have his eye on the whole in the relevant sense, unless he has reflected on the nature of philosophical thinking. It is this reflection on the place of philosophy itself, in the scheme of things which is the distinctive trait of the philosopher as contrasted with the reflective specialist; and in the absence of this critical reflection on the philosophical enterprise, one is at best but a potential philosopher.

It has often been said in recent years that the aim of the philosopher is not to discover new truths, but to 'analyse' what we already know. But while the term 'analysis' was helpful in its implication that philosophy as such makes no substantive contribution to what we know, and is concerned in some way to improve the manner in which we know it, it is most misleading by its contrast to 'synthesis'. For by virtue of this contrast these statements suggest that philosophy is ever more myopic, tracing parts within parts, losing each in turn from sight as new parts come into view. One is tempted, therefore, to contrast
the analytic conception of philosophy as myopia with the synoptic vision of true philosophy. And it must be admitted that if the contrast between ‘analysis’ and ‘synthesis’ were the operative connotation in the metaphor, then a purely analytic philosophy would be a contradiction in terms. Even if we construe ‘analysis’ on the analogy of making ever smaller scale maps of the same overall terrain, which does more justice to the synoptic element, the analogy disturbs because we would have to compare philosophy to the making of small-scale maps from an original large-scale map; and a smaller scale map in this sense is a triviality.

Even if the analogy is changed to that of bringing a picture into focus, which preserves the synoptic element and the theme of working within the framework of what is already known while adding a dimension of gain, the analogy is disturbing in two respects. (a) It suggests that the special disciplines are confused; as though the scientist had to wait for the philosopher to clarify his subject-matter, bring it into focus. To account for the creative role of philosophy, it is not necessary to say that the scientist doesn’t know his way around in his own area. What we must rather say is that the specialist knows his way around in his own neighbourhood, as his neighbourhood, but doesn’t know his way around in it in the same way as a part of the landscape as a whole.

(b) It implies that the essential change brought about by philosophy is the standing out of detail within a picture which is grasped as a whole from the start. But, of course, to the extent that there is one picture to be grasped reflectively as a whole, the unity of the reflective vision is a task rather than an initial datum. The search for this unity at the reflective level is therefore more appropriately compared to the contemplation of a large and complex painting which is not seen as a unity without a prior exploration of its parts. The analogy, however, is not complete until we take into account a second way in which unity is lacking in the original datum of the contemporary philosopher. For he is confronted not by one picture, but, in principle, by two and, in fact, by many. The plurality I have in mind is not that which concerns the distinction between the fact finding, the ethical, the aesthetic, the logical, the religious, and other aspects of experience, for these are but aspects of one complex picture which is to be grasped reflectively as a whole. As such, it constitutes one term of a crucial duality which confronts the contemporary philosopher at the very beginning of his enterprise. Here the most appropriate analogy is stereoscopic vision, where two differing perspectives on a landscape are fused into one coherent experience.

For the philosopher is confronted not by one complex many-dimensional
picture, the unity of which, such as it is, he must come to appreciate; but by two pictures of essentially the same order of complexity, each of which purports to be a complete picture of man-in-the-world, and which, after separate scrutiny, he must fuse into one vision. Let me refer to these two perspectives, respectively, as the manifest and the scientific images of man-in-the-world. And let me explain my terms. First, by calling them images I do not mean to deny to either or both of them the status of 'reality'. I am to use Husserl's term, 'bracketing' them, transforming them from ways of experiencing the world into objects of philosophical reflection and evaluation. The term 'image' is usefully ambiguous. On the one hand it suggests the contrast between an object, e.g. a tree, and a projection of the object on a plane, or its shadow on a wall. In this sense, an image is as much an existent as the object imaged, though, of course, it has a dependent status.

In the other sense, an 'image' is something imagined, and that which is imagined may well not exist, although the imagining of it does—in which case we can speak of the image as merely imaginary or unreal. But the imagined can exist; as when one imagines that someone is dancing in the next room, and someone is. This ambiguity enables me to imply that the philosopher is confronted by two projections of man-in-the-world on the human understanding. One of these projections I will call the manifest image, the other the scientific image. These images exist and are as much a part and parcel of the world as this platform or the Constitution of the United States. But in addition to being confronted by these images as existents, he is confronted by them as images in the sense of 'things imagined'—or, as I had better say at once, conceived; for I am using 'image' in this sense as a metaphor for conception, and it is a familiar fact that not everything that can be conceived can, in the ordinary sense, be imagined. The philosopher, then, is confronted by two conceptions, equally public, equally non-arbitrary, of man-in-the-world and he cannot shirk the attempt to see how they fall together in one stereoscopic view.

Before I begin to explain the contrast between 'manifest' and 'scientific', as I shall use these terms, let me make it clear that they are both 'idealizations' in something like the sense in which a frictionless body or an ideal gas is an idealization. They are designed to illuminate the inner dynamics of the development of philosophical ideas, as scientific idealizations illuminate the development of physical systems. From a somewhat different point of view they can be compared to the 'ideal types' of Max Weber's sociology. The story is complicated by the fact that each image has a history, and while the main outlines of what I shall call the manifest image took shape in the mists of pre-
history, the scientific image, promissory notes apart, has taken shape before our very eyes.

II. The Manifest Image

The 'manifest' image of man-in-the-world can be characterized in two ways, which are supplementary rather than alternative. It is, first, the framework in terms of which man came to be aware of himself as man-in-the-world. It is the framework in terms of which, to use an existentialist turn of phrase, man first encountered himself—which is, of course, when he came to be man. For it is no merely incidental feature of man that he has a conception of himself as man-in-the-world, just as it is obvious, on reflection, that 'if man had a radically different conception of himself he would be a radically different kind of man'.

I have given this quasi-historical dimension of our construct pride of place, because I want to highlight from the very beginning what might be called the paradox of man's encounter with himself, the paradox consisting of the fact that man couldn't be man until he encountered himself. It is this paradox which supports the last stand of Special Creation. Its central theme is the idea that anything which can properly be called conceptual thinking can occur only within a framework of conceptual thinking in terms of which it can be criticized, supported, refuted, in short, evaluated. To be able to think is to be able to measure one's thoughts by standards of correctness, of relevance, of evidence. In this sense a diversified conceptual framework is a whole which, however sketchy, is prior to its parts, and cannot be construed as a coming together of parts which are already conceptual in character. The conclusion is difficult to avoid that the transition from pre-conceptual patterns of behaviour to conceptual thinking was a holistic one, a jump to a level of awareness which is irreducibly new, a jump which was the coming into being of man.

There is a profound truth in this conception of a radical difference in level between man and his precursors. The attempt to understand this difference turns out to be part and parcel of the attempt to encompass in one view the two images of man-in-the-world which I have set out to describe. For, as we shall see, this difference in level appears as an irreducible discontinuity in the manifest image, but as, in a sense requiring careful analysis, a reducible difference in the scientific image.

I have characterized the manifest image of man-in-the-world as the framework in terms of which man encountered himself. And this, I believe, is a useful way of characterizing it. But it is also misleading, for it suggests that the contrast I am drawing between the manifest and the scientific images, is that
between a pre-scientific, uncritical, naive conception of man-in-the-world, and a reflected, disciplined, critical—in short a scientific conception. This is not at all what I have in mind. For what I mean by the manifest image is a refinement or sophistication of what might be called the ‘original’ image; a refinement to a degree which makes it relevant to the contemporary intellectual scene. This refinement or sophistication can be construed under two headings; (a) empirical; (b) categorial.

By empirical refinement, I mean the sort of refinement which operates within the broad framework of the image and which, by approaching the world in terms of something like the canons of inductive inference defined by John Stuart Mill, supplemented by canons of statistical inference, adds to and subtracts from the contents of the world as experienced in terms of this framework and from the correlations which are believed to obtain between them. Thus, the conceptual framework which I am calling the manifest image is, in an appropriate sense, itself a scientific image. It is not only disciplined and critical; it also makes use of those aspects of scientific method which might be lumped together under the heading ‘correlational induction’. There is, however, one type of scientific reasoning which it, by stipulation, does not include, namely that which involves the postulation of imperceptible entities, and principles pertaining to them, to explain the behaviour of perceptible things.

This makes it clear that the concept of the manifest image of man-in-the-world is not that of an historical and bygone stage in the development of man’s conception of the world and his place in it. For it is a familiar fact that correlational and postulational methods have gone hand in hand in the evolution of science, and, indeed, have been dialectically related; postulational hypotheses presupposing correlations to be explained, and suggesting possible correlations to be investigated. The notion of a purely correlational scientific view of things is both an historical and a methodological fiction. It involves abstracting correlational fruits from the conditions of their discovery, and the theories in terms of which they are explained. Yet it is a useful fiction (and hence no mere fiction), for it will enable us to define a way of looking at the world which, though disciplined and, in a limited sense, scientific, contrasts sharply with an image of man-in-the-world which is implicit in and can be constructed from the postulational aspects of contemporary scientific theory. And, indeed, what I have referred to as the ‘scientific’ image of man-in-the-world and contrasted with the ‘manifest’ image, might better be called the ‘postulational’ or ‘theoretical’ image. But, I believe, it will not be to misleading if I continue, for the most part, to use the former term.

Now the manifest image is important for our purpose, because it defines
one of the poles to which philosophical reflection has been drawn. It is not only the great speculative systems of ancient and medieval philosophy which are built around the manifest image, but also many systems and quasi-systems in recent and contemporary thought, some of which seem at first sight to have little if anything in common with the great classical systems. That I include the major schools of contemporary Continental thought might be expected. That I lump in with these the trends of contemporary British and American philosophy which emphasize the analysis of 'common sense' and 'ordinary usage', may be somewhat more surprising. Yet this kinship is becoming increasingly apparent in recent years and I believe that the distinctions that I am drawing in this chapter will make possible an understanding and interpretation of this kinship. For all these philosophies can, I believe, be fruitfully construed as more or less adequate accounts of the manifest image of man-in-the-world, which accounts are then taken to be an adequate and full description in general terms of what man and the world really are.

Let me elaborate on this theme by introducing another construct which I shall call—borrowing a term with a not unrelated meaning—the perennial philosophy of man-in-the-world. This construct, which is the 'ideal type' around which philosophies in what might be called, in a suitably broad sense, the Platonic tradition cluster, is simply the manifest image endorsed as real, and its outline taken to be the large-scale map of reality to which science brings a needle-point of detail and an elaborate technique of map-reading.

It will probably have occurred to you by now that there are negative overtones to both constructs: the 'manifest image' and the 'perennial philosophy'. And, in a certain sense, this is indeed the case. I am implying that the perennial philosophy is analogous to what one gets when one looks through a stereoscope with one eye dominating. The manifest image dominates and mislocates the scientific image. But if the perennial philosophy of man-in-the-world is in this sense distorted, an important consequence lurks in the offing. For I have also implied that man is essentially that being which conceives of itself in terms of the image which the perennial philosophy refines and endorses. I seem, therefore, to be saying that man's conception of himself in the world does not easily accommodate the scientific image; that there is a genuine tension between them; that man is not the sort of thing he conceives himself to be; that his existence is in some measure built around error. If this were what I wished to say, I would be in distinguished company. One thinks, for example, of Spinoza, who contrasted man as he falsely conceives himself to be with man as he discovers himself to be in the scientific enterprise. It
might well be said that Spinoza drew a distinction between a 'manifest' and a 'scientific' image of man, rejecting the former as false and accepting the latter as true.

But if in Spinoza's account, the scientific image, as he interprets it, dominates the stereoscopic view (the manifest image appearing as a tracery of explainable error), the very fact that I use the analogy of stereoscopic vision implies that as I see it the manifest image is not overwhelmed in the synthesis.

But before there can be any point to these comparisons, I must characterize these images in more detail, adding flesh and blood to the bare bones I have laid before you. I shall devote the remainder of this section and section III to developing the manifest image. In the concluding sections I shall characterize the scientific image, and attempt to describe certain key features of how the two images blend together in true stereoscopic view.

I distinguished above between two dimensions of the refinement which turned the 'original' image into the 'manifest' image: the empirical and the categorial. Nothing has been said so far about the latter. Yet it is here that the most important things are to be said. It is in this connection that I will be able to describe the general structure of the manifest image.

A fundamental question with respect to any conceptual framework is 'of what sort are the basic objects of the framework?' This question involves, on the one hand, the contrast between an object and what can be true of it in the way of properties, relations, and activities; and, on the other, a contrast between the basic objects of the framework and the various kinds of groups they can compose. The basic objects of a framework need not be things in the restricted sense of perceptible physical objects. Thus, the basic objects of current theoretical physics are notoriously imperceptible and unimaginable. Their basic-ness consists in the fact that they are not properties or groupings of anything more basic (at least until further notice). The questions, 'Are the basic objects of the framework of physical theory thing-like? And if so, to what extent?' are meaningful ones.

Now to ask, 'what are the basic objects of a (given) framework?' is to ask not for a list, but a classification. And the classification will be more or less 'abstract' depending on what the purpose of the inquiry is. The philosopher is interested in a classification which is abstract enough to provide a synoptic view of the contents of the framework but which falls short of simply referring to them as objects or entities. Thus we are approaching an answer to the question, 'what are the basic objects of the manifest image?' when we say that it includes persons, animals, lower forms of life and 'merely material' things, like rivers and stones. The list is not intended to be complete, although it is in-
tended to echo the lower stages of the ‘great chain of being’ of the Platonic tradition.

The first point I wish to make is that there is an important sense in which the primary objects of the manifest image are persons. And to understand how this is so, is to understand central and, indeed, crucial themes in the history of philosophy. Perhaps the best way to make the point is to refer back to the construct which we called the ‘original’ image of man-in-the-world, and characterize it as a framework in which all the ‘objects’ are persons. From this point of view, the refinement of the ‘original’ image into the manifest image, is the gradual ‘de-personalization’ of objects other than persons. That something like this has occurred with the advance of civilization is a familiar fact. Even persons, it is said (mistakenly, I believe), are being ‘depersonalized’ by the advance of the scientific point of view.

The point I now wish to make is that although this gradual de-personalization of the original image is a familiar idea, it is radically misunderstood, if it is assimilated to the gradual abandonment of a superstitious belief. A primitive man did not believe that the tree in front of him was a person, in the sense that he thought of it both as a tree and as a person, as I might think that this brick in front of me is a doorstop. If this were so, then when he abandoned the idea that trees were persons, his concept of a tree could remain unchanged, although his beliefs about trees would be changed. The truth is, rather, that originally to be a tree was a way of being a person, as, to use a close analogy, to be a woman is a way of being a person, or to be a triangle is a way of being a plane figure. That a woman is a person is not something that one can be said to believe; though there’s enough historical bounce to this example to make it worthwhile to use the different example that one cannot be said to believe that a triangle is a plane figure. When primitive man ceased to think of what we call trees as persons, the change was more radical than a change in belief; it was a change in category.

Now, the human mind is not limited in its categories to what it has been able to refine out of the world view of primitive man, any more than the limits of what we can conceive are set by what we can imagine. The categories of theoretical physics are not essences distilled from the framework of perceptual experience, yet, if the human mind can conceive of new categories, it can also refine the old; and it is just as important not to over-estimate the role of creativity in the development of the framework in terms of which you and I experience the world, as it is not to under-estimate its role in the scientific enterprise.

I indicated above that in the construct which I have called the ‘original’ im-
age of man-in-the-world, all 'objects' are persons, and all kinds of objects ways of being persons. This means that the sort of things that are said of ob­jects in this framework are the sort of things that are said of persons. And let me make it clear that by 'persons', I do not mean 'spirit' or 'mind'. The idea that a person is a team of two things, a mind and a body, is one for which many reasons of different kinds and weights have been given in the course of human intellectual development. But it is obvious, on reflection, that whatever philosophers have made of the idea of a mind, the pre-philosophical conception of a 'spirit', where it is found, is that of a ghostly person, something analogous to flesh and blood persons which 'inhabits' them, or is otherwise intimately connected with them. It is, therefore, a development within the framework of persons, and it would be incorrect to construe the manifest image in such a way that persons are composite objects. On the other hand, if it is to do its work, the manifest framework must be such as to make meaningful the assertion that what we ordinarily call persons are composites of a person proper and a body—and, by doing so, make meaningful the contrary view that although men have many different types of ability, ranging from those he has in common with the lowest of things, to his ability to engage in scientific and philosophical reflection, he nevertheless is one object and not a team. For we shall see that the essential dualism in the manifest image is not that be­tween mind and body as substances, but between two radically different ways in which the human individual is related to the world. Yet it must be admitted that most of the philosophical theories which are dominated by the manifest image are dualistic in the substantive sense. There are many factors which ac­count for this, most of which fall outside the scope of this essay. Of the factors which concern us, one is a matter of the influence of the developing scientific image of man, and will be discussed in the following section. The other arises in the attempt to make sense of the manifest image in its own terms.

Now to understand the manifest image as a refinement or de-personalization of the 'original' image, we must remind ourselves of the range of activities which are characteristic of persons. For when I say that the objects of the manifest image are primarily persons, I am implying that what the objects of this framework, primarily are and do is what persons are and do. Thus persons are 'impetuous' or 'set in their ways'. They apply old policies or adopt new ones. They do things from habit or ponder alternatives. They are imma­ture or have an established character. For my present purposes, the most im­portant contrasts are those between actions which are expressions of charac­ter and actions which are not expressions of character, on the one hand, and between habitual actions and deliberate actions, on the other. The first point
that I want to make is that only a being capable of deliberation can properly be said to act, either impulsively or from habit. For in the full and non-metaphorical sense an action is the sort of thing that can be done deliberately. We speak of actions as becoming habitual, and this is no accident. It is important to realize that the use of the term 'habit' in speaking of an earthworm as acquiring the habit of turning to the right in a T-maze, is a metaphorical extension of the term. There is nothing dangerous in the metaphor until the mistake is made of assuming that the habits of persons are the same sort of thing as the (metaphorical) 'habits' of earthworms and white rats.

Again, when we say that something a person did was an expression of his character, we mean that it is 'in character'—that it was to be expected. We do not mean that it was a matter of habit. To be habitual is to be 'in character', but the converse is not true. To say of an action that it is 'in character', that it was to be expected, is to say that it was predictable—"not," however, predictable 'no holds barred,' but predictable with respect to evidence pertaining to what the person in question has done in the past, and the circumstances as he saw them in which he did it. Thus, a person cannot, logically cannot, begin by acting 'in character', any more than he can begin by acting from habit.

It is particularly important to see that while to be 'in character' is to be predictable, the converse is not true. It does not follow from the fact that a piece of human behaviour is predictable, that it is an expression of character. Thus the behaviour of a burnt child with respect to the fire is predictable, but not an expression of character. If we use the phrase, 'the nature of a person,' to sum up the predictabilities no holds barred pertaining to that person, then we must be careful not to equate the nature of a person with his character, although his character will be a 'part' of his nature in the broad sense. Thus, if everything a person did were predictable (in principle), given sufficient knowledge about the person and the circumstances in which he was placed, and was, therefore, an 'expression of his nature', it would not follow that everything the person did was an expression of his character. Obviously, to say of a person that everything that he does is an expression of his character is to say that his life is simply a carrying out of formed habits and policies. Such a person is a type only approximated to in real life. Not even a mature person always acts in character. And as we have seen, it cannot possibly be true that he has always acted in character. Yet, if determinism is true, everything he has done has been an expression of his 'nature'.

I am now in a position to explain what I mean when I say that the primary objects of the manifest image are persons. I mean that it is the modification of an image in which all the objects are capable of the full range of personal ac-
tivity, the modification consisting of a gradual pruning of the implications of saying with respect to what we would call an inanimate object, that it did something. Thus, in the original image to say of the wind that it blew down one's house would imply that the wind either decided to do so with an end in view, and might, perhaps, have been persuaded not to do it, or that it acted thoughtlessly (either from habit or impulse), or, perhaps, inadvertently, in which case other appropriate action on one's part might have awakened it to the enormity of what it was about to do.

In the early stages of the development of the manifest image, the wind was no longer conceived as acting deliberately, with an end in view; but rather from habit or impulse. Nature became the locus of 'truncated persons'; that which things could be expected to do, its habits; that which exhibits no order, its impulses. Inanimate things no longer 'did' things in the sense in which persons do them—not, however, because a new category of impersonal things and impersonal processes has been achieved, but because the category of person is now applied to these things in a pruned or truncated form. It is a striking exaggeration to say of a person, that he is a 'mere creature of habit and impulse'; but in the early stages of the development of manifest image, the world includes truncated persons which are mere creatures of habit, acting out routines, broken by impulses, in a life which never rises above what ours is like in our most unreflective moments. Finally, the sense in which the wind 'did' things, was pruned, save for poetic and expressive purposes—and, one is tempted to add, for philosophical purposes—of implications pertaining to 'knowing what one is doing' and 'knowing what the circumstances are'.

Just as it is important not to confuse between the 'character' and the 'nature' of a person, that is to say, between all action's being predictable with respect to evidence pertaining to prior action, and its being predictable no holds barred, so it is important not to confuse between an action's being predictable and its being caused. These terms are often treated as synonyms, but only confusion can arise from doing so. Thus, in the 'original' image, one person causes another person to do something he otherwise would not have done. But most of the things people do are not things they are caused to do, even if what they do is highly predictable. For example: when a person has well-established habits, what he does in certain circumstances is highly predictable, but it is not for that reason caused. Thus the category of causation (as contrasted with the more inclusive category of predictability) betrays its origin in the 'original' image. When all things were persons it was certainly not a framework conception that everything a person did was caused; nor, of course, was it a framework principle that everything a person did was predict-
able. To the extent that relationships between the truncated ‘persons’ of the manifest framework were analogous to the causal relationships between persons, the category itself continued to be used, although pruned of its implications with respect to plans, purposes, and policies. The most obvious analogue at the inanimate level of causation in the original sense is one billiard ball causing another to change its course, but it is important to note that no one who distinguishes between causation and predictability would ask, ‘what caused the billiard ball on a smooth table to continue in a straight line?’ The distinctive trait of the scientific revolution was the conviction that all events are predictable from relevant information about the context in which they occur, not that they are all in any ordinary sense, caused.

III. Classical Philosophy and the Manifest Image

I have characterized the concept of the manifest image as one of the poles towards which philosophical thinking is drawn. This commits me, of course, to the idea that the manifest image is not a mere external standard, by relation to which one interested in the development of philosophy classifies philosophical positions, but has in its own way an objective existence in philosophical thinking itself, and, indeed, in human thought generally. And it can influence philosophical thinking only by having an existence which transcends in some way the individual thought of individual thinker. I shall be picking up this theme shortly, and shall ask how an image of the world, which, after all, is a way of thinking, can transcend the individual thinker which it influences. (The general lines of the answer must be obvious, but it has implications which have not always been drawn.) The point I wish to make now is that since this image has a being which transcends in some way the individual thought of individual thinker, there is truth and error with respect to it, even though the image itself might have to be rejected, in the last analysis, as false.

Thus, whether or not the world as we encounter it in perception and self-awareness is ultimately real, it is surely incorrect, for example, to say as some philosophers have said that the physical objects of the encountered world are ‘complexes of sensations’ or, equally, to say that apples are not really coloured, or that mental states are ‘behavioural dispositions’, or that one cannot intend to do something without knowing that one intends to do it, or that to say that something is good is to say that one likes it, etc. For there is a correct and an incorrect way to describe this objective image which we have of the world in which we live, and it is possible to evaluate the correctness or incorrectness of such a description. I have already claimed that much of academic philosophy can be interpreted as an attempt by individual thinkers to delineate the mani-
fest image (not recognized, needless to say, as such) an image which is both immanent in and transcendent of their thinking. In this respect, a philosophy can be evaluated as perceptive or imperceptive, mistaken or correct, even though one is prepared to say that the image they delineate is but one way in which reality appears to the human mind. And it is, indeed, a task of the first importance to delineate this image, particularly in so far as it concerns man himself, for, as was pointed out before, man is what he is because he thinks of himself in terms of this image, and the latter must be understood before it is proper to ask, 'to what extent does manifest man survive in the synoptic view which does equal justice to the scientific image which now confronts us?'

I think it correct to say that the so-called 'analytic' tradition in recent British and American philosophy, particularly under the influence of the later Wittgenstein, has done increasing justice to the manifest image, and has increasingly succeeded in isolating it in something like its pure form, and has made clear the folly of attempting to replace it piecemeal by fragments of the scientific image. By doing so, it is made apparent, and has come to realize, its continuity with the perennial tradition.

Now one of the most interesting features of the perennial philosophy is its attempt to understand the status in the individual thinker of the framework of ideas in terms of which he grasps himself as a person in the world. How do individuals come to be able to think in terms of this complex conceptual framework? How do they come to have this image? Two things are to be noticed here: (1) The manifest image does not present conceptual thinking as a complex of items which, considered in themselves and apart from these relations, are not conceptual in character. (The most plausible candidates are images, but all attempts to construe thoughts as complex patterns of images have failed, and, as we know, were bound to fail.) (2) Whatever the ultimate constituents of conceptual thinking, the process itself as it occurs in the individual mind must echo, more or less adequately, the intelligible structure of the world.

There was, of course, a strong temptation not only to think of the constituents of thinking as qualitatively similar to the constituents of the world, but also to think of the world as causing these constituents to occur in patterns which echo the patterns of events. The attempt by precursors of scientific psychology, to understand the genesis of conceptual thinking in the individual in terms of an 'association' of elemental processes which were not themselves conceptual, by a direct action of the physical environment on the individual—the paradigm case being the burnt child fearing the fire—was a premature attempt to construct a scientific image of man.

The perennial tradition had no sympathy with such attempts. It recognized
(a) that association of *thoughts* is not association of images, and, as presupposing a framework of conceptual thinking, cannot account for it; (b) that the direct action of perceptible nature, *as perceptible*, on the *individual* can account for associative connection, *but not the rational connections of conceptual thinking*.

Yet somehow the world is the cause of the individual's image of the world, and, as is well-known, for centuries the dominant conception of the perennial tradition was that of a direct causal influence of the world as intelligible on the individual mind. This theme, initiated by Plato, can be traced through Western thought to the present day. In the Platonic tradition this mode of causation is attributed to a being which is analogous, to a greater or lesser degree, to a person. Even the Aristotelian distinguishes between the way in which sensations make available the intelligible structure of things to man, and the way in which contingencies of perceptual experience establish expectations and permit a non-rational accommodation of animals to their environment. And there is, as we know today, a sound core to the idea that while reality is the 'cause' of the human conceptual thinking which represents it, this causal role cannot be equated with a conditioning of the individual by his environment in a way which could in principle occur without the mediation of the family and the community. The Robinson Crusoe conception of the world as generating conceptual thinking directly in the individual is too simple a model. The perennial tradition long limited itself to accounting for the presence in the individual of the framework of conceptual thinking in terms of a unique kind of action of reality as intelligible on the individual mind. The accounts differed in interesting respects, but the main burden remained the same. It was not until the time of Hegel that the essential role of the group as a mediating factor in this causation was recognized, and while it is easy for us to see that the immanence and transcendence of conceptual frameworks with respect to the individual thinker is a social phenomenon, and to find a recognition of this fact implicit in the very form of our image of man in the world, it was not until the nineteenth century that this feature of the manifest image was, however inadequately, taken into account.

The Platonic theory of conceptual abilities as the result of the 'illumination' of the mind by intelligible essences limited the role of the group and, in particular, the family to that of calling these abilities into play—a role which could, in principle, be performed by perceptual experience—and to that of teaching the means of giving verbal expression to these abilities. Yet the essentially social character of conceptual thinking comes clearly to mind when we recognize that there is no thinking apart from common standards of correct-
ness and relevance, which relate what I do think to what anyone ought to think. The contrast between 'I' and 'anyone' is essential to rational thought.

It is current practice to compare the inter-subjective standards without which there would be no thinking, to the inter-subjective standards without which there would be no such a thing as a game; and the acquisition of a conceptual framework to learning to play a game. It is worth noting, however, that conceptual thinking is a unique game in two respects: (a) one cannot learn to play it by being told the rules; (b) whatever else conceptual thinking makes possible—and without it there is nothing characteristically human—it does so by virtue of containing a way of representing the world.

When I said that the individual as a conceptual thinker is essentially a member of a group, this does not mean of course, that the individual cannot exist apart from the group, for example as sole survivor of an atomic catastrophe, any more than the fact that chess is a game played by two people means that one can't play chess with oneself. A group isn't a group in the relevant sense unless it consists of a number of individuals each of which thinks of himself as 'I' in contrast to 'others'. Thus a group exists in the way in which members of the group represent themselves. Conceptual thinking is not by accident that which is communicated to others, any more than the decision to move a chess piece is by accident that which finds an expression in a move on a board between two people.

The manifest image must, therefore, be construed as containing a conception of itself as a group phenomenon, the group mediating between the individual and the intelligible order. But any attempt to explain this mediation within the framework of the manifest image was bound to fail, for the manifest image contains the resources for such an attempt only in the sense that it provides the foundation on which scientific theory can build an explanatory framework; and while conceptual structures of this framework are built on the manifest image, they are not definable within it. Thus, the Hegelian, like the Platonist of whom he is the heir, was limited to the attempt to understand the relation between intelligible order and individual minds in analogical terms.

It is in the scientific image of man in the world that we begin to see the main outlines of the way in which man came to have an image of himself-in-the-world. For we begin to see this as a matter of evolutionary development as a group phenomenon, a process which is illustrated at a simpler level by the evolutionary development which explains the correspondence between the dancing of a worker bee and the location, relative to the sun, of the flower from which he comes. This correspondence, like the relation between man's
'original' image and the world, is incapable of explanation in terms of a direct conditioning impact of the environment on the individual as such.

I have called attention to the fact that the manifest image involves two types of causal impact of the world on the individual. It is, I have pointed out, this duality of causation and the related irreducibility, within the manifest image of conceptual thinking in all its forms to more elementary processes, which is the primary and essential dualism of the perennial philosophy. The dualistic conception of mind and body characteristic of, but by no means an invariable feature of, *philosophia perennis*, is in part an inference from this dualism of causation and of process. In part, however, as we shall see, it is a result of the impact of certain themes present in even the smallest stages of the developing scientific image.

My primary concern in this essay is with the question, 'in what sense, and to what extent, does the manifest image of man-in-the-world survive the attempt to unite this image in one field of intellectual vision with man as conceived in terms of the postulated objects of scientific theory?' The bite to this question lies, we have seen, in the fact that man is that being which conceives of itself in terms of the manifest image. To the extent that the manifest does not survive in the synoptic view, to that extent man himself would not survive. Whether the adoption of the synoptic view would transform man in bondage into man free, as Spinoza believed, or man free into man in bondage, as many fear, is a question that does not properly arise until the claims of the scientific image have been examined.

IV. The Scientific Image

I devoted my attention in the previous sections to defining what I called the 'manifest' image of man-in-the-world. I argued that this image is to be construed as a sophistication and refinement of the image in terms of which man first came to be aware of himself as man-in-the-world; in short, came to be man. I pointed out that in any sense in which this image, in so far as it pertains to man, is a 'false' image, this falsity threatens man himself, inasmuch as he is, in an important sense, the being which has this image of himself. I argued that what has been called the perennial tradition in philosophy—philosophia perennis—can be construed as the attempt to understand the structure of this image, to know one's way around in it reflectively with no intellectual holds barred. I analysed some of the main features of the image and showed how the categories in terms of which it approaches the world can be construed as progressive prunings of categories pertaining to the person and his relation to other persons and the group. I argued that the perennial tradi-
tion must be construed to include not only the Platonic tradition in its broadest sense, but philosophies of 'common sense' and 'ordinary usage'. I argued what is common to all these philosophies is that acceptance of the manifest image as the real. They attempt to understand the achievements of theoretical science in terms of this framework, subordinating the categories of theoretical science to its categories. I suggested that the most fruitful way of approaching the problem of integrating theoretical science with the framework of sophisticated common sense into one comprehensive synoptic vision is to view it not as a piecemeal task—e.g. first a fitting together of the common sense conception of physical objects with that of theoretical physics, and then, as a separate venture, a fitting together of the common sense conception of man with that of theoretical psychology—but rather as a matter of articulating two whole ways of seeing the sum of things, two images of man-in-the-world and attempting to bring them together in a 'stereoscopic' view.

My present purpose is to add to the account I have given of the manifest image, a comparable sketch of what I have called the scientific image, and to conclude this essay with some comments on the respective contributions of these two to the unified vision of man-in-the-world which is the aim of philosophy.

The scientific image of man-in-the-world is, of course, as much an idealization as the manifest image—even more so, as it is still in the process of coming to be. It will be remembered that the contrast I have in mind is not that between an unscientific conception of man-in-the-world and a scientific one, but between that conception which limits itself to what correlational techniques can tell us about perceptible and introspectible events and that which postulates imperceptible objects and events for the purpose of explaining correlations among perceptibles. It was granted, of course, that in point of historical fact many of the latter correlations were suggested by theories introduced to explain previously established correlations, so that there has been a dialectical interplay between correlational and postulational procedures. (Thus we might not have noticed that litmus paper turns red in acid, until this hypothesis had been suggested by a complex theory relating the absorption and emission of electro-magnetic radiation by objects to their chemical composition; yet in principle this familiar correlation could have been, and, indeed, was, discovered before any such theory was developed.) Our contrast then, is between two ideal constructs: (a) the correlational and categorial refinement of the 'original image', which refinement I am calling the manifest image; (b) the image derived from the fruits of postulational theory construction which I am calling the scientific image.

It may be objected at this point that there is no such thing as the image of
man built from postulated entities and processes, but rather as many images as there are sciences which touch on aspects of human behaviour. And, of course, in a sense this is true. There are as many scientific images of man as there are sciences which have something to say about man. Thus, there is man as he appears to the theoretical physicist—a swirl of physical particles, forces, and fields. There is man as he appears to the biochemist, to the physiologist, to the behaviourist, to the social scientist; and all of these images are to be contrasted with man as he appears to himself in sophisticated common sense, the manifest image which even today contains most of what he knows about himself at the properly human level. Thus the conception of the scientific or postulational image is an idealization in the sense that it is a conception of an integration of a manifold of images, each of which is the application to man of a framework of concepts which have a certain autonomy. For each scientific theory is, from the standpoint of methodology, a structure which is built at a different ‘place’ and by different procedures within the intersubjectively accessible world of perceptible things. Thus ‘the’ scientific image is a construct from a number of images, each of which is supported by the manifest world.

The fact that each theoretical image is a construction on a foundation provided by the manifest image, and in this methodological sense pre-supposes the manifest image, makes it tempting to suppose that the manifest image is prior in a substantive sense; that the categories of a theoretical science are logically dependent on categories pertaining to its methodological foundation in the manifest world of sophisticated common sense in such a way that there would be an absurdity in the notion of a world which illustrated its theoretical principles without also illustrating the categories and principles of the manifest world. Yet, when we turn our attention to ‘the’ scientific image which emerges from the several images proper to the several sciences, we note that although the image is methodologically dependent on the world of sophisticated common sense, and in this sense, does not stand on its own feet, yet it purports to be a complete image, i.e. to define a framework which could be the whole truth about that which belongs to the image. Thus although methodologically a development within the manifest image, the scientific image presents itself as a rival image. From its point of view the manifest image on which it rests is an ‘inadequate’ but pragmatically useful likeness of a reality which first finds its adequate (in principle) likeness in the scientific image. I say, ‘in principle’, because the scientific image is still in the process of coming into being—a point to which I shall return at the conclusion of this chapter.

To all of which, of course, the manifest image or, more accurately, the pe-
rennial philosophy which endorses its claims, replies that the scientific image cannot replace the manifest without rejecting its own foundation.

But before attempting to throw some light on the conflicting claims of these two world perspectives, more must be said about the constitution of the scientific image from the several scientific images of which it is the supposed integration. There is relatively little difficulty about telescoping some of the 'partial' images into one image. Thus, with due precaution, we can unify the biochemical and the physical images; for to do this requires only an appreciation of the sense in which the objects of biochemical discourse can be equated with complex patterns of the objects of theoretical physics. To make this equation, of course, is not to equate the sciences, for as sciences they have different procedures and connect their theoretical entities via different instruments to intersubjectively accessible features of the manifest world. But diversity of this kind is compatible with intrinsic 'identity' of the theoretical entities themselves, that is, with saying that biochemical compounds are 'identical' with patterns of sub-atomic particles. For to make this 'identification' is simply to say that the two theoretical structures, each with its own connection to the perceptible world, could be replaced by one theoretical framework connected at two levels of complexity via different instruments and procedures to the world as perceived.

I distinguished above between the unification of the postulated entities of two sciences and the unification of the sciences. It is also necessary to distinguish between the unification of the theoretical entities of two sciences and the unification of the theoretical principles of the two sciences. For while to say that biochemical substances are complexes of physical particles is in an important sense to imply that the laws obeyed by biochemical substances are 'special cases' of the laws obeyed by physical particles, there is a real danger that the sense in which this is so may be misunderstood. Obviously a specific pattern of physical particles cannot obey different laws in biochemistry than it does in physics. It may, however, be the case that the behaviour of very complex patterns of physical particles is related in no simple way to the behaviour of less complex patterns. Thus it may well be the case that the only way in which the laws pertaining to those complex systems of particles which are biochemical compounds could be discovered might be through the techniques and procedures of biochemistry, i.e. techniques and procedures appropriate to dealing with biochemical substances.

There is, consequently, an ambiguity in the statement: The laws of biochemistry are 'special cases' of the laws of physics. It may mean: (a) biochemistry needs no variables which cannot be defined in terms of the variables of
atomic physics; (b) the laws relating to certain complex patterns of subatomic particles, the counterparts of biochemical compounds, are related in a simple way to laws pertaining to less complex patterns. The former, of course, is the only proposition to which one is committed by the identification of the theoretical objects of the two sciences in the sense described above.

Similar considerations apply, *mutatis mutandis*, to the physiological and biochemical images of man. To weld them into one image would be to show that physiological (particularly neurophysiological) entities can be equated with complex biochemical systems, and, therefore, that in the weaker sense, at least, the theoretical principles which pertain to the former can be interpreted as 'special cases' of principles pertaining to the latter.

More interesting problems arise when we consider the putative place of man as conceived in behaviouristics in 'the' scientific image. In the first place, the term 'behaviouristic psychology' has more than one meaning, and it is important for our purpose to see that in at least one sense of the term, its place is not in the scientific image (in the sense in which I am using the term) but rather in the continuing correlational sophistication of the manifest image. A psychology is behaviouristic in the broad sense, if, although it permits itself the use of the full range of psychological concepts belonging to the manifest framework, it always confirms hypotheses about psychological events in terms of behavioural criteria. It has no anxieties about the concepts of sensation, image, feeling, conscious or unconscious thought, all of which belong to the manifest framework; but requires that the occurrence of a feeling of pain, for example, be asserted only on behavioural grounds. Behaviourism, thus construed, is simply good sense. It is not necessary to redefine the language of mental events in terms of behavioural criteria in order for it to be true that observable behaviour provides evidence for mental events. And, of course, even in the common sense world, even in the manifest image, perceptible behaviour is the only *intersubjective* evidence for mental events.

Clearly 'behaviourism' in this sense does not preclude us from paying attention to what people say about themselves. For using *auto-biographical statements as evidence for* what a person is thinking and feeling is different from simply *agreeing with* these statements. It is part of the force of auto-biographical statements in ordinary discourse—not unrelated to the way in which children learn to make them—that, other things being equal, if a person says, 'I am in state $\psi$', it is reasonable to believe that he is in state $\psi$; the probability ranging from almost certainty in the case of, 'I have a toothache', to considerably less than certainty in the case of, 'I don't hate my brother'. The discounting of verbal and non-verbal behaviour as evidence is not limited to professional psychologists.
Thus, behaviourism in the first sense is simply a sophistication within the manifest framework which relies on pre-existent evidential connections between publicly observable verbal and non-verbal behaviour on the one hand and mental states and processes on the other, and should, therefore, be considered as belonging to the manifest rather than the scientific image as I have defined in these terms. Behaviourism in a second sense not only restricts its evidential base to publicly observable behaviour, but conceives of its task as that of finding correlations between constructs which it introduces and defines in terms of publicly accessible features of the organism and its environment. The interesting question in this connection is: 'Is there reason to think that a framework of correlation between constructs of this type could constitute a scientific understanding of human behaviour?' The answer to this question depends in part on how it is interpreted, and it is important to see why this is so.

Consider first the case of animal behaviour. Obviously, we know that animals are complex physiological systems and, from the standpoint of a finer-grained approach, biochemical systems. Does this mean that a science of animal behaviour has to be formulated in neurophysiological or biochemical terms? In one sense the answer is 'obviously not'. We bring to our study of animal behaviour a background knowledge of some of the relevant large-scale variables for describing and predicting the behaviour of animals in relation to their environments. The fact that these large-scale variables (the sort of thing that are grouped under such headings as 'stimulus', 'response', 'goal behaviour', 'deprivation', etc.) are such that we can understand the behaviour of the animal in terms of them is something which is not only suggested by our background knowledge, but is, indeed, explained by evolutionary theory. But the correlations themselves can be discovered by statistical procedures; and, of course, it is important to establish these correlations. Their discovery and confirmation by the procedures of behaviouristics must, of course, be distinguished from their explanation in terms of the postulated entities and processes of neurophysiology. And, indeed, while physiological considerations may suggest correlations be tested, the correlations themselves must be establishable independently of physiological consideration, if, and this is a 'definitional' point, they are to belong to a distinguishable science of behaviour.

Thus if we mean by 'earthworm behaviouristics' the establishing of correlations in large-scale terms pertaining to the earthworm and its environment, there may not be much to it, for a correlation does not belong to 'earthworm behaviouristics' unless it is a correlation in these large-scale terms. On the other hand, it is obvious that not every scientific truth about earthworms is a part of earthworm behaviouristics, unless the latter term is so stretched as to
be deprived of its distinctive sense. It follows that one cannot explain every­
thing an earthworm does in terms of earthworm behaviouristics thus defined.
Earthworm behaviouristics works within a background knowledge of ‘stan­
dard conditions’—conditions in which correlations in terms of earthworm
behaviour categories are sufficient to explain and predict what earthworms do
in so far as it can be described in these categories. This background knowl­
edge is obviously an essential part of the scientific understanding of what
earthworms do, though not a part of earthworm behaviouristics, for it is sim­
ply the application to earthworms of physics, chemistry, parasitology, medi­
cine, and neurophysiology.

We must also take into consideration the fact that most of the interesting
constructs of correlational behaviouristics will be ‘iffy’ properties of organ­
isms, properties to the effect that if at that time a certain stimulus were to oc­
cur, a certain response would be made. Thus, to use an example from another
field, we are able to correlate the fact that a current has been run through a
helix in which a piece of iron has been placed, with the ‘iffy’ property of being
such that if an iron filing were placed near it, the latter would be attracted.

Now it may or may not be helpful at a given stage of scientific develop­
ment, to suppose that ‘iffy’ properties of organisms are connected with states
of a postulated system of entities operating according to certain postulated
principles. It is helpful, if the postulated entities are sufficiently specific and
can be connected to a sufficient diversity of large-scale behavioural variables
to enable the prediction of new correlations. The methodological utility of
postulational procedures for the behaviouristics of lower organisms has, per­
haps, been exaggerated, primarily because until recently little was known in
neurophysiology which was suited to throw much light on correlations at the
large-scale level of behaviouristics. In human behaviouristics, however, the
situation has been somewhat different from the start, for an important fea­
ture of characteristically human behaviour is that any two successive pieces of
observable behaviour essentially involve complex, very complex, ‘iffy’ facts
about what the person would have said or done at each intervening moment if
he had been asked certain questions; and it happens that our background
knowledge makes reasonable the supposition that these ‘iffy’ facts obtain be­
cause an inner process is going on which is, in important respects, analogous to
overt verbal behaviour, and each stage of which would find a natural expression
in overt speech. This is a point to which I shall return later on.

Thus it does prove helpful in human behaviouristics to postulate an inner
sequence of events in order to interpret what could in principle be austerely
formulated as correlations between behavioural states and properties, includ­
ing the very important and, indeed, essential 'iffy' ones. But, and this is an important point, the postulated episodes are not postulated on neurophysiological grounds—at least this was not true until very recently, but because of our background knowledge that something analogous to speech goes on while people are sitting 'like bumps on a log'.

For our present purposes it does not make too much difference whether we say that human behaviouristics as such postulates inner speechlike processes, or that whatever their contribution to explanation or discovery, these processes fall by definition outside behaviouristics proper. Whether or not human behaviouristics, as a distinctive science, includes any statements about postulated entities, the correlations it establishes must find their counterparts in the postulational image, as was seen to be true in the case of the correlations established by earthworm behaviouristics. Thus, the scientific explanation of human behaviour must take account of those cases where the correlations characteristic of the organism in 'normal' circumstances break down. And, indeed, no behaviourist would deny that the correlations he seeks and establishes are in some sense the counterparts of neurophysiological and, consequently, biochemical connections, nor that the latter are special cases within a spectrum of biochemical connections (pertaining to human organisms), many of which are reflected in observable phenomena which, from the standpoint of behaviouristics, represent breakdowns in explanation. I shall, therefore, provisionally assume that although behaviouristics and neurophysiology remain distinctive sciences, the correlational content of behaviouristics points to a structure of postulated processes and principles which telescope together with those of neurophysiological theory, with all the consequences which this entails. On this assumption, if we trace out these consequences, the scientific image of man turns out to be that of a complex physical system.

V. The Clash of the Images

How, then, are we to evaluate the conflicting claims of the manifest image and the scientific image thus provisionally interpreted to constitute the true and, in principle, complete account of man-in-the-world?

What are the alternatives? It will be helpful to examine the impact of the earlier stages of postulational science on philosophy. Some reflections on the Cartesian attempt at a synthesis are in order, for they bring out the major stresses and strains involved in any attempt at a synoptic view. Obviously, at the time of Descartes theoretical science had not yet reached the neurophysiological level, save in the fashion of a clumsy promissory note. The initial
challenge of the scientific image was directed at the manifest image of inanimate nature. It proposed to construe physical things, in a manner already adumbrated by Greek atomism, as systems of imperceptible particles, lacking the perceptible qualities of manifest nature. Three lines of thought seemed to be open: (1) Manifest objects are identical with systems of imperceptible particles in that simple sense in which a forest is identical with a number of trees. (2) Manifest objects are what really exist; systems of imperceptible particles being 'abstract' or 'symbolic' ways of representing them. (3) Manifest objects are 'appearances' to human minds of a reality which is constituted by systems of imperceptible particles. Although (2) merits serious consideration, and has been defended by able philosophers, it is (1) and (3), particularly the latter, which I shall be primarily concerned to explore.

First, some brief remarks about (1). There is nothing immediately paradoxical about the view that an object can be both a perceptible object with perceptible qualities and a system of imperceptible objects, none of which has perceptible qualities. Cannot systems have properties which their parts do not have? Now the answer to this question is 'yes', if it is taken in a sense of which a paradigm example would be the fact that a system of pieces of wood can be a ladder, although none of its parts is a ladder. Here one might say that for the system as a whole to be a ladder is for its parts to be of such and such shapes and sizes and to be related to one another in certain ways. Thus there is no trouble about systems having properties which its parts do not have if these properties are a matter of the parts having such and such qualities and being related in such and such ways. But the case of a pink ice cube, it would seem clear, cannot be treated in this way. It does not seem plausible to say that for a system of particles to be a pink ice cube is for them to have such and such imperceptible qualities, and to be so related to one another as to make up an approximate cube. Pink does not seem to be made up of imperceptible qualities in the way in which being a ladder is made up of being cylindrical (the rungs), rectangular (the frame), wooden, etc. The manifest ice cube presents itself to us as something which is pink through and through, as a pink continuum, all the regions of which, however small, are pink. It presents itself to us as ultimately homogeneous; and an ice cube variegated in colour is, though not homogeneous in its specific colour, 'ultimately homogeneous', in the sense to which I am calling attention, with respect to the generic trait of being coloured.

Now reflection on this example suggests a principle which can be formulated approximately as follows:
If an object is *in a strict sense* a system of objects, then every property of the object must consist in the fact that its constituents have such and such qualities and stand in such and such relations or, roughly,

*every property of a system of objects consists of properties of, and relations between, its constituents.*

With something like this principle in mind, it was argued that if a physical object is *in a strict sense* a system of imperceptible particles, then it cannot as a whole have the perceptible qualities characteristic of physical objects in the manifest image. It was concluded that manifest physical objects are 'appearances to human perceivers of systems of imperceptible particles which is alternative (3) above.

This alternative, (3), however, is open to an objection which is ordinarily directed not against the alternative itself, but against an imperceptive formulation of it as the thesis that the perceptible things around us 'really have no colour'. Against *this* formulation the objection has the merit of calling attention to the fact that in the manifest framework it is as absurd to say that a visible object has no colour, as it is to say of a triangle that it has no shape. However, against the above formulation of alternative (3), namely, that *the very objects themselves* are appearances to perceivers of systems of imperceptible particles, the objection turns out on examination to have no weight. The objection for which the British 'common sense' philosopher G. E. Moore is directly or indirectly responsible, runs:

Chairs, tables, etc., as we ordinarily think them to be, can't be 'appearances' of systems of particles lacking perceptible qualities, because we *know* that there are chairs, tables, etc., and it is a framework feature of chairs, tables, etc., that they have perceptible qualities.

It simply *disappears* once it is recognized that, properly understood, the claim that physical objects do not really have perceptible qualities is not analogous to the claim that something generally believed to be true about a certain kind of thing is actually false. It is not the denial of a belief *within a framework*, but a challenge to the framework. It is the claim that although the framework of perceptible objects, the manifest framework of everyday life, is adequate for the everyday purposes of life, it is ultimately inadequate and should not be accepted as an account of what there is *all things considered*. Once we see this, we see that the argument from 'knowledge' cuts no ice, for the reasoning:
We know that there are chairs, pink ice cubes, etc. (physical objects). Chairs, pink ice cubes are coloured, are perceptible objects with perceptible qualities. Therefore, perceptible physical objects with perceptible qualities exist

operates within the framework of the manifest image and cannot support it. It fails to provide a point of view outside the manifest image from which the latter can be evaluated.

A more sophisticated argument would be to the effect that we successfully find our way around in life by using the conceptual framework of coloured physical objects in space and time, therefore, this framework represents things as they really are. This argument has force, but is vulnerable to the reply that the success of living, thinking, and acting in terms of the manifest framework can be accounted for by the framework which proposes to replace it, by showing that there are sufficient structural similarities between manifest objects and their scientific counterparts to account for this success.¹

One is reminded of a standard move designed to defend the reality of the manifest image against logically rather than scientifically motivated considerations. Thus it has been objected that the framework of physical objects in space and time is incoherent, involving antinomies or contradictions, and that therefore this framework is unreal. The counter to this objection has often been, not a painstaking refutation of the arguments claiming to show that the framework is incoherent, but rather something along the following lines:

_We know_ that this collision occurred at a different place and time than that collision.

Therefore, the statement that the first collision occurred at a different place and time from the other collision _is true._

Therefore, the statement that the two collisions occurred at different times and places _is consistent._

Therefore, statements about events happening at various times and places are, as such, consistent.

¹ It might seem that the manifest framework accounts for the success of the scientific framework, so that the situation is symmetrical. But I believe that a more penetrating account of theoretical explanation than I have been able to sketch in this chapter would show that this claim is illusory. I discuss this topic at some length in Chapter 4 ["The Language of Theories," _Science, Perception and Reality_].
This argument, like the one we have already considered, does not prove what it sets out to prove, because it operates within the framework to be evaluated, and does not provide an external point of view from which to defend it. It makes the tacit assumption that if a framework is inconsistent, its incoherence must be such as to lead to retail and immediate inconsistencies, as though it would force people using it to contradict themselves on every occasion. This is surely false. The framework of space and time could be internally inconsistent, and yet be a successful conceptual tool at the retail level. We have examples of this in mathematical theory, where inconsistencies can be present which do not reveal themselves in routine usage.

I am not, however, concerned to argue that the manifest image is unreal because ultimately incoherent in a narrowly conceived logical sense. Philosophers who have taken this line have either (a) left it at that (Hume; scepticism), or (b) attempted to locate the source of the inconsistency in features of the framework, and interpreted reality as an inadequately known structure analogous to the manifest image, but lacking just those features which are responsible for the inconsistency. In contrast to this, the critique of the manifest image in which we are engaged is based on logical considerations in a broader and more constructive sense, one which compares this image unfavourably with a more intelligible account of what there is.

It is familiar fact that those features of the manifest world which play no role in mechanical explanation were relegated by Descartes and other interpreters of the new physics to the minds of the perceiver. Colour, for example, was said to exist only in sensation; its esse to be percipi. It was argued, in effect, that what scientifically motivated reflection recognizes to be states of the perceiver are conceptualized in ordinary experience as traits of independent physical things, indeed that these supposed independent coloured things are actually conceptual constructions which ape the mechanical systems of the real world.

The same considerations which led philosophers to deny the reality of perceptible things led them to a dualistic theory of man. For if the human body is a system of particles, the body cannot be the subject of thinking and feeling, unless thinking and feeling are capable of interpretation as complex interactions of physical particles; unless, that is to say, the manifest framework of man as one being, a person capable of doing radically different kinds of things can be replaced without loss of descriptive and explanatory power by a postulational image in which he is a complex of physical particles, and all his activities a matter of the particles changing in state and relationship.

Dualism, of course, denied that either sensation or feeling or conceptual
thinking could in this sense be construed as complex interactions of physical particles, or man as a complex physical system. They were prepared to say that a chair is really a system of imperceptible particles which 'appears' in the manifest framework as a 'colour solid' (cf. our example of the ice cube), but they were not prepared to say that man himself was a complex physical system which 'appears' to itself to be the sort of thing man is in the manifest image.

Let us consider in more detail the Cartesian attempt to integrate the manifest and the scientific images. Here the interesting thing to note is that Descartes took for granted (in a promissory-note-ish kind of way) that the scientific image would include items which would be the counterparts of the sensations, images, and feelings of the manifest framework. These counterparts would be complex states of the brain which, obeying purely physical laws, would resemble and differ from one another in a way which corresponded to the resemblances and differences between the conscious states with which they were correlated. Yet, as is well-known, he denied that there were brain states which were, in the same sense, the cerebral counterparts of conceptual thinking.

Now, if we were to ask Descartes, 'Why can't we say that sensations "really are" complex cerebral processes as, according to you, we can say that physical objects "really are" complex systems of imperceptible particles?' he would have a number of things to reply, some of which were a consequence of his conviction that sensation, images, and feelings belong to the same family as believing, choosing, wondering, in short are low-grade examples of conceptual thinking and share its supposed irreducibility to cerebral states. But when the chips are down there would remain the following argument:

We have pulled perceptible qualities out of the physical environment and put them into sensations. If we now say that all there really is to sensation is a complex interaction of cerebral particles, then we have taken them out of our world picture altogether. We will have made it unintelligible how things could even appear to be coloured.

As for conceptual thinking, Descartes not only refused to identify it with neurophysiological process, he did not see this as a live option, because it seemed obvious to him that no complex neurophysiological process could be sufficiently analogous to conceptual thinking to be a serious candidate for being what conceptual thinking 'really is'. It is not as though Descartes granted that there might well be neurophysiological processes which are strikingly analogous to conceptual thinking, but which it would be philosophically incorrect to identify with conceptual thinking (as he had identified physical ob-
jects of the manifest world with systems of imperceptible particles). He did not take seriously the idea that there are such neurophysiological processes.

Even if he had, however, it is clear that he would have rejected this identification on the ground that we had a 'clear and distinct', well-defined idea of what conceptual thinking is before we even suspected that the brain had anything to do with thinking. Roughly: we know what thinking is without conceiving of it as a complex neurophysiological process, therefore, it cannot be a complex physiological process.

Now, of course, the same is true of physical objects. We knew what a physical object was long before we knew that there were imperceptible physical particles. By parity of reasoning we should conclude that a physical object cannot be a complex of imperceptible particles. Thus, if Descartes had had reason to think that neurophysiological processes strikingly analogous to conceptual thinking exist, it would seem that he should either have changed his tune with respect to physical objects or said that conceptual thinking really is neurophysiological process.

Now in the light of recent developments in neurophysiology, philosophers have come to see that there is no reason to suppose there can't be neurophysiological processes which stand to conceptual thinking as sensory states of the brain stand to conscious sensations. And, indeed, there have not been wanting philosophers (of whom Hobbes was, perhaps, the first) who have argued that the analogy should be viewed philosophically as an identity, i.e. that a world picture which includes both thoughts and the neurophysiological counterparts of thoughts would contain a redundancy; just as a world picture which included both the physical objects of the manifest image and complex patterns of physical particles would contain a redundancy. But to this proposal the obvious objection occurs, that just as the claim that 'physical objects are complexes of imperceptible particles' left us with the problem of accounting for the status of the perceptible qualities of manifest objects, so the claim that 'thoughts, etc., are complex neurophysiological processes' leaves us with the problems of accounting for the status of the introspectable qualities of thoughts. And it would seem obvious that there is a vicious regress in the claim that these qualities exist in introspective awareness of the thoughts which seem to have them, but not in the thoughts themselves. For, the argument would run, surely introspection is itself a form of thinking. Thus one thought (Peter) would be robbed of its quality only to pay it to another (Paul).

We can, therefore, understand the temptation to say that even if there are cerebral processes which are strikingly analogous to conceptual thinking, they
are processes which run parallel to conceptual thinking (and cannot be identified with it) as the sensory states of the brain run parallel to conscious sensation. And we can, therefore, understand the temptation to say that all these puzzles arise from taking seriously the claim of any part of the scientific image to be what really is, and to retreat into the position that reality is the world of the manifest image, and that all the postulated entities of the scientific image are 'symbolic tools' which function (something like the distance-measuring devices which are rolled around on maps) to help us find our way around in the world, but do not themselves describe actual objects and processes. On this view, the theoretical counterparts of all features of the manifest image would be equally unreal, and that philosophical conception of man-of-the-world would be correct which endorsed the manifest image and located the scientific image within it as a conceptual tool used by manifest man in his capacity as a scientist.

VI. The Primacy of the Scientific Image: A Prolegomenon

Is this the truth of the matter? Is the manifest image, subject, of course, to continual empirical and categorial refinements, the measure of what there really is? I do not think so. I have already indicated that of the three alternatives we are considering with respect to the comparative claims of the manifest and scientific images, the first, which, like a child, says 'both', is ruled out by a principle which I am not defending in this chapter, although it does stand in need of defense. The second alternative is the one I have just reformulated and rejected. I propose, therefore, to re-examine the case against the third alternative, the primacy of the scientific image. My strategy will be to argue that the difficulty, raised above, which seems to stand in the way of the identification of thought with cerebral processes, arises from the mistake of supposing that in self-awareness conceptual thinking presents itself to us in a qualitative guise. Sensations and images do, we shall see, present themselves to us in a qualitative character, a fact which accounts for the fact that they are stumbling blocks in the attempt to accept the scientific image as real. But one scarcely needs to point out these days that however intimately conceptual thinking is related to sensations and images, it cannot be equated with them, nor with complexes consisting of them.

It is no accident that when a novelist wishes to represent what is going on in the mind of a person, he does so by 'quoting' the person's thoughts as he might quote what a person says. For thoughts not only are the sort of things that find overt expression in language, we conceive of them as analogous to
overt discourse. Thus, thoughts in the manifest image are conceived not in terms of their ‘quality’, but rather as inner ‘goings-on’ which are analogous to speech, and find their overt expression in speech—though they can go on, of course, in the absence of this overt expression. It is no accident that one learns to think in the very process of learning to speak.

From this point of view one can appreciate the danger of misunderstanding which is contained in the term ‘introspection’. For while there is, indeed, an analogy between the direct knowledge we have of our own thoughts and the perceptual knowledge we have of what is going on in the world around us, the analogy holds only in as much as both self-awareness and perceptual observation are basic forms of non-inferential knowledge. They differ, however, in that whereas in perceptual observation we know objects as being of a certain quality, in the direct knowledge we have of what we are thinking (e.g. I am thinking that it is cold outside) what we know non-inferentially is that something analogous to and properly expressed by the sentence, ‘It is cold outside’, is going on in me.

The point is an important one, for if the concept of a thought is the concept of an inner state analogous to speech, this leaves open the possibility that the inner state conceived in terms of this analogy is in its qualitative character a neurophysiological process. To draw a parallel: if I begin by thinking of the cause of a disease as a substance (to be called ‘germs’) which is analogous to a colony of rabbits, in that it is able to reproduce itself in geometrical proportion, but, unlike rabbits, imperceptible and, when present in sufficient number in the human body, able to cause the symptoms of disease, and to cause epidemics by spreading from person to person, there is no logical barrier to a subsequent identification of ‘germs’ thus conceived with the bacilli which microscopic investigation subsequently discovers.

But to point to the analogy between conceptual thinking and overt speech is only part of the story, for of equally decisive importance is the analogy between speech and what sophisticated computers can do, and finally, between computer circuits and conceivable patterns of neurophysiological organization. All of this is more or less speculative, less so now than even a few years ago. What interests the philosopher is the matter of principle; and here the first stage is decisive—the recognition that the concept of a thought is a concept by analogy. Over and above this all we need is to recognize the force of Spinoza’s statement: ‘No one has thus far determined what the body can do nor no one has yet been taught by experience what the body can do merely by the laws of nature insofar as nature is considered merely as corporeal and extended’ (Ethics, Part Three, Prop. II (note)).
Another analogy which may be even more helpful is the following: suppose we are watching the telegraphic report of a chess game in a foreign country.

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>P–K3</td>
<td>P–QB3</td>
<td></td>
</tr>
</tbody>
</table>

And suppose that we are sophisticated enough to know that chess pieces can be made of all shapes and sizes, that chess boards can be horizontal or vertical, indeed, distorted in all kinds of ways provided that they preserve certain topological features of the familiar board. Then it is clear that while we will think of the players in the foreign country as moving kings, pawns, etc., castling and check-mating, our concepts of the pieces they are moving and the moving of them will be simply the concept of items and changes which play a role analogous to the pieces and moves which take place when we play chess. We know that the items must have some intrinsic quality (shape, size, etc.), but we think of these qualities as 'those which make possible a sequence of changes which are structurally similar to the changes which take place on our own chess boards'.

Thus our concept of 'what thoughts are' might, like our concept of what a castling is in chess, be abstract in the sense that it does not concern itself with the intrinsic character of thoughts, save as items which can occur in patterns of relationships which are analogous to the way in which sentences are related to one another and to the contexts in which they are used.

Now if thoughts are items which are conceived in terms of the roles they play, then there is no barrier in principle to the identification of conceptual thinking with neurophysiological process. There would be no 'qualitative' remainder to be accounted for. The identification, curiously enough, would be even more straightforward than the identification of the physical things in the manifest image with complex systems of physical particles. And in this key, if not decisive, respect, the respect in which both images are concerned with conceptual thinking (which is the distinctive trait of man), the manifest and scientific images could merge without clash in the synoptic view.

How does the situation stand in respect to sensation and feeling? Any attempt at identification of these items with neurophysiological process runs into a difficulty to which reference has already been made, and which we are now in a position to make more precise. This difficulty accounts for the fact that, with few exceptions, philosophers who have been prepared to identify conceptual thinking with neurophysiological process have not been prepared to make a similar identification in the case of sensation.

Before restating the problem let us note that curiously enough, there is
more similarity between the two cases than is commonly recognized. For it turns out on reflection that just as conceptual thinking is construed in the manifest image by analogy with overt speech, so sensation is construed by analogy with its external cause, sensations being the states of persons which correspond, in their similarities and differences to the similarities and differences of the objects which, in standard conditions, bring them about. Let us assume that this is so. But if it is so, why not suppose that the inner-states which as sensations are conceived by analogy with their standard causes, are in propria persona complex neurophysiological episodes in the cerebral cortex? To do so would parallel the conclusion we were prepared to draw in the case of conceptual thinking.

Why do we feel that there would be something extremely odd, even absurd, about such a supposition? The key to the answer lies in noticing an important difference between identifying thoughts with neurophysiological states and identifying sensations with neurophysiological states. Whereas both thoughts and sensations are conceived by analogy with publicly observable items, in the former case the analogy concerns the role and hence leaves open the possibility that thoughts are radically different in their intrinsic character from the verbal behaviour by analogy with which they are conceived. But in the case of sensations, the analogy concerns the quality itself. Thus a ‘blue and triangular sensation’ is conceived by analogy with the blue and triangular (facing) surface of a physical object which, when looked at in daylight, is its cause. The crucial issue then is this: can we define, in the framework of neurophysiology, states which are sufficiently analogous in their intrinsic character to sensations to make identification plausible?

The answer seems clearly to be ‘no’. This is not to say that neurophysiological states cannot be defined (in principle) which have a high degree of analogy to the sensations of the manifest image. That this can be done is an elementary fact in psycho-physics. The trouble is, rather, that the feature which we referred to as ‘ultimate homogeneity’, and which characterizes the perceptible qualities of things, e.g. their colour, seems to be essentially lacking in the domain of the definable states of nerves and their interactions. Putting it crudely, colour expanses in the manifest world consist of regions which are themselves colour expanses, and these consist in their turn of regions which are colour expanses, and so on; whereas the state of a group of neurons, though it has regions which are also states of groups of neurons, has ultimate regions which are not states of groups of neurons but rather states of single neurons. And the same is true if we move to the finer grained level of biochemical process.
Nor do we wish to say that the ultimate homogeneity of the sensation of a red rectangle is a matter of each physical particle in the appropriate region of the cortex having a colour; for whatever other difficulties such a view would involve, it doesn't make sense to say of the particles of physical theory that they are coloured. And the principle of reducibility, which we have accepted without argument, makes impossible the view that groups of particles can have properties which are not 'reducible to' the properties and relations of the members of the group.

It is worth noting that we have here a recurrence of the essential features of Eddington's 'two tables' problem—the two tables being, in our terminology, the table of the manifest image and the table of the scientific image. There the problem was to 'fit together' the manifest table with the scientific table. Here the problem is to fit together the manifest sensation with its neurophysiological counterpart. And, interestingly enough, the problem in both cases is essentially the same: how to reconcile the ultimate homogeneity of the manifest image with the ultimate non-homogeneity of the system of scientific objects.

Now we are rejecting the view that the scientific image is a mere 'symbolic tool' for finding our way around in the manifest image; and we are accepting the view that the scientific account of the world is (in principle) the adequate image. Having, therefore, given the perceptible qualities of manifest objects their real locus in sensation, we were confronted with the problem of choosing between dualism or identity with respect to the relation of conscious sensations to their analogues in the visual cortex, and the above argument seems to point clearly in the dualistic direction. The 'ultimate homogeneity' of perceptible qualities, which, among other things, prevented identifying the perceptible qualities of physical objects with complex properties of systems of physical particles, stands equally in the way of identifying, rather than correlating, conscious sensations with the complex neural processes with which they are obviously connected.

But such dualism is an unsatisfactory solution, because ex hypothesi sensations are essential to the explanation of how we come to construct the 'appearance' which is the manifest world. They are essential to the explanation of how there even seem to be coloured objects. But the scientific image presents itself as a closed system of explanation, and if the scientific image is interpreted as we have interpreted it up to this point the explanation will be in terms of the constructs of neuro-physiology, which, according to the argument, do not involve the ultimate homogeneity, the appearance of which in the manifest image is to be explained.

We are confronted, therefore, by an antinomy, either, (a) the neurophysio-
logical image is *incomplete*, i.e. and must be supplemented by new objects ('sense fields') which do have ultimate homogeneity, and which somehow make their presence felt in the activity of the visual cortex as a system of physical particles; or, (b) the neurophysiological image is complete and the ultimate homogeneity of the sense qualities (and, hence, the sense qualities, themselves) is *mere appearance* in the very radical sense of not existing in the spatio-temporal world at all.

Is the situation irremediable? Does the assumption of the reality of the scientific image lead us to a dualism of particles and sense fields? of matter and 'consciousness'? If so, then, in view of the obviously intimate relation between sensation and conceptual thinking (for example, in perception), we must surely regress and take back the identification of conceptual thinking with neurophysiological process which seemed so plausible a moment ago. We could then argue that although in the absence of other considerations it would be plausible to equate conceptual thinking with neurophysiological process, when the chips are *all* down, we must rather say that although conceptual thinking and neurophysiological process are each analogous to verbal behaviour as a public social phenomenon (the one by virtue of the very way in which the very notion of 'thinking' is formed; the other as a scientifically ascertained matter of fact), they are also *merely* analogous to one another and cannot be identified. If so, the manifest and the scientific conception of *both* sensations and conceptual thinking would fit into the synoptic view as parallel processes, a dualism which could only be avoided by interpreting the scientific image *as a whole* as a 'symbolic device' for coping with the world as it presents itself to us in the manifest image.

Is there any alternative? As long as the ultimate constituents of the scientific image are particles forming ever more complex systems of particles, we are inevitably confronted by the above choice. But the scientific image is not yet complete; we have not yet penetrated all the secrets of nature. And if it should turn out that particles instead of being the primitive entities of the scientific image could be treated as singularities in a space-time continuum which could be conceptually 'cut up' without significant loss—in *inorganic contexts, at least*—into interacting particles, then we would not be confronted at the level of neurophysiology with the problem of understanding the relation of *sensory consciousness* (with its ultimate homogeneity) to *systems of particles*. Rather, we would have the alternative of saying that although for many purposes the central nervous system can be construed without loss as a complex system of physical particles, *when it comes to an adequate understanding of the relation of sensory consciousness to neurophysiological process,*
we must penetrate to the non-particulate foundation of the particulate image, and recognize that in this non-particulate image the qualities of sense are a dimension of natural process which occurs only in connection with those complex physical processes which, when 'cut up' into particles in terms of those features which are the least common denominators of physical process—present in inorganic as well as organic processes alike—become the complex system of particles which, in the current scientific image, is the central nervous system.

VII. Putting Man in the Scientific Image

Even if the constructive suggestion of the preceding section were capable of being elaborated into an adequate account of the way in which the scientific image could recreate in its own terms the sensations, images, and feelings of the manifest image, the thesis of the primacy of the scientific image would scarcely be off the ground. There would remain the task of showing that categories pertaining to man as a person who finds himself confronted by standards (ethical, logical, etc.) which often conflict with his desires and impulses, and to which he may or may not conform, can be reconciled with the idea that man is what science says he is.

At first sight there would seem to be only one way of recapturing the specifically human within the framework of the scientific image. The categories of the person might be reconstructed without loss in terms of the fundamental concepts of the scientific image in a way analogous to that in which the concepts of biochemistry are (in principle) reconstructed in terms of subatomic physics. To this suggestion there is, in the first place, the familiar objection that persons as responsible agents who make genuine choices between genuine alternatives, and who could on many occasions have done what in point of fact they did not do, simply can't be construed as physical systems (even broadly interpreted to include sensations and feelings) which evolve in accordance with laws of nature (statistical or non-statistical). Those who make the above move can be expected to reply (drawing on distinctions developed in section I) that the concepts in terms of which we think of a person's 'character', or the fact that 'he could have done otherwise', or that 'his actions are predictable' would appear in the reconstruction as extraordinarily complex defined concepts not to be confused with the concepts in terms of which we think of the 'nature' of NaCl, or the fact that 'system X would have failed to be in state S given the same initial conditions' or that 'it is predictable that system X will assume state S given these initial conditions'. And I think
that a reply along these lines could be elaborated which would answer this objection to the proposed reconstruction of categories pertaining to persons.

But even if the proposed reconstruction could meet what might be called the 'free will' objection, it fails decisively on another count. For it can, I believe, be conclusively shown that such a reconstruction is in principle impossible, the impossibility in question being a strictly logical one. (I shall not argue the point explicitly, but the following remarks contain the essential clues.) If so, that would seem to be the end of the matter. Must we not return to a choice between (a) a dualism in which men as scientific objects are contrasted with the 'minds' which are the source and principle of their existence as persons; (b) abandoning the reality of persons as well as manifest physical objects in favour of the exclusive reality of scientific objects; (c) returning once and for all to the thesis of the merely 'calculational' or 'auxiliary' status of theoretical frameworks and to the affirmation of the primacy of the manifest image?

Assuming, in accordance with the drift of the argument of this chapter, that none of these alternatives is satisfactory, is there a way out? I believe there is, and that while a proper exposition and defense would require at least the space of this whole volume, the gist can be stated in short compass. To say that a certain person desired to do A, thought it his duty to do B but was forced to do C, is not to describe him as one might describe a scientific specimen. One does, indeed, describe him, but one does something more. And it is this something more which is the irreducible core of the framework of persons.

In what does this something more consist? First, a relatively superficial point which will guide the way. To think of a featherless biped as a person is to think of it as a being with which one is bound up in a network of rights and duties. From this point of view, the irreducibility of the personal is the irreducibility of the 'ought' to the 'is'. But even more basic than this (though ultimately, as we shall see, the two points coincide), is the fact that to think of a featherless biped as a person is to construe its behaviour in terms of actual or potential membership in an embracing group each member of which thinks of itself as a member of the group. Let us call such a group a 'community'. Once the primitive tribe, it is currently (almost) the 'brotherhood' of man, and is potentially the 'republic' of rational beings (cf. Kant's 'Kingdom of Ends'). An individual may belong to many communities, some of which overlap, some of which are arranged like Chinese boxes. The most embracing community to which he belongs consists of those with whom he can enter into meaningful discourse. The scope of the embracing community is the scope of 'we' in its most embracing non-metaphorical use. 'We', in this funda-
mental sense (in which it is equivalent to the French 'on' or English 'one') is no less basic than the other 'persons' in which verbs are conjugated. Thus, to recognize a featherless biped or dolphin or Martian as a person is to think of oneself and it as belonging to a community.

Now, the fundamental principles of a community, which define what is 'correct' or 'incorrect', 'right' or 'wrong', 'done' or 'not done', are the most general common intentions of that community with respect to the behaviour of members of the group. It follows that to recognize a featherless biped or dolphin or Martian as a person requires that one think thoughts of the form, 'We (one) shall do (or abstain from doing) actions of kind A in circumstances of kind C'. To think thoughts of this kind is not to classify or explain, but to rehearse an intention.2

Thus the conceptual framework of persons is the framework in which we think of one another as sharing the community intentions which provide the ambience of principles and standards (above all, those which make meaningful discourse and rationality itself possible) within which we live our own individual lives. A person can almost be defined as a being that has intentions. Thus the conceptual framework of persons is not something that needs to be reconciled with the scientific image, but rather something to be joined to it. Thus, to complete the scientific image we need to enrich it not with more ways of saying what is the case, but with the language of community and individual intentions, so that by construing the actions we intend to do and the circumstances in which we intend to do them in scientific terms, we directly relate the world as conceived by scientific theory to our purposes, and make it our world and no longer an alien appendage to the world in which we do our living. We can, of course, as matters now stand, realize this direct incorporation of the scientific image into our way of life only in imagination. But to do so is, if only in imagination, to transcend the dualism of the manifest and scientific images of man-of-the-world.

2. Community intentions ('One shall . . .') are not just private intentions ('I shall . . .') which everybody has. (This is another way of putting the above-mentioned irreducibility of 'we'.) There is, however, a logical connection between community and private intentions. For one does not really share a community intention unless, however often one may rehearse it, it is reflected, where relevant, in the corresponding private intention.
V

KANT
“... this I or he or it (the thing) which thinks ... .”

Immanuel Kant, *Critique of Pure Reason* (A346; B404)

1. The quotation which I have taken as my text occurs in the opening paragraphs of the Paralogisms of Pure Reason in which Kant undertakes a critique of what he calls 'Rational Psychology'. These paragraphs are common to the two editions of the *Critique of Pure Reason*, and the formulations they contain may be presumed to have continued to satisfy him—at least as introductory remarks.

2. The paragraph in which the quoted passage occurs opens with a reference to “a transcendental psychology” which, “wrongly regarded as a science of pure reason,” is characterized by “four paralogisms ... concerning the nature of our thinking being”. In other words, 'Rational Psychology' is a distorted version of an enterprise which, properly understood, does belong in the *Critique*, but only in the framework of the principles expounded in the Transcendental Analytic.

3. Notice that the subject matter of transcendental psychology is characterized, by implication, as “the nature of our thinking being”. If we permit ourselves to use the referring expression ‘I’ as a common noun, meaning roughly whatever can be referred to by an appropriate tokening of ‘I’—much as philosophers in the Aristotelian tradition speak of primary substances as *thises*—we can rephrase the question to read ‘What sort of being is an I?’

4. More accurately, ‘What sort of being can we know an I to be without any appeal to experience?’. The question might also be rephrased, with still
less ambiguity, as ‘What can we know \textit{a priori}, through sheer reflection on the relevant concepts, about the sort of being an I is?’.

5. Now if the relevant concepts are taken to include such concepts as that of a “necessary condition of the possibility of experience”; not to go further afield, there is much that can be known \textit{a priori} about an I. In this restricted sense there is indeed, according to Kant, a body of knowledge which can be called ‘transcendental psychology’. Rational Psychology, on the other hand, takes the relevant concepts to be that of an I and that of a thought and purports to tell us what an I is “in itself”. In other words, as Kant puts it, the rational psychologist takes as his “sole text” (A343; B401) “the proposition ‘I think’” (A348; B405) and seeks, by explicating it, to answer certain traditional metaphysical questions regarding “the nature of our thinking being”.

6. Now it is no news that Kant denies that Rational Psychology can achieve its goal. On the other hand, his argument shares many of the obscurities of the transcendental deduction of the categories—to which it is closely related—and has been the subject of almost as many controversies and misunderstandings.\footnote{It is therefore interesting to note that in the second edition the chapter on the paralogisms, like the transcendental deduction, was completely rewritten and transformed from a groping sequence of arguments designed as much to persuade as to demonstrate, into a relatively brief argument, confident in tone, which marches along in singleminded style from beginning to end. This development is epitomized by the transformation of the fourth paralogism into the second edition Refutation of Idealism.} Thus, the concept of the “transcendental unity of apperception” plays a key role in both the Deduction and the Paralogisms, and, while it is, perhaps, the central concept of the \textit{Critique}, only recently has British and American philosophy freed itself sufficiently, first from its positivistic heritage, then from its anti-systematic bias, to be in a position to translate it into congenial terms.

7. I shall not undertake any such translation on the present occasion, for it would take us into the technicalities of epistemic logic—a phrase which, incidentally, is on its way to becoming the contemporary counter-part of Kant’s transcendental logic.\footnote{Hector-Neri Castaneda’s highly original study of the logic of ‘I’ (and cognate expressions) in epistemic contexts is bound to develop, as he himself realizes, in a Kantian direction.} I shall write in the traditional idiom, leaving for another occasion this more ambitious enterprise. Let me begin, therefore, by pointing out that the transcendental unity of apperception plays two closely related roles in the \textit{Critique}. In the first place it is an \textit{unrestricted} principle in the philosophy of mind, which transcends the distinction between the noumenal and the phenomenal self, to the effect that
an I thinks of a manifold

is not to be confused with

an I has a manifold of thoughts.

Thus, an I thinking that Socrates is wise is not to be confused with the “coexistence” in the I of a thought of Socrates and a thought of wisdom. Nor, for that matter, a thinking that p and q with a thinking that p and a thinking that q.

8. This principle is, of course, compatible with the idea that a thinking that Socrates is wise unifies, in a unique way, a thinking of Socrates with a thinking of wisdom. The ways in which many thinkings constitute one thinking are the “forms of thought”, e.g. the categories. The recognition of the radical difference between categorial forms and matter-of-factual relationships is the *pons asinorum* of the Critical Philosophy.

9. In epistemology, which, as concerned with good thinking in its various modes, is *a fortiori* concerned with thinking as such, this general principle becomes the epistemic principle that any true content of thought, e.g. that Socrates is wise, must, in principle, be an element in a certain kind of larger context, e.g.

an I thinks the true thought of a world in which Socrates is wise.

Roughly, the form of empirical knowledge is: an I thinking (however schematically) the thought of a temporal system of states of affairs to which any actual state of affairs belongs.3

10. Thus, in the Transcendental Analytic, the above unrestricted principle about thinking provides the clue to the form of the phenomenal world. This world is a represented world, and Space, Time, and the Categories are its “forms”. These latter, however, are no mere collection of “forms of experience”. They are but moments (to use Hegel's term) in its larger form:

An I thinking a complex spatial-temporal-causal system of states of affairs—including, say, α and β (the synthetic unity of apperception).

3. For an elaboration of the ontological framework which supports this analysis see my essay "Some Remarks on Kant's Theory of Experience" [reprinted as Chapter 16 of this volume], *Journal of Philosophy*, 64, 1967, pp. 633–648; also Chapter 2 of *Science and Metaphysics* (London and New York, 1968).
From this synthetic unity, as Kant points out, it follows analytically that

The I which thinks $\alpha$ is identical with the I which thinks $\beta$ (the analytic unity of apperception).

11. A moment ago I said that for Kant the sole text of rational psychology is the proposition "I think". He brings this claim to sharper focus by writing,

We can assign no other basis for this teaching than the simple, and in itself completely empty, representation 'I'.

To which he adds that

We cannot even say that this is a concept, but only that it is a bare consciousness which accompanies all concepts. Through this I or he or it (the thing) which thinks, nothing further is represented than a transcendental subject of thoughts = $X$. It is known only through the thoughts which are its predicates, and of it, apart from them, we cannot have any concept whatsoever. (A345-346; B404)

12. Now it has sometimes been thought that in this passage Kant is relying on a "substratum" theory of predication, a theory which sees every predicate in the light of the schema

$$x \text{ has attribute } A$$

and which therefore rebuffs every attempt to answer the question 'What is it which has $A$?'—thus "It is a stone which has $A$"—by transforming the predicate—in this case, 'is a stone'—in its turn into

$$x \text{ has attributes } A_1, \ldots A_j$$

a procedure which characteristically (and with flagrant inconsistency) culminates by permitting only the metaphysical predicate 'is a bare particular', asserting that

It is bare particulars which have empirical attributes.

13. Kant most certainly does not make this mistake. He is not above speaking in scholastic vein of adjectival predicates and even verbs as true of objects by virtue of the "inherence" in them of "accidents". But he nowhere implies that the subject in which these accidents inhere is a bare particular. And he explicitly warns against construing predication in terms of a
relation of inherence between accidents and substance, insisting rather, that a so-called accident, instead of being an entity, is "the way in which the existence of a substance is determined" (italics mine). While this does not amount to an adequate theory of predication it is certainly on the right track.

14. Thus, Kant’s contention in the passage we are examining rests not on a general theory of predication, but on the specific nature of the representation ‘I’. He tells us, in effect, that the conceptual burden of the “proposition ‘I think’” is carried by the verb ‘to think’. He means that the only answer to the question

What sort of being is an I which thinks?

which is yielded by a priori reflection is

a thinker.

15. By contrast, consider the statement

This moves.

If asked

What sort of thing is a this which moves

we can answer not just

a mover

i.e. a thing capable of motion, but by using such sortals as ‘a car’ or, which, perhaps, comes to the same thing, ‘a missile’. We can draw a meaningful distinction between what a material object is and what it does, or is capable of doing. For Kant, the ultimate cash value of what a material object is, is to be given in terms of intensive and extensive physical magnitudes, roughly in terms of the traditional “primary qualities” of which the core consists of geometrical attributes constructible in external intuition.

16. Kant’s point, then, is that our concept of an I is the concept of that which thinks, in the various modes of thinking, or, perhaps, to use a more general expression, that which represents, in the various modes of representing. Thus, we cannot answer

What is it that represents?

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4. A187; B230. See also A182, the first edition formulation of the First Analogy.
save, tautologously, by

a representer.

17. Now before I go on to spell out what I think to be important about this, it should noted that Kant did consider a less empty answer to the question 'What sort of being is it that thinks?'; namely,

a person

where a person is construed not as a team, but as a single subject which has both mental and non-mental attributes. Kant does not reject this answer without qualification. For he specifically tells us that it might be true of the noumenal self. On the other hand, he does reject this answer as an account of the empirical self, on the ground that all the attributes of the objects of external perception must, as indicated above, be construed in terms of primary qualities. Although this answer conflicts with the flexibility of his concept of "matter", and his sensitivity to the possibilities of sophisticated physical theory, he never seriously questions it.

18. Thus, in the world of appearance, the I which thinks is not, as such, identical with the I which runs.\(^5\) It is therefore tempting to say that Kant rejects a Strawsonian account of persons as objects of experience in favor of a cartesian dualism. But although his account is dualistic, it is not cartesian. Descartes takes it for granted that "res cogitans" is a proper sortal concept, i.e. that we have a positive, indeed adequate, idea of what it is to be a mind. This conviction underlies his argument for a real distinction between mind and body. Kant, on the other hand, denies that we have a positive, let alone adequate, idea of mind as a sort of being. There was a time, he tells us, when it seemed to him "so plausible" that "we can form judgments about the nature of a thinking being, and can do so from concepts alone" (A399). But no longer.

19. One important ground he has for saying this emerges when we consider what he means by denying that the categories are innate concepts. Many philosophers who agree with Kant in rejecting such innateness have held, for example, that the category of substance is an empirical concept formed by abstraction either from perceived objects or the introspected self. Representational theories of perception undercut the former alternative, suggesting that perception presupposes, rather than accounts for, a concept of sub-

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\(^5\) Kant, of course, would not deny that the term 'I' might have, in this context, a derivative sense in which it refers to a psychological team.
stance. But do we not directly experience ourselves as substances? And is not this experience the source of our concept of substance? Such a claim, however, would imply that we experience the mind in the first instance as being of a determinate sort or species of substance, thus as being a "mental substance" or mind, and only subsequently come to see it most generically as substance.

20. Kant's revolutionary move was to see the categories as concepts of functional roles in mental activity. Categorial concepts are not, indeed, innate. They are formed by abstraction, not, however, by reflecting on the self as object, but by reflecting on its conceptual activities. The ability to engage in these activities is, indeed, for Kant, innate; but this does not require that concepts of these activities be innate. Even before entering his Critical period, Kant had come to think of categorial concepts as derived by reflecting on the nature of mental activity. The crystalization of this insight into the Metaphysical Deduction required only a perspicuous classification of the forms of mental activity.

21. The idea that concepts pertaining to thinking are essentially functional in character raises the question: What non-functional characterization can be given of the processes which embody these functions. To answer "They are thoughts" is to move in a circle. Kant's answer is, essentially, that we are not able to give a non-functional characterization. We don't know these processes save as processes which embody these functions. A materialist, in some sense of this protean term, might agree with Kant that concepts pertaining to thought are functional in character, but claim that, although common sense is unable to give a non-functional characterization of thoughts, theoretical science will ultimately do this in terms of neurophysiology. Kant, of course, denies that scientific theory can answer the question, for he conceives of even sophisticated scientific theory as restricted to appearances construed as above. Hence his ignorabimus.

6. For an elaboration of this point see the paper referred to in note 3 above. See also "Towards a Theory of the Categories", in Theory and Experience (Amherst, Mass., 1970).

7. Kant clearly does not reject abstractionism lock, stock and barrel, as do many of his contemporary disciples. The task of assessing the truth contained in traditional abstractionist theories of concept formation is still on the philosophical agenda.

8. Kant, of course, grants that thought has "content" as well as "form"—but the content consists of concepts, for example, empirical concepts—and these in their turn are "functions": When we think of a shape, e.g. of a triangle, our thought, needless to say is not triangular—it contains the concept of a triangle, itself a rule or function by which the mind can generate representations of triangles (A141; B180). For an elaboration of this point see pp. 639–640 of the paper referred to in note 3.
22. To sum up, Kant is claiming that

(1) the I is a being of unknown species which thinks;

(2) the I doesn’t simply “have thoughts”: it *thinks*—but in knowing *that* it thinks, and *what* it thinks, we are not knowing what sort of being it is.

Yet,

(3) the I must have a nature—what it is we cannot know, though we *can* know that it is not material substance.

23. Nevertheless, although the I as an object of experience is not a material substance, Kant insists, as pointed out above, that *as noumenon* the I may be the same being as that which appears to us as our bodies. He tells us that

The transcendental object is equally unknown in respect to inner and outer intuition. (A373)

and suggests the possibility that

The substance which in relation to outer sense possesses extension is in itself the possessor of thoughts, and that these thoughts can by means of its own inner sense be consciously represented. (A365)

In other words, the being which thinks might, as noumenon, be a Strawsonian person which, in addition to thinking, has the noumenal counterparts of physical attributes. If so, he tells us,

the thesis that only souls (as particular kinds of substances) think would have to be given up; and we should have to fall back on the common expression that men think . . . (A359–360)

According to this hypothesis, a mind would not be an ultimate logical subject, but an aspect of a more fundamental logical subject—the person.

24. Kant goes even further and suggests that the noumenal person might be a composite being. The way is prepared for these possibilities by his critique of the first two paralogisms. He detects in these arguments a common form:

The *representation of the I* is not *the representation of*

(a) an aspect of something more basic,

(b) a composite of parts;
Therefore, the I is not
(a) an aspect of something more basic,
(b) a composite of parts.9

25. The Third Paralogism, that of personality, i.e. of the identity of a person throughout Time, elevates the identity which is implied by the concept of a person as having true and false beliefs (e.g. memory) about his own states at various times into the identity of an abiding mental substance. Kant argues, per contra, that

The identity of the consciousness of myself at different times is ... only a formal condition of my thoughts and their coherence, and in no way proves the numerical identity of my subject. (A363)

26. Kant, of course, means that it does not prove the numerical identity of the noumenal self. In other words, he suggests the possibility that successive acts of thought might belong together, as acts of the same I, and yet be successive states of different noumenal subjects.

Despite the logical identity of the 'I', such a change may have occurred in it as does not allow of the retention of its identity, and yet we may ascribe to it the same-sounding 'I', which in every different state, even in one involving change of the [thinking] subject, might still retain the thought of this preceding subject and so hand it over to the subsequent subject. (A363)

27. When Kant speaks of "such a change ... as does not allow the retention of its identity" he is tacitly contrasting "ontological identity proper"—in this case, the identity of a basic logical subject with respect to its successive states—with the identity appropriate to entia rationis—in this case, the identity of a series.10 He is suggesting that the "logical identity" of the I through Time, which is an analytic implication of the knowledge of oneself as thinking different thoughts at different times, is compatible with the idea that these thoughts are successive states of different ultimate subjects. Compare the materialist who argues that the thoughts which make up the history of an I are states of systems of material particles which are constantly losing old and gaining new constituents.11

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10. The temptation to speak of different kinds of identity is endemic in philosophy. It is clear, in any case, that the term 'identity' is appropriately used in radically different contexts.

11. The reader should ponder the fascinating footnote which Kant appends to the passage
28. Thus, although I do not represent my successive thoughts as successive states of a series of different subjects of attributes, and do not need to do so in order to know my "logical identity" through the period in which these thoughts occur, a being with suitable cognitive powers might know me to be such a series. This insight, however, would not require him to say that my knowledge of myself as logically identical through the period of time in question is an illusion, but only that the logical identity of the I as I represent it, is not an adequate conceptualization of "the nature of our thinking being".

29. Exposed as a fallacy, the Third Paralogism has the form:

The representation of the successive states of the I is not the representation of successive states of a series of different subjects of attributes. Therefore, the successive states of the I are not successive states of a series of different subjects of attributes.  

30. Now the most intriguing feature of the situation resulting from Kant's analysis of the Paralogisms is that it opens the way for him to hold (if he were to relax his restrictions on what attributes an object of external perception can have),

(1) that the empirical self—the I which we experience as thinking in time—is an aspect of a perceptible object which, as having physical attributes, is a body (i.e. that the logical subject which, as representing and capable of representing, is a being which thinks is identical with the being which, as having material attributes, is the body);

(2) that the empirical I which, in so far forth as it is represented as thinking, is not represented as a composite, is nevertheless identical with (i.e. is) a composite physical object.

For, according to the above analysis, a logical subject which is not represented as an aspect of something more basic, may be an aspect of something more basic, and a logical subject which is not represented as composite may nevertheless be composite.

quotation above. Furthermore, the Third Paralogism as a whole should be carefully studied by those who are tempted to think that because the noumenal realm is not in Newtonian Time, it is therefore "unchanging" or "static". Of course, the only concept of change we can render intuitive, according to Kant, is temporal alteration. See also note 17 below.

12. The phrase 'different subjects of attributes' is essential. For, as I pointed out on p. 251 of the essay referred to in note 9, the idea that the I might be a series must not be confused with the idea that it might be a series of I's.
31. As a matter of fact, there are important considerations which push Kant toward a "materialist"—though not "reductively" materialist—interpretation of the phenomenal world. Thus, consider the First Analogy:

In all change of appearances, substance is permanent. Its quantum in nature is neither increased nor diminished. (B224)

Kant does not speak here of "outer appearances", but "appearances" tout court, not of transitory material states, but of transitory states sans phrase. And the argument which follows is equally general. It seeks to establish that matter is the correlate, in the world of experience, of Time, and that its permanence represents the permanence of Time. Time, then, is everlasting.

32. Now if Time were a transcendentally real "container", it might be everlasting, and yet, in principle, be occupied for only a finite stretch, a period preceded by empty time and followed by empty time. But although Kant thinks of Time as an individual in which ordinary things come into being, endure, change, and cease to be, he rejects the idea that the existence of Time is independent of the existence of things in Time. In this sense he is an Aristotelian, holding that Time is ens rationis which constitutes the framework in which change is measured with respect to before and after. This Aristotelian theme, however, is combined with the claim (the crux of the Aesthetic) that "before" and "after" themselves cannot be understood apart from Time.

33. Aristotle argued from the everlastingness of Time to the everlastingness of First Matter. Roughly, if portions of First Matter could cease to exist, then all First Matter could cease to exist—but then Time would cease to exist. Time, as everlasting, cannot cease, so First Matter cannot. Kant's argument is essentially the same. This is why it is essential to realize that when Kant uses the term 'substance' in the First Analogy, he is using it in Aristotle's sense of First Matter. Changeable substances (in the plural) are, for Aristotle, portions of First Matter variously qualified by powers and potentialities ranging from those characteristic of the elements to those characteristic of rational animals.

34. Descartes' res extensa is the conceptual heir of Aristotle's First Matter,

13. In A: All appearances contain the permanent (substance) as the object itself, and the transitory as its mere determination, that is, as a way in which the object exists. (A182)

14. Kant does on occasion, speak of time as always changing. When he does so, however, he has in mind what McTaggart calls A-determinations. And while Time is, in this sense, continually changing, it abides, as numerically identical through these changes.

15. For a discussion of the way in which Kant's treatment of time runs together different strata of temporal concepts see Science and Metaphysics, pp. 57–59.
though, like Kant after him, Descartes denies that powers and acts pertaining to representation can characterize portions of *res extensa* or First Matter.

35. It is instructive, in this context, to note that, contrary to what we might expect, Kant relates his categories of substance and attribute to categorical judgment. He does, indeed, characterize the latter as involving the “relation” of subject to predicate, but whereas we tend to think of the category of substance as peculiarly related to the *singular* subject-predicate judgment, thus judgments of the form

\[
S \text{ is } P,
\]

(where ‘S’ is a singular referring expression, and ‘P’ a predicate), which we tend to assimilate to the form

\[
x \text{ is } f,
\]

Kant explicitly says that in the categorical judgment we consider *two* concepts. Of course, singular referring expressions can be said to stand for “individual concepts”. Thus Kant’s formulation does not exclude the cases

\[
This \ S \text{ is } P
\]

\[
A \ text{ certain} \ S \text{ is } P.
\]

But, and this is the crucial point, it does *not* exclude the case

\[
All \ S \text{ is } P.
\]

And, as is well known, traditional logic tended to view the singular categorical judgment as a special case of the universal.

36. The point at which I am driving is that the concept of substance as that of a subject which is not also a predicate has the *general form* of the categorical judgment as its context. It is the concept of a term, ‘S’, which stands, indeed, for a *concept*, and thus occurs appropriately in the context

\[
\text{All } \begin{cases} \text{Some} \text{ } S \text{ is } P \\ \text{This} \end{cases}
\]

but *not* appropriately in the predicate position, thus

\[
\text{All } \begin{cases} \text{Some} \text{ } S' \text{ is } S \\ \text{This} \end{cases}
\]
In one sense 'S' is a predicate, for it, or something like it, is predicable of individuals, but in the sense of belonging in the predicate position of a categorical judgment, it is not a predicate.

37. This is exactly the role played by a "stuff" predicate which stands for First Matter in Aristotle's system. Thus, if Fire is First Matter,

\[
\begin{align*}
\text{All} & \quad \text{Some} & \quad \text{(portion(s) of) Fire is P} \\
\text{This} & \quad \text{(portion(s) of) S'} & \quad \text{is fiery.}
\end{align*}
\]

is appropriate, but not

\[
\begin{align*}
\text{All} & \quad \text{Some} & \quad \text{(portion(s) of) S' is fiery.}
\end{align*}
\]

38. Now prima facie it was open to Kant (as it was to Aristotle) to hold that a person is a portion of First Matter which has powers not only on the corporeal level, but also those which pertain to life and mind. As a matter of fact, the explicit argument of the First Analogy requires him to do so, for he speaks of substance as "the substratum of all change" (B225), not just of material change, and tells us that "all change or co-existence must, in being apprehended, be perceived in this substratum" which is "the substratum of all that is real" (B225). Again: "... all that belongs to existence can be thought of only as a determination of substance ..." (B225). The argument is studded with similar passages.

39. This clearly defined line of thought confronts Kant with a dilemma. If all change is a change of (portions of) material substance, then either acts of representing are states of material substance, or the states of the empirical self are not "changes" nor "alterations", nor "in Time". No other alternative seems to be permitted by the thesis that

All existence and all change in Time have thus to be viewed as simply a mode of the existence of that which remains and persists. (A183; B227)

40. Suppose Kant had taken a "materialistic" line with respect to the phenomenal world. In doing so he would be construing mental acts as objects of empirical knowledge to be states of organized portions of matter. They would either be physical states in the tough sense that they are, in principle, reducible to "primary qualities", or, if he relaxes this requirement, the broader sense that they belong to the causal order. The first alternative would constitute a
“reductive” materialism. It is so radically incompatible with Kant’s account of inner experience that there is little point in considering it. The second has more to recommend it, in that it allows for certain objects in the phenomenal world to have the powers of sensory and perceptual consciousness, and of conceptual thinking. These Strawsonian objects, however, would be “appearances” belonging to a deterministic natural order.

41. Instead, however, of opting for a Strawsonian account of the empirical self, Kant opts for a dualistic model. He must therefore explain how alterations which are not states of corporeal substance can nevertheless be located in an objective time order. This he does by arguing that the temporal objectivity of the mental is somehow derivative from, or dependent on, the objective order of material events.\(^\text{16}\)

42. In order to understand the dependent status of the temporal objectivity of the empirical self, we must take into account Kant’s theory of self knowledge, for the empirical self is the self as known.

43. The first thing to note is that according to Kant introspective knowledge involves an element of passivity. Kant clearly thinks of the self as passive with respect to the representations of outer sense. He also thinks that an analogous passivity is involved in what he calls, using Locke’s dangerous metaphor, “inner sense”. Here also the mind is caused\(^\text{17}\) to represent something; only this time, the “cause” is one of our own states. Schematically, the noumenal state of thinking \(that\ S\ is\ P\) causes one to represent \(that\ one\ is\ thinking\ that\ S\ is\ P\). The mind, by being in a certain state, “affects” itself. The “affecting” may involve a certain agency, as when we seek to find out what we are thinking. In this sense the mind both “affects” and “is affected by” itself. (Compare the “agency” of \textit{looking} with the passivity involved in \textit{seeing}.) I shall return to this “agency” shortly. But abstracting from it for the moment, we can say that in “inner sense” or, better, “inner perception”, one is caused to have representations of the form

\[
\text{I have just (a moment ago) represented such and such.}^{\text{18}}
\]

\(^{16}\) This, of course, is the explicit thesis of the second edition Refutation of Idealism, and, somewhat less obviously—because the connection between “objective time order” and “events in Material substance” stands out less clearly—of the first edition Deduction.

\(^{17}\) Notice, of course, that the causation involved is \textit{noumenal causation}, the concept of which has as its core the purely logical concepts of ground and consequence. While it would obviously be a mistake to identify the concept of noumenal causation with that of the \textit{generic} notion of ground and consequence, for noumenal causation must be a \textit{species} of this relationship, we do not have intuitive content in terms of \textit{which} to give the \textit{differentia} of this species, as we do in the case of the schematized category of causation applicable to the phenomenal world. Thus we do not have an \textit{adequate}, but at best an \textit{analogical}, concept of noumenal causation. Another example of such causation is the impact of things in themselves on outer sense which Kant calls “\textit{affizieren}”.

\(^{18}\) Notice that the metaphor of “inner sense” should not lead us to think that \textit{inner sense} gives
44. Now we saw that the argument of the First Analogy requires the empirical self to be a portion of corporeal substance endowed with life and thought. But even if the implications of the First Analogy are evaded, the other two analogies require that the states of the empirical self belong to a deterministic system of events, the core of which consists of material events occurring to interacting material substances.

45. I pointed out a moment ago that in inner perception we are caused to represent ourselves as in a temporally located state of representing something. But notice that there is another way in which "causation" can come into the picture. In addition to the inner perception of the empirical self being "noumenally" caused, the empirical self as an object of knowledge may be represented as passive, i.e. as in a state which it is caused to be in by something other than itself.

46. In principle, it would seem, we could be noumenally "caused" to represent the empirical self as active, i.e. as in states which it is not caused to be in by something other than itself. It is important, therefore, to see that Kant seems to take it for granted that since the states of the empirical self belong to the order of nature, they must be states with respect to which the empirical self is passive, states which it is caused to have.

47. Now this seems to be a confusion—though one which is by no means limited to Kant. That it is a confusion is shown by the fact that even with respect to purely physical phenomena, the idea that the state of a system is determined by a preceding state of the system is not the same as the idea of a state which the system is caused to have, i.e. a state with respect to which the system is passive.

48. In the Third Antinomy, Kant speaks of the causality of nature as one in which "the causality of the cause is caused". This phrase occurs a number of times, and is echoed, for example, in the Fundamental Principles of the Metaphysic of Morals, where he writes

Physical necessity is a heteronomy of the efficient causes, for every effect is possible only according to this law, that something else determines the efficient cause to exert its causality. (Abbott edition, p. 65)

us "inner sensations": If we take the metaphor too seriously, we are likely to think that what we know in inner perception stands to the noumenal states of the noumenal self, as the colored and shaped objects of outer perceptions stand to the unknowable attributes of things in themselves. Actually, what we know in the inner perception of our thoughts differs from the corresponding reality only (1) by being temporal, located in Time; (2) by being conceived in purely functional terms, that is to say by failing to reveal the contentual character of noumenal thinking.
The picture is that all natural objects are passive with respect to their states—so that if they cause other things to change, they do so because they have, in their turn, been caused by other things to be in the states by virtue of which they are causes.

49. Yet the fact that a state of a system is a physically necessary consequence of an antecedent state means merely that relative to this antecedent state it could not have been the case that the system did not come to be in its subsequent state. It does not mean that the system was caused to be in its present state by a "foreign cause".  

"The past is not something with respect to which we are passive." To be sure, the explanation of why a system is in a certain state may largely lie in what other things have done to it in the past. But the very existence of the concept of a closed system makes it clear that it would be a mistake to suppose that the explanation of the present state of such a system lies entirely in "other things".

50. If I am right, Kant, instead of taking it to be a simple consequence of the fact that the empirical self belongs to the order of nature, would have to give some special reason for holding that the self known in inner perception is essentially passive with respect to "foreign causes".

51. It is not, however, difficult to find just such an argument, for once Kant rejects the Strawsonian account of the empirical self, yet continues to think of material substance as the embodiment of objective temporal order, he is committed to the view that the states of the empirical self borrow their temporal objectivity from states of material substance. And the most obvious way of developing such a view is by construing these states of the empirical self as states which it is caused to be in by material substance, thus, for example, perceptual states. Indeed there is a temptation to construe it exclusively in terms of perceptual states.

52. Now it is certainly reasonable to say that a model which contains a core of passivity or being acted upon is appropriate to perceptual representation. Yet what of our knowledge of ourselves as philosophizing, as cooking up plots for novels or reflecting on what to do? Surely even perceptual experience

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20. If it is argued that the explanation of the very existence of natural objects lies in other things which existed before they came into being, it must surely be pointed out: (a) that the concept of passivity has no application in this context; (b) that if the natural order is construed in a deterministic way, then the existence of any object at any time involves conditions of compatibility which limit the existence of other things at other times as much as they limit it.

21. That this is a strand in Kant's thinking is indicated by his stress on the role of "inner sense" in perceptual experience, and by his puzzling claim that the materials of "inner sense" are provided by "outer sense".
is not purely passive, involving as it does choosing what to look at and deciding what we want to find out. Shall we deny that knowledge of such activity falls within the scope of “inner sense”? It is impossible to find an explicit, let alone a satisfying, answer to these questions in the Kantian corpus.

53. It is simply not true, then, that all self-awareness is awareness of states in which the self is passive and conceived to be passive. There are two lines of thought open to Kant at this point. In the first place he can argue that even if we are not aware of these states as passive, they must be passive, as belonging to the order of nature. In other words it is philosophical reflection that reveals them to be passive. And when, in this context, the possibilities of neurophysiology are viewed with a speculative eye, the suggestion naturally arises that even such unperceptual activities as philosophizing find their place in the objective time order by their connection with bodily states. And even if, as I have suggested, the immensity of nature does not preclude a relative autonomy of the body, could we not conclude from the necessity of material correlates for all conceptual states of the empirical self, that the mind is passive with respect to the body? Is not the phenomenal self an epiphenomenon? A good case can be made for this being Kant’s position.

54. Yet it is not difficult to find a second thread in Kant's thought which, though not ultimately inconsistent with the above, points in another direction. For he distinguishes two modes of self awareness, one of which (“inner sense”) is a passive awareness of states which are passive, while the other is an awareness of the self as having a certain “spontaneity”, as not merely responding to the impingement of “foreign causes”.

55. Now the notion of a self-awareness which is not that of inner sense may strike one as pre-critical and even anti-critical. Yet, once one looks for it one finds it throughout the Critique. Perhaps the most striking passage is the following.

Man, who knows all the rest of nature solely through the senses, knows himself through pure apperception; ... and this, indeed, in acts and inner determinations which he cannot regard as impressions of the senses. (A546; B574)

It might be thought that by ‘senses’ Kant here means “external sense”, and that the passage is compatible with the idea that the “acts and inner determinations” in question are known through inner sense, and are, hence, appearances. Interestingly enough, he explicitly excludes this interpretation, writing

22. Even granted that our awareness of these states is passive.
He is thus to himself, on the one hand phenomenon, and on the other hand, in respect of certain faculties the action of which cannot be ascribed to the receptivity of sensibility, a purely intelligible object. We entitle these latter faculties understanding and reason.

56. This suggests that according to Kant the domain of inner “sense” is mental states in which the mind is passive with respect to “foreign causes.” Pure apperception, on the other hand, gives us a non-passive awareness of the mind as active. Indeed, Kant insists again and again that the mind is aware of the “unity” and “spontaneity” of its acts of synthesis. He even characterizes these acts as “successive” in a way which implies that not all successiveness is the successiveness of objective Newtonian Time.

57. How can these themes be reconciled? If we focus attention on the *Critique of Pure Reason*, and lay aside for the moment questions concerning other forms of “spontaneity” than those involved in constituting phenomenal objects, we can conceive Kant to argue that although we are conscious of ourselves as spontaneous in the synthesizing of empirical objects, this spontaneity is still only a relative spontaneity, a spontaneity “set in motion” by “foreign causes”.

58. The following model may be helpful:

Consider a computer which embodies a certain logical program, a set of computational dispositions. Even if “turned on” and humming with readiness, it still does nothing unless a problem is “fed in”. Furthermore, once this happens, it moves along in accordance with its logical disposition. At certain stages it may “search its memory bank”. This search, however, is *itself* the outcome of the initial input and its computational development. And although, with this qualification, it “initiates” the “search”, the information it gets is information which, as computer, it is *caused to have*—i.e. more input. Here also it is passive.

59. In other words, from the standpoint of the problems discussed in the *Critique*, even if we take into account an awareness of self which is not that of “inner sense”, the spontaneity of which we are conscious is, though not *sheer* passivity, nevertheless a passivity in that the inner development is set in mo-

23. An elaboration of this theme would take me far afield. Yet it seems to me clear that Kant is committed to the view that we have some conception of a mode of successiveness which characterizes the activity and agency of the noumenal self, and the noumenal realm to which it belongs. This successiveness would be reflected in, but not identical with, the Time of experienced events. For a discussion of this point see my *Science and Metaphysics*, chapter 2, sections 12–18, and the Appendix on inner sense. The considerations advanced in note 17 above are relevant to this topic.
tion by a foreign cause and follows a routine. In the awareness of noumenal activities of synthesis we would encounter simply another example of a cause the causality of which is caused. If this were all that the spontaneity of the noumenal self amounted to, then although it would not be a part of the phenomenal nature of outer and inner sense, it would be like an object in nature and might be called a noumenal mechanism.

60. Notice that if the domain of pure apperception were limited as above, it would correspond closely to the domain of inner sense. Thus, even if the concepts of inner experience and pure apperception did not coincide, the domain of the latter would, roughly speaking, coincide with that of the former, the self as passive. The distinctive feature of inner experience would be its location of these passive states of the self in an objective time order, by virtue of their connection with material process.

61. The question thus arises: Does pure apperception give us access to another spontaneity, one which is not, in the above sense, relative?

62. Now, at last, I am in a position to return to my text and comment on one of its more interesting features—

this I or he or it (the thing) which thinks.

One can complain that the list does not include 'she'; but why does it include 'it'? Does this not suggest once again that the being which thinks is, when we come right down to it, simply a substratum of thoughts, and that it is an I by virtue of the fact that the accidents it supports are "thoughts"—"thoughts" which have the "synthetic unity" pertaining to "apperception"?

63. Nothing could be further from the truth. The noumenal subject of thoughts is a thinker, not a bare substratum, and we are conscious of it, in pure apperception, as such. But is it, in the full sense of the term, a person? For what is a "thing" in the sense relevant to our text? The answer comes out loud and clear:

That which is not capable of any imputation is called a thing.24

Thus Kant is leaving open the possibility that the being which thinks might be something "which is not capable of imputation". It might, in other words, be an automaton spirituale or cogitans, a thinking mechanism along the lines we have described. According to Kant we are indeed conscious of ourselves as something more than such a thinking mechanism, but might not the more be a delusion, a "figment of the brain"?

64. In our text, then, Kant is hinting at the problem of freedom, which, placed on the agenda in the Introduction, first makes its presence felt in the resolution of the third antinomy. The argument of the analytic justifies us, Kant believes, in attributing to the noumenal self at least a relative spontaneity; or, to introduce another way of putting it, a relative autonomy. Can any other considerations lead us to say more?

65. What is haunting Kant, in this cryptic passage, is the concept of an \textit{automaton spirituale}, a mind which conceptualizes, but only in response to challenges from without, and in ways which, however varied, realize set dispositions. He thinks of the perception of external objects as the paradigm of conceptual activity being called into play. But, as we have seen, he interprets even self knowledge as involving a causal dimension, a conceptual response to inner states, by virtue of which it is not inappropriately called `inner sense'.

66. He grants that “inner perception” may be prepared for by an activity of searching, a direction of attention in which the mind affects itself,\textsuperscript{25} just as perceptual response may occur in a context in which we are looking for something, seeking relevant observations. But why the searching? Why the direction of attention? Relevance to what? Here considerations of purpose enter in, and the first \textit{Critique} simply \textit{abstracts} from the purposive aspects of the conceptualization involved in experiential knowledge.

67. Now it is clear that although the structure of the first \textit{Critique} highlights what I have called the relative spontaneity of the conceptualizing mind, it clearly presupposes a larger context in which the mind is thinking to some purpose. Thus reference to reason in its practical aspect is implicit throughout the \textit{Critique}, but only in the Dialectic, after the constructive argument is over, does it become explicit.

68. I have been developing the idea of a \textit{theoretical automaton spirituale}. But can we not also conceive of a \textit{practical automaton spirituale}? One which, given an input of “practical propositions”—roughly intentions\textsuperscript{*} and purposes—would add factual information, select and combine this “mix” according to built-in conceptual procedures, and come up with coherent practical

\textsuperscript{25}Which must be contrasted with the passivity in which the mind is affected by itself. The most interesting passage in this connection is the following: "If the faculty of coming to consciousness of oneself is to seek out (to apprehend) that which lies in the mind, it must affect the mind, and only in this way can it give rise to an intuition of itself. The form of this intuition, which exists antecedently in the mind, determines, in the representation of time, the mode in which the manifold is together in the mind, since it then intuits itself not as it would represent itself if immediately self active, but as it is affected by itself, and therefore as it appears to itself, not as it is" (B59–60).

\textsuperscript{*}[Correction of “intensions” in original printing.]
scenarios, alternative courses of action, one or other of which, ratified by the appetitive faculty, would become the decided course of action?

69. To use Hempel’s metaphor, practical reason, thus conceived, would be a sausage machine. Chunks of purpose meat go in at one end. Purpose sausages come out the other. The “customer” is—not practical reason itself, but the very aspect of the self which brought the raw material to the machine.

70. It is some such picture which Kant has in mind, when he speaks of the heteronomy of the will. A paradigm formulation is given by Hume’s challenging (and puzzling) statement that “reason is and ought to be the slave of the passions”. According to this point of view, reason also in its practical role would have only that relative spontaneity which Kant finds in the synthetic activity by which the understanding constitutes the objects of experience.

71. Now it might be argued that although particular desires and aversions constitute a “sausage meat” which comes into the machine from without, there is, in addition, a purpose which is, so to speak, intrinsic to the machine, the purpose to promote one’s own happiness in the long run. Is not practical reason perhaps fully autonomous by virtue of self-love providing a practical premise which, unlike particular desires and aversions, does not come in to reason from without?

72. This suggestion has the merit of implying that for practical reason to be autonomous, there must be a practical premise which is as intrinsic to reason as are its conceptual or “transformational” procedures. For, surely, if all its premises come from without, then it is indeed “set in motion” from without—its “causality” is “caused”; its “spontaneity” relative.

73. Now it might be objected that reference to “self-love” instead of pointing to an additional and over-arching premise, would simply be another way of describing the fact that practical reason turns out unified practical packages from which the “appetitive faculty” must choose. Would not the choice of one such package be ipso facto a choice of how to promote one’s happiness in a concrete situation?

74. This move, however, would clearly be mistaken. Self-love clearly provides a practical premise of its own, indeed a “higher order” premise which refers to the satisfactions to be obtained from particular desires and aversions. Notice that

I shall promote my happiness

is not a “hypothetical imperative”. Hypothetical imperatives reflect procedural aspects of practical reason in that they formulate implications between purposes, and must be supplemented by practical premises to get practical
conclusions. Indeed, 'I shall promote my happiness' is not even an "assertorial hypothetical imperative", for these have the form

If I want (as I do) to promote my happiness, I ought to do A.

Self-love does, indeed, put in its appearance as a practical premise. And if so, why can we not construe it as "intrinsic" to practical reason and the principle of its autonomy?

75. There seem to be a number of possible answers, each of which can be found in Kant. Thus: Because it presupposes the fragmentary premises supplied by particular desires and aversions. They are the source of such determinate content as it can have, and, since practical reason is passive with respect to the latter, the pursuit of one's own happiness in the long run must also be heteronomous. This argument is not, by itself, convincing. But it is easy to see what Kant has in mind. He thinks of the premise which formulates self-love as also implanted in practical reason from without—not, it is true, by partial aspects of man as a natural object, but as corresponding to man as a unified natural whole. In Spinoza's terms, it is the "idea" which is the mental aspect of the conatus in suo esse perseverare which constitutes the individual man as a finite mode in Natura Naturata.

76. But if self-love does not provide a premise which is intrinsic to practical reason, then, unless we can find another candidate, we are left with the sausage machine, the automaton spirituale. We must look elsewhere. Now, what Kant finds is, in outline, a familiar story. The intrinsic practical premise is, in one of the many senses in which he uses this term, the Moral Law. And, if he is right, then one and the same idea defines both what it is for a rational being to be autonomous, and the moral point of view.

77. Of course, this intrinsic practical premise does not, of itself, by purely conceptual procedures, generate specific practical scenarios. Nevertheless, even if particular circumstances occasion the question, 'What shall I do?', and even though this premise must be supplemented by factual information which satisfies its criteria of relevance, it nevertheless serves as a premise which does not come into reason from without.

78. Kant's conception of this premise is difficult to disentangle from the complicated—indeed tortuous—apparatus in which it is embedded. In particular, it must be disentangled from the higher-order philosophical propositions which describe the criteria which a practical premise must satisfy if it is (a), to constitute the moral point of view; (b), to exhibit practical reason as autonomous. That these criteria are satisfied by one and the same practical
proposition is the central burden of the *Critique of Practical Reason*, and its forerunner, the *Fundamental Principles of the Metaphysic of Morals*.

79. The necessarily generic character of this premise together with certain less than perspicuous Kantian formulations of the role of universality in moral reasoning have led to the mistaken idea that it is "purely formal," somehow deriving its authority solely from the principle of contradiction. I shall short-circuit these issues, by formulating it without further ado as follows:

Let any of us persons do that in each circumstance which promotes our common good.

I shall not attempt to justify the ascription of exactly this premise to Kant. Nor, indeed, shall I embark on the lengthy commentary which would be necessary to show that it satisfies the criteria referred to above. I note simply:

(a) It is logically intersubjective.

(b) It constitutes a purpose which can be said to be implied by the very concept of a community of persons.

(c) If content can be given to the idea of promoting our common good, it implies, together with factual information, general practical propositions of the form

Let any of us do A, if in C.26

(d) If promoting the common good involves as its necessary condition certain practices, and, hence, sanctioned legislation, it provides a theory of morally justified legislation.27

80. I have said that this intrinsic generic practical proposition is a "premise" in practical reasoning. Strictly speaking, this is not correct. For practical reasoning proceeds by working out the implications of practical propositions. Since I am not concerned to defend any particular formulation of the above generic practical proposition, I shall, in the argument to follow, express it as follows:

Let any of us persons do that which satisfies condition $\alpha$.

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26. These practical propositions would be "derivative moral laws" in a first sense of this phrase.

27. Such legislation would constitute "derivative moral laws" (obligations) in a second sense to be carefully distinguished from those defined in the preceding note—which, indeed, they would presuppose. For an elaboration of this point see the distinction between "principles" and "sanctioned imperatives" in my "Reason and the Art of Living in Plato," in *Phenomenology and Natural Existence: Essays in Honor of Marvin Farber* (State University of New York Press, 1973).
Thus, practical reasoning as such would tell us that this proposition, with relevant information, implies

Let me now do A.

To apprehend this implication is not to draw the corresponding inference. That would involve "affirming the antecedent", with a result which could be expressed by,

Let me now do A, because let any of us do that which satisfies α.

81. That one in point of fact "affirms the antecedent" is not intrinsic to practical reason, but a matter of free choice. The concept of autonomy must not be confused with that of free choice. Kant's point is that if one affirms the antecedent, one acts from a premise which does not come into practical reason from without, as do other purposes. Thus, according to Kant, we always act either in the way of autonomy or in the way of heteronomy.

82. Schematically—and over simplifying by treating self-love as the alternative to action on principle—practical reasoning, in cool hours, would generate two implications:

I. 'Let any of us do actions which satisfy α' implies (with the facts) 'Let me now do A'

II. 'Let me promote my happiness' implies (with the facts) 'Let me now do B'.

An implication from the moral point of view confronts an implication from the "personal" point of view.28

83. If, now, I affirm the antecedent of the first implication, I end up with

Let me now do A, because let any of us do actions satisfying α, although this implies not promoting my happiness by doing B

which amounts to a long-winded version of choosing to do A, as being what I ought to do.

84. If, on the other hand, I affirm the antecedent of the second implication, I end up with

Let me now do B, because let me now promote my happiness, although this implies my not doing A, which is subsumable under the principle "let any of us do actions satisfying α"

28. It should be remembered that, as indicated above, self-love is simply one special case of the personal point of view, a fact which will be taken into account in a moment.
which amounts to a long-winded version of choosing to do B, as being what will promote my happiness, in spite of the fact that it conflicts with duty.

85. Kant, in other words, argues that unless we can choose to do something for the reason that it is implied by the moral law, then although there would be "free choice" (Willkuer)—for it would still be up to us whether we did that which promotes our happiness, or (out of sympathy) that which helps a person in distress, or (out of impulse) that which satisfies a momentary whim, there would be no freedom in the deeper sense which he has been seeking to explicate. For, in practical reasoning limited to such motives, which practical premise was affirmed would be determined by "inclination". That practical reason is autonomous means that a choice is possible in which practical reason itself affirms the antecedent. A rational being which had no inclinations (desires and aversions) would always act in accordance with the moral law, and hence in the way of autonomy.²⁹ A being which has inclinations, but not the possibility of acting for the sake of principle, would always act in the way of heteronomy. It would be, an "it (the thing) which thinks".

86. Kant ends on an agnostic note. We are conscious, in pure apperception, of ourselves as autonomous rational beings, beings which can act out of respect for principle. But is not, perhaps, this consciousness an illusion? He claims to know, on philosophical grounds, that as objects of empirical knowledge we are not autonomous beings. We cannot, alas, show, on philosophical grounds, that as noumena we are autonomous. He therefore takes refuge in the claim that, equally, we cannot know, on philosophical grounds, that as noumena we are not autonomous.

87. At no time has Kant been taken more seriously than today, particularly in the English speaking world. A whole new generation of commentaries is coming into existence. And with good reason. For his views, when translated into contemporary idiom, have invariably been found to contain insights which the "dogmatic rationalism" and the "skeptical empiricism" of his day—brought up to date—do not provide. If my interpretation of his views on the nature of reason are essentially correct, then they challenge first those who take the cartesian line—dare I call them 'rational psychologists'?—to take the scientific image of man seriously. But second, they also challenge "scientific realists", those who are already committed to the scientific image—perhaps they should, as Chisholm has wittily suggested, be called 'rational physi-

²⁹. Whether or not the concept of such a being makes sense hinges on how far it is intended to abstract the concept of reason from the weighing of alternatives, and, hence, from change or process. Kant is as willing as most theologians to make use of "analogy". But, as has often been pointed out, when the granted negative analogy is of a certain character, only the word remains.
kists'—to come up with a concept of nature which not only finds a place for reason and the causality of reason (tasks which any naturalist will undertake), but also for the autonomy of reason and the reality of the moral point of view.

88. That Kant is an insightful guide to this problem has been the burden of my remarks. Whether, and to what extent, the details of his solution survive translation into contemporary idiom is, of course, a test of Kantian views. One suspects, however, that, as so often before, it will also be a test of the translators.
I

Kant never tires of telling us that Nature and the Space and Time which are its forms exist as a system of "representations." Now a representation is either a representing or a something represented. Does Kant mean that nature is a system of representings? Or that it is a system of representeds? And, in any case, what would the claim amount to?

Representings are "mental acts." Does Kant think of nature as a system of mental acts? At one level the answer is clearly No. For, although nature does include representings—thus, at least, the sensory representings that are states of the empirical self—its primary constituents are material things and events, and Kant would agree with the Cartesians that the idea that a material event could be a representing, or, equivalently, that a mental act could have shape and size, is absurd.

In the second-edition Refutation of Idealism Kant clearly contrasts material objects and events with the sense impressions correlated with them in the history of the empirical self. The former are extended and located in space; the latter are neither extended nor in space,¹ though they do have temporal

¹ Kant's treatment of sensation is notoriously inadequate and inept. From the premise that sense impressions as mental states are neither literally extended nor in physical space, he infers that they are in no sense spatial, i.e., that they in no way have a structure which conforms to a geometrical axiomatics. The idea that sensations are "purely intensive magnitudes" has always made it difficult to understand how sense impressions could have a meaningful connection with physical states of affairs.
location. He argues that spatial structures are as directly or intuitively represented as are the non-spatial states of the empirical self, thus attacking the view, lurking in the Cartesian tradition, that the intuitive awareness involved in perceptual experience is an awareness of nonspatial sense impressions. This thesis is by no means new to the Second Edition, though the distinction between physical events and sense impressions is drawn in a clearer and less misleading way.

Shall we then say that nature is a system, not of representings, but of representeds? What would this mean? One's first reaction is to point out that not everything in nature is represented, and that not everything which is represented as being in nature is in nature. To the first of these objections the natural reply is to distinguish between “actually represented” and “representable,” and define nature as a system of representables. To the second the natural reply is that while not everything which is represented as being in nature is in nature, everything which is represented by a true representing as being in nature is in nature. These considerations merge; for not every system of empirical representables constitutes nature, but only that system of empirical representables, the representings of which would be true.

The conception thus arises of nature as the system of those representable spatial and/or temporal states of affairs which did, do, or will obtain, whether or not they were, are, or will be actually represented. An actual representing is true if the state of affairs it represents belongs to this privileged set of representable states of affairs.

The trouble with this picture, as Kant saw, is not that it is false but that it is so thin that it scarcely begins to illuminate the concept of nature as the object of empirical knowledge. Yet unilluminating though the idea may be that an empirical judging is true if the state of affairs it represents is one which did, does, or will obtain, i.e., was, is, or will be actual, it is the initial datum for analysis. Kant saw that this truism must be submitted to the closest scrutiny if the specter of skepticism is to be laid to rest. This scrutiny must aim at clarifying the concepts of an empirical judging, of truth, of a state of affairs, and of what it is for a state of affairs to obtain or be actual. This Kant proceeds to do with important, indeed, dramatic results.

The central theme of the Analytic is that unless one is clear about what it is to judge, one is doomed to remain in the labyrinth of traditional metaphysics. On the other hand, to be clear about what it is to judge is to have Ariadne's thread in one's hand.

Now from the Kantian point of view, the above concepts pair up in an interesting way: judging with state of affairs, and truth with actuality. Indeed to
say that they pair up is to underst ate the closeness of their relationships. For, Kant argues, in effect, that the pairs turn out, on close examination, to be identities.

II

Before following through with this claim, we must take into account another concept which ties them together and gives them point, that of empirical knowledge. On any view there is the closest of connections between the concepts of knowledge and truth. The above remarks suggest that for Kant the connection between the concept of empirical knowledge and the "category" of actuality is at least as close. Indeed, as we shall see, the core of Kant's "epistemological turn" is the claim that the distinction between epistemic and ontological categories is an illusion. All so-called ontological categories are in fact epistemic. They are "unified" by the concept of empirical knowledge because they are simply constituent moments of this one complex concept, the articulation of which is the major task of the constructive part of the Critique.

It is obvious to the beginning student that the truths of "transcendental logic" cannot themselves be "synthetic a priori." If they were, then any transcendental demonstration that objects of empirical knowledge conform to synthetic universal principles in the modality of necessity would be question-begging. It must in a tough sense be an analytic truth that objects of empirical knowledge conform to logically synthetic universal principles. It must, however, also be an illuminating analytic truth, far removed from the trivialities established by the unpacking of 'body' into 'extended substance' and 'brother' into 'male sibling'.

It is also obvious, on reflection, that Kant is not seeking to prove that there is empirical knowledge, but only to show that the concept is a coherent one and that it is such as to rule out the possibility that there could be empirical knowledge not implicitly of the form 'such and such a state of affairs belongs to a coherent system of states of affairs of which my perceptual experiences are a part'. By showing this, he undercuts both the skeptic and the "problematic idealist" who, after taking as paradigms of empirical knowledge items that seem to involve no intrinsic commitment to such a larger context, raise the il-

2. Kant's discussion of philosophical method in the concluding chapters of the Critique shows that he was fully aware of these facts, and realized as well that "transcendental logic" as knowledge about knowledge could consist of analytic knowledge about synthetic knowledge.
legitimate question of how one can justifiably move from these items to the larger context to which we believe them to belong.

Before developing these themes, we must take into account the familiar fact that truth is a necessary but not sufficient condition for knowledge. A judgment, to be a case of knowledge, not only must be true; we must, in some sense, be justified in making it. The problem posed is as old as the hills and as new as tomorrow. It is not my purpose to claim that Kant found all the essentials of the solution. He did, however, show convincingly that certain traditional lines of thought are blind alleys, and in so doing discovered the general lines of a successful strategy.

The task of "transcendental logic" is to explicate the concept of a mind that gains knowledge of the world of which it is a part. The acquisition of knowledge by such a mind involves its being acted on or "affected" by the objects it knows. There are, of course, any number of stages at which one can go wrong with respect to the structure of Kant's thought—and Kant himself is not always a reliable guide—but the sooner one makes a wrong choice of roads, the more difficult it is to get back on the right track. And the first major "choice-point" concerns the concept of "receptivity." What is it, exactly, that is brought about when our "receptivity" (inner or outer) is "affected"? It has always been easy to answer, "impressions of sense," and to continue by construing these as nonconceptual states, states that belong to the same family as tickles and aches, but differ in that unlike the latter they are constituents of the perceptual experience of physical things.

Even though there is an element of truth in this interpretation, its total effect is to distort Kant's thought in a way that obscures its most distinctive features. In the first place, it makes nonsense of the idea that space is the form of outer receptivity. For sense impressions, being mental states, are, for Kant, no more capable of being extended than they were for Descartes. In the second place, it makes nonsense of the idea of inner sense. For when Kant tells us that the contents of "inner sense" come from "outer sense," this would mean, on the above interpretation, that certain extended (but not temporal) sensations "cause" a further set of nonconceptual states (sensations) which are unextended though temporally related.

It is often taken for granted that Kant was clear about the distinction between conceptual and nonconceptual mental states or representings. "Empiri-

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3. That it also involves action in relation to these objects—if only by changing one’s relative position—is a point to which he pays little attention than it deserves. Compare C. I. Lewis's treatment of this topic in the first chapter of An Analysis of Knowledge and Valuation.
cal intuitions" are interpreted as nonconceptual and construed, on the above lines, as the epistemically more important members of the sensation family. Actually the pattern of Kant’s thought stands out far more clearly if we interpret him as clear about the difference between general conceptual representings (sortal and attributive), on the one hand, and, on the other, intuition as a special class of nongeneral conceptual representings, but add to this interpretation the idea that he was not clear about the difference between intuitions in this sense and sensations. “Intuitive” representings would consist of those conceptual representings of individuals (roughly, individual concepts) which have the form illustrated by

this-line

as contrasted with

the line I drew yesterday

which is an individual concept having the form of a definite description.

Notice that the above line of interpretation enables us to make sense of Kant’s claim that “intuitions of a manifold” have categorial form; for there is an obvious sense in which

this-line

has the subject-predicate form, even though it is not a subject-predicate judgment. It is familiar fact that in the judgment

This book is red

the subject-predicate form enters twice, a fact which can be made explicit by the paraphrase

This is a book and it is red.

According to the above interpretation, the representings that are brought about by the “affection” of “receptivity” would, as intuitions, already be, in a broad sense, conceptual. To make this move, however, is to give a radical reinterpretation to the concept of “receptivity” and to the contrast between “receptivity” and “spontaneity.” This can be brought out by comparing Kant’s conception of the affection of receptivity by things in themselves with what I

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4. “Intuitions of a manifold” are to be contrasted with “manifolds of intuition” (see, for example, B135). The lumping of manifolds of sense with the latter, though a confusion, would at least keep them distinct from the intuitive representings synthesized by the productive imagination.
have elsewhere called "language entry transitions." A language entry transition is an evoking, for example, of the response 'this is red' by a red object in sunlight from a person who knows the language to which this sentence belongs. As an element in a rule-governed linguistic system the utterance is no mere conditioned response to the environment. Its occurrence is a function not only of the environment but of the conceptual set of the perceiver. To know the language of perception is to be in a position to let one's thoughts be guided by the world in a way that contrasts with free association, with daydreaming, and, more interestingly, with the coherent imaginings of the storyteller.

It is Kant's contention that the conceptual structures we develop in perceptual experience under the influence of independent reality, are of a piece with the conceptual structures we freely or spontaneously develop in imagination. A useful parallel is provided by the difference between counting objects and "counting" in that unconstrained way (repeating the numbers) which is a rehearsing in imagination of actual counting procedures. Another parallel is the difference between perceiving a triangle and imagining a particular triangle (which must not be confused with "having a triangular image," whatever that is). In receptivity we do the same sort of thing we do in the "spontaneity" of imagination, but we do it as receptive to guidance by the objects we come to represent.

Kant claims, in other words, that the very same rule-governed conceptual activity that occurs in the free play of imagination constitutes perceptual experience, when it is guided by independent reality. According to this interpretation, the "productive imagination" (which is Kant's term for the faculty that generates intuitive representings of the form 'this cube') provides the subject-terms of perceptual judgments; thus, for example

This cube is a piece of ice.

III

According to the above interpretation Kant thinks of the products of that peculiar blend of the passivity of sense and the spontaneity of the understanding which is "receptivity" in the sense defined above as consisting of representings of the form

this-φ
rather than full-fledged judgments. But, since it is clear that he thinks of these representings as involving the categorial forms that occur in full-fledged judgment, it will simplify matters if, for our present purposes, we abstract from this special feature of his theory and suppose that, as in our linguistic model, it is perceptual judgments themselves which are evoked by the action of objects in our perceptual capacities. We are thus enabled to focus our attention on Kant's theory of what judgings are.

I shall begin by summarizing this theory as four closely related theses:

1. Judgings are complex representings in a very special sense of 'complex', which distinguishes them from the mere co-occurrence of representings in the same mind at the same time, as when an association is aroused. Kant believed, not without justification, that this distinction was not clearly drawn by his predecessors—particularly David Hume.

2. Judgings have a variety of forms which Kant clearly conceives by analogy with the logical forms of the statements that express them.

3. Not only do judgings have these forms; anything (with the exception of intuitive representings) that has these forms is a judging.

4. To judge, for example, that snow is white is not just to represent snow and represent white; it is to be committed to the idea that the representable snow and the representable white belong together regardless of what anyone happens to think. It is, in other words, to be committed to the idea that representings that snow is white are (epistemically) correct and representings that snow is not white (epistemically) incorrect. This thesis finds its clearest expression in section 19 of the Second Edition Deduction, entitled "The Logical Form of All Judgments Consists in the Objective Unity of the Apperception of the Concepts which They Contain" (B141–142).

The first two theses need little if any elaboration. The third and fourth, however, are of crucial importance to Kant's argument and require a closer look. At first sight the statement that only judgings have the forms that judgings have, may have the appearance of tautology. But it is not a triviality, and, indeed, is the very heart of the Critique.

It will be illuminating, I believe, to compare this thesis with its counterpart in a linguistic version of the Kantian position, i.e., one that speaks in terms of (meaningful) expressions rather than (conceptual) representations:
Statings have certain logical forms and everything which has these forms is a stating.

The logical form of a stating is clearly not the empirical configuration of the sentence it illustrates, though having an appropriate empirical configuration is a necessary condition of the stating’s having the logical form it does, in the language to which it belongs. For a stating to have a certain logical form is for it to have certain logical powers, and, if so, the idea that anything having this form must be a stating has the ring of truth rather than paradox.

Kantian “categories” are concepts of logical form, where ‘logical’ is to be taken in a broad sense, roughly equivalent to ‘epistemic’. To say of a judging that it has a certain logical form is to classify it and its constituents with respect to their epistemic powers.

If judgings qua conceptual acts have “form,” they also have “content.” Of all the metaphors that philosophers have employed, this is one of the most dangerous, and few have used it without to some extent being taken in by it. The temptation is to think of the “content” of an act as an entity that is “contained” by it. But if the “form” of a judging is the structure by virtue of which it is possessed of certain generic logical or epistemic powers, surely the content must be the character by virtue of which the act has specific modes of these generic logical or epistemic powers.

Thus, a judging that Tom is tall would, in its generic character, be a judging of the subject-predicate form. It is a judging that a certain substance has a certain attribute. (These two ways of putting it are equivalent.) If we focus our attention on the predicate we can characterize the judging more specifically as a judging that a certain substance has the attribute tall. Thus, just as to say that a judging is a judging that a certain substance has a certain attribute is to say that the judging is of a certain generic kind (i.e., has certain generic logical powers); so to say that a judging is a judging that a certain substance is tall is to classify the judging as one of the such and such is tall kind, i.e., to classify it in a way that ascribes to it the more specific conceptual powers distinctive of the concept of being tall. Indeed, for the judging to “contain the concept of being tall” is nothing more nor less than for it to have these specific powers.5

5. The above remarks on categories and concepts can be construed as a commentary on the passage in the Paralogisms where Kant writes: “We now come to a concept which was not included in the general list of transcendental concepts but which must yet be counted as belonging to that list, without, however, in the least altering it or declaring it defective. This is the concept or, if the term be preferred, the judgment, ‘I think’. As is easily seen, this is the vehicle of all concepts, and therefore also of transcendental concepts; and so is always included in the conceiving of these latter, and is itself transcendental” (A341; B399).
Kant correctly concludes from the above that there is no such thing as comparing a judging with an actual state of affairs and finding the judging to be "correct" or "justified." For, according to the above analysis, an "actual state of affairs," since it has judgmental form, is simply a true species of judging, i.e., to use Peircean terminology, a judging-type that it would be (epistemically) correct to token.6 Thus "comparing a judging with a state of affairs" could only be comparing a judging with another judging of the same specific kind, and this would no more be a verification than would checking one copy of today's Times by reading another.

In evaluating the significance of this point, it should be borne in mind that linguistic episodes have not only logical powers but also, and necessarily, matter-of-factual characteristics, e.g., shape, size, color, internal structure, and that they exhibit empirical uniformities both among themselves and in relation to the environment in which they occur. They can be compared as objects in nature with other objects in nature with respect to their matter-of-factual characteristics. I mention this, because the fact that we tend to think of conceptual acts as having only logical form, as lacking matter-of-factual characteristics, i.e., as, to use Moore's expression, diaphanous, makes it difficult to appreciate that the ultimate point of all the logical powers pertaining to conceptual activity in its epistemic orientation is to generate conceptual structures which as objects in nature stand in certain matter-of-factual relations to other objects in nature.7

IV

Aristotle seems to have thought of his categories as the most generic sortal concepts that can occur in statements about the objects around us. Thus

Tom is a substance

would belong to the same family of statements as

Tom is an animal

6. Put in linguistic terms, an "actual state of affairs" is a true species of stating, i.e., a stating-type that it would be epistemically correct to token.

7. The basic flaw in the Kantian system (as in that of Peirce) is in its inability to do justice to this fact. The insight that logical form belongs only to conceptual acts (i.e., belongs to "thoughts" rather than to "things") must be supplemented by the insight that "thoughts" as well as "things" must have empirical form if they are to mesh with each other in that way which is essential to empirical knowledge. I have developed this point in Chapter 6 of Science, Perception and Reality (New York: Humanities, 1965) and, more recently in Chapter 5 of Science and Metaphysics (New York: Humanities, 1967).
and would stand to the latter as

Tom is an animal

stands to

Tom is a man.

If one attempts to carry through this model with the other categories, one is led to postulate such puzzling entities as quality-individuals and (horrible dictu) relation-individuals to be the subjects of statements of the form

... is a quality
... is a relation.

Medieval logicians began the process of reinterpreting the categories that culminated in Kant's *Critique*, by recognizing that certain statements (thus 'Man is a species') which seem to be about queer entities in the world are actually statements that classify constituents of conceptual acts. The insights of terminist logicians were largely lost in the post-Cartesian period. Kant not only rediscovered these insights, but extended them in such a way as to connect categories not only with the logical forms in the narrowest sense (roughly, syntactical powers) studied by formal logicians, but, to an extent not always recognized, with the logical powers in a broader sense which are essential to a conceptual framework the employment of which generates knowledge of matter of fact. Thus he thinks of the categories as together constituting the concept of an object of empirical knowledge. The extent to which this is so does not stand out in the Metaphysical Deduction. It isn't until the Analytic of Principles, as has often been pointed out, that one can grasp the full import of Kant's theory of the categories. The conception of the categories as the most general classifications of the logical powers that a conceptual system must have in order to generate empirical knowledge is the heart of the Kantian revolution.

It is, we have seen, in the literal sense a category mistake to construe 'substance'; for example, as an object-language sortal word that differs from ordinary empirical predicates by being a summum genus. However, once the Kantian turn is taken, and substance-attribute is seen to be a classification of judgings, it becomes possible to interpret at least some categories as meta-conceptual summa genera, and to look for the "differences" that generate their species. It is along these lines that the obscure doctrine of the Schematism is to be understood. Roughly, the schemata turn out to be specific differences,
and the schematized categories a classification of the epistemic powers of judgings in so far as they pertain to events in time.

V

Once it is recognized that intuitive representings are, in a generic sense, conceptual, though not sortal or attributive, other parts of the Kantian system begin to fall into place. To intuit is to represent a \textit{this}, i.e., if I may so put it, to have a representing of the "this" kind. But no representing is, so to speak, a sheer "this" representing. To suppose the contrary is to treat 'this' as a mere label devoid of any but the most meager logical powers. Space and time are "forms of intuition," not by virtue of being attributes of or relations between things or events in nature, but by virtue of the fact that the logical powers distinctive of "this" representings are specified in terms of concepts pertaining to relative location in space and time. The "\textit{transcendental}" or epistemic function of spatiotemporal concepts as forms of representing, must be distinguished from their empirical function in matter-of-factual judgments about historical fact.

In linguistic terms this means roughly that spatiotemporal predicates are essential not only to object-language statements, but to the metalinguistic statements that ascribe logical (epistemic) powers to linguistic forms. It is a familiar, but important, fact that the logical powers of demonstratives and tenses essentially involve the manner of their occurrence in space and time, and, hence, the conceptual structure of space and time is built into their logical powers.

To be an intuitive representing is to represent something as located in space or time, as being \textit{here} and \textit{now} with \textit{me} as contrasted with \textit{there} and \textit{then}. But, by the same token, it is to represent it as on the way to being \textit{there} and \textit{then} and no longer with \textit{me now}. We must remember that, although time does not change in the sense that one temporal system is replaced by another (there is only one time), it does, moving image of eternity that it is, constantly change with respect to the A-characteristics of pastness, presentness, and futurity.

Now to be represented as having a location in space and time is to be represented as an \textit{object}, as something with respect to which there is truth or falsity. It is sufficient to note that so to represent an item is to commit oneself to the idea that it \textit{is} so located. In the Analogies Kant argues, among other things, that such truth and falsity involves the concept of Nature as the object \textit{par excellence} of empirical knowledge (A129).
VI

Since a “this” representing is an object-of-knowledge representing, intuitions have the form

this-object

But just as nothing is represented as a mere “this,” for the conceptual framework of space, time and of myself as confronted by this is involved, so nothing is represented in perception as merely

this (here now) object

To make the obvious point, object is an epistemic concept, and we experience objects in terms of empirical concepts. Thus, in giving an example of an intuition, we should offer not

this object

but, say,

this cube

where the concept of a cube, unlike its pure geometrical counterpart, is the concept of an object in nature. Kant seems to have taken for granted that the intuitive representings must be absolutely determinate and that to represent an absolutely determinate cube, for example, is to “draw it in thought” (B138, B162, A102). This difficult doctrine requires that the logical powers of the concept cube involve not only the inferential powers characteristic of its role as the predicate of full-fledged judgment, but also the powers involved in “constructing” or “drawing” determinate “this-cube” representings in accordance with a rule, and knowing that this is what one is doing.\(^8\)

VII

To be able to have intuitive representings, then, is to have all the conceptual apparatus involved in representing oneself as acquiring empirical knowledge

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8. One is struck by Brouwer’s parallel point that to have temporal concepts is to be able not only to make judgments involving temporal predicates but to “construct” determinate representings of the form

this-after-that.

But I must leave the details of Kant’s theory of intuitive conceptualization and how it fits in with his theory of concepts as rules to another occasion.
of a world one never made. We are a long way from the Humean notion that merely by virtue of having a sense impression one has as good a piece of knowledge as one can get; not to mention the Cartesian notion that the intuitive knowledge of one's present cogitationes is logically independent of any knowledge of the context in which they occur. Some familiar Kantian theses follow as corollary from the above considerations:

1. Having particular intuitions involves having the conceptual framework of space and time. Hence the possession of the latter cannot be accounted for in terms of the former. Kant infers that the ability to represent items as in space and time is innate.

2. The fact that concepts have categorial form undercuts any abstractionism that derives them from nonconceptual representations. As for forming concepts and categories by abstraction from intuitive representings of manifolds, this makes sense because the latter already have a conceptual and categorial character. By confusing the synopsis of sense (A97) with the intuitive representing of a manifold Locke mistakenly concluded that concepts and categories could be abstracted from sheer sensibility. Kant infers that the framework of basic concept and categories is innate.

3. Induction, the process of forming generalizations about objects and events, presupposes the conceptual framework involved in thinking of objects and events as located in space and time. Since any present event will be a past event, it must, if it is to have truth and knowability, be inferentially as well as intuitively accessible. Since such inferential access involves laws of nature, the domain of objects of empirical knowledge must conform to knowable laws. The knowledge of these laws cannot be inductive, for, as was pointed out above, induction presupposes knowable objects. The knowledge of these laws must be innate in the sense in which geometry was innate in Meno's slave.

4. To conceive of an event as occurring at a time is to commit oneself to the idea that the concept of that event and the concept of that time belong together regardless of what one happens to think. But there is nothing about the sheer concept of a particular time which requires that it be occupied by a certain event. The belonging must, Kant concludes, be a matter of the temporal location of the event relative to other events; and, as belonging, be the inferability (in principle) of its occurrence at that location from the occurrence of the events to which it is thus related.
5. Association of ideas is association of concepts (not images), and hence presupposes and cannot account for the framework features of a conceptual structure.

6. Even our consciousness of what is going on in our own mind is a conceptual response which must be distinguished from that which evokes the response. Not even in this context does it make sense to speak of verifying judgments by comparing them with the actual state of affairs to which we are responding. Kant tends to limit this point to the introspection of sense impressions and other sensory states of the empirical self. Thus he tells us in A456 that we have knowledge "by pure apperception" of our conceptual acts. Indeed, he repeatedly implies that we have (or can have) an unproblematic awareness of all acts of spontaneity or synthesis¹⁰ (e.g., A108, B130, B153). And in B430 he even seems to suggest that in pure apperception the mental activity known and the knowing of it are somehow one and the same, a thesis which is surely inconsistent with critical principles.¹⁰

7. The application of the fourth Corollary above to the special case of sensory states of the empirical self gives the coup de grâce to the problematic idealism of Descartes. For since the only inferability there is pertaining to the occurrence of sense impressions concerns their law-like relation to the stimulation of our sense organs by material things, the belonging together of the individual concept of a particular sense impression and the individual concept of a certain moment involves the distinction between material things and the sense impressions that represent them in the empirical self (B274ff.).

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¹⁰ It has often been noted that Kant's references to successive acts of synthesis is in prima facie conflict with his dictum that everything in time is appearance. This conflict, however, merely points up the extent to which Kant's system calls for a distinction between Newtonian time as a form of nature and the successiveness involved in the activity by which the mind represents nature. The reference to motion as a transcendental concept (as contrasted with the motion of objects in space) in B155 and the accompanying note is particularly important in this connection.

¹⁰ Kant could insist that the knowledge gained by pure apperception is not knowledge of an object by arguing that the mind qua rational, i.e. qua capable of spontaneous conceptual activity, is not a part of nature. In the terminology of the third Antinomy, its causality is not caused. A rational being qua rational does not have a nature in the sense in which, for example, gold and aqua regia have natures. Such natures as rational beings have is a matter of abilities (and the "second nature" of habit) rather than causal properties.
VIII

Nature, we have said, is the system of *actual* basic empirical states of affairs. There are two themes in Kant's account of what it is to be an actual basic state of affairs:

(a) It is one the intuiting of which would be a correct *intuiting*. In terms of our linguistic model, this amounts to saying that a true basic statement is one which, *in here-now form*, as contrasted with the *there-then* counterparts which make the same statement, would be a correct "language entry transition" by a person appropriately located with respect to the object.

(b) An actual basic state of affairs is one that is correctly inferable from correct present intuitive representings. In terms of our linguistic model, this amounts to saying that a true basic empirical statement is one that is correctly derivable by means of true law-like statements from true basic here-now statements.

Once again, it must be borne in mind that Kant's aim has not been to prove that there is knowledge of the *there-then*, but to show, by articulating the concept of empirical knowledge, that knowing the *here-now* involves knowing it as an element in a system that includes *there-thens*.

IX

It is often said today that Kant's *Critique* consists of important insights into the logical geography of our conceptual structure which are obscured almost to the point of invisibility by a tedious and fictitious "transcendental psychology." Kant is said to postulate a mechanism consisting of empirically inaccessible mental processes which "constructs" the world of experience out of sense impressions. If my argument is correct, this criticism is misdirected. The true situation can be seen by assessing the validity of a corresponding criticism directed against a linguistic version of Kant's position.

To construe the concepts of meaning, truth, and knowledge as metalinguistic concepts pertaining to linguistic behavior (and dispositions to behave) involves construing the latter as governed by *ought-to-be's* which are actualized as uniformities by the training that transmits language from generation to generation. Thus, if logical and (more broadly) epistemic categories express general features of the *ought-to-be's* (and corresponding uniformities)
which are necessary to the functioning of language as a cognitive instrument, epistemology, in this context, becomes the theory of this functioning—in short transcendental linguistics.

Transcendental linguistics differs from empirical linguistics in two ways: (1) it is concerned with language as conforming to epistemic norms which are themselves formulated in the language; (2) it is general in the sense in which what Carnap describes as “general syntax” is general; i.e., it is not limited to the epistemic functioning of historical languages in the actual world. It attempts to delineate the general features that would be common to the epistemic functioning of any language in any possible world. As I once put it, epistemology, in the “new way of words” is the theory of what it is to be a language that is about a world in which it is used.11 Far from being an accidental excrescence, Kant’s transcendental psychology is the heart of his system. He, too, seeks the general features any conceptual system must have in order to generate knowledge of a world to which it belongs.

An essential requirement of the transmission of a language from generation to generation is that its mature users be able to identify both extra-linguistic items and the utterances that are correct responses to them. This mobilizes the familiar fact, stressed in the last paragraph of section III above, that, in addition to their logical powers, linguistic expressions have an empirical character as items in the world. We can ascertain, for example, that a person does in point of fact respond as he ought to red objects in sunlight by uttering or being disposed to utter ‘this is red’. Again, we can ascertain that, other things being equal, he is not disposed to enlarge, as he ought not, utterances of ‘it is raining’ into ‘it is raining and it is not raining’.

Kant’s agnosticism, however, if taken seriously—i.e., construed as the view that we have no determinate concepts of how things are in themselves—means that no conceptual response can be evaluated, in the above manner, as correct or incorrect. Rules of the form

\[ (Ceteris paribus) \text{one ought to respond to } \phi \text{ items with conceptual acts of kind } C. \]

could never be rules in accordance with which people criticize conceptual responses; for, on his official view, the esse of any item to which any empirical predicate applies is already to be a conceptual response, not something that is

responded to. To put it bluntly, only God could envisage the *ought-to-be's* in terms of which our conceptual responses are to be criticized.

But, although any contemporary Kantian must take seriously the critique of agnosticism implicit in the preceding remarks, its force would have been obscured by the innatist features of Kant's transcendental "inner-linguistics." For him there is no problem concerning the cultural transmission of basic conceptual abilities. There is, in his system, no place for this role of the *ought-to-be's* of language entry transitions. Thus Kant is in a position to grant that empirical knowledge involves a uniformity of conceptual response to extra-conceptual items and even that extra-conceptual items conform to general laws,\(^\text{12}\) without granting that the character of the items to which we conceptually respond, or the laws to which God knows them to conform, are accessible to finite minds.

We could expect Kant to say that, if there is empirical knowledge, there must be such uniformities (once again, he is not attempting to prove that there is empirical knowledge, but to articulate its structure) and that, in the absence of particular reasons for thinking that something has gone wrong, we are entitled to suppose that our conceptual machinery is functioning properly.

\(^{12}\) This idea is implicit in the transcendental principle of the affinity of the manifold of sense and finds its explicit formulation in B164, where Kant in a little noted passage wrote that "things in themselves would necessarily" (i.e. as a necessary truth of transcendental logic) "apart from any understanding that knows them, conform to laws of their own." We are led to think of the Newtonian framework of the world as we experience it as a projection of a system of laws to which things in themselves conform and which are known only to God.
CHAPTER SEVENTEEN

The Role of Imagination in Kant’s Theory of Experience

I

1. My aim in this paper is to give a sympathetic account of Kant’s theory of the role played by what he calls the productive imagination in perceptual experience. My method, however, will not be that of textual exegesis and commentary, but rather that of constructing an ostensibly independent theory which will turn out, it just so happens, to contain the gist of the Kantian scheme. Proceeding in this way will enable me to avoid the tasks involved in coping with Kant’s terminology, architectonic, and polemical orientation. By concentrating attention on the subject matter itself, this approach will make possible a relatively brief treatment of what would otherwise be a time-consuming enterprise.

2. By referring to the theory I am about to construct as “ostensibly independent,” I also mean to imply that although I shall stick reasonably close to what I think to be the truth, I shall not be above warping and slanting the argument to fit the role of a sympathetic interpretation of the Critique. The extent to which I succeed in capturing the spirit of Kant’s thought must be measured by the degree to which it illuminates the letter of the text.

3. Our access to the external world and to the nature and variety of the objects (in a suitably broad sense) of which it consists is through perception. Phenomenological reflection on the structure of perceptual experience, therefore, should reveal the categories, the most generic kinds or classes, to which these objects belong, as well as the manner in which objects perceived and perceiving subjects come together in the perceptual act.
4. I shall therefore begin my reflections on Kantian themes with a careful account of the relevant features of perceptual (in point of fact, visual) experience. An initial survey will provide a framework of working distinctions which will subsequently be refined. These distinctions, in one form or another, are familiar tools of the philosopher's trade. It is the subsequent refinements that will lead into the arena of controversy.

5. In the first place there is the distinction between the act of seeing and the object seen. Visual experience presents itself as a direct awareness of a complex physical structure. It also presents itself as having a point of view, as perspectival. Opaque objects present themselves as endowed with facing colored surfaces. I do not mean by this that they present themselves as complex structures of color expanses (visual "sense data"), but rather that they present themselves as three-dimensional physical objects which stand in such and such relations to each other and to the perceiver's body.

6. In the second place, there is the distinction, already alluded to, between the objects perceived and what they are perceived as. Thus in veridical perception occurring in optimum circumstances—I shall have nothing to say about illusions, misperceptions, or hallucinations—the object is not only, for example, a brick which is red and rectangular on the side facing me, it is seen as a brick which is red and rectangular on the facing side. How is this to be understood?

7. Traditionally a distinction was drawn between the visual object and the perceptual judgment about the object. The latter was construed as a special kind of occurring believing. Occurrent acts of belief were, in their turn, construed as propositional in form; as having, so to speak, a syntactical form which parallels or is analogous to the syntactical form of the sentence which would express it in overt speech. Believing, so to speak, occur in Mentalese.

8. This suggested to some philosophers that to see a visual object as a brick with a red and rectangular facing surface consists in seeing the brick and believing it to be a brick with a red and rectangular facing surface:

   This is a brick which has a red and rectangular facing surface

where the judgment has a demonstrative component analogous to the linguistic demonstrative, "this," in the sentence by which it would be expressed.

9. Now I think that there is something to the idea that seeing as involves an occurring act of belief, but I also think that the standard account misconstrues the structure of the believing. Notice that the subject term of the judgment was exhibited above as a bare demonstrative, a sheer this, and that what the object is seen as was placed in an explicitly predicative position, thus "is a brick which has a red and rectangular facing surface."
10. I submit, on the contrary, that correctly represented, a perceptual belief has the quite different form:

This brick with a red and rectangular facing surface

Notice that this is not a sentence but a complex demonstrative phrase. In other words, I suggest that in such a perceptually grounded judgment as

This brick with a red and rectangular facing side is too large for the job at hand

the perceptual belief proper is that tokening of a complex Mentalese demonstrative phrase which is the grammatical subject of the judgment as a whole. This can be rephrased as a distinction between a perceptual taking and what is believed about what is taken. What is taken or, if I may so put it, believed in is represented by the complex demonstrative phrase; while that which is believed about the object is represented by the explicitly predicative phrase which follows. Perceptual takings, thus construed, provide the perceiver with perceptual subject-terms for judgments proper.

11. From this point of view, what the visual object is seen as is a matter of the content of the complex demonstrative Mentalese phrase.

II

12. I shall prepare the way for the next major step in the argument by changing my example. Consider the visual perception of a red apple. Apples are red on the outside (have a red skin) but white inside. Other features of apples are relevant, but this will do to begin with. The initial point to be made about the apple is that we see it not only as having a red surface but as white inside. This however, is just the beginning. Notice that the experience contains an actual quantity of red. By “actual quantity of red” I mean a quantity of red which is not merely believed to exist as did the Fountain of Youth for Ponce de Leon. The Fountain of Youth does not actually exist. By contrast, the quantity of red which is a constituent of the visual experience of the apple not only actually exists but is actually or, to use a familiar metaphor, bodily present in the experience.

13. But what of the volume of white apple flesh which the apple is seen as containing? Many philosophers would be tempted to say that it is present in the experience merely by virtue of being believed in. It has, of course, actual existence as a constituent of the apple, but, they would insist, it is not present in its actuality. Phenomenologists have long insisted that this would be a mis-
take. As they see it, an actual volume of white is present in the experience in a way which parallels the red. We experience the red as containing the white.

14. But if what is experienced is red-containing-white as red-containing-white, and if both the red and the white are actualities actually present, how are we to account for the fact that there is a legitimate sense in which we don't see inside of the apple? To be sure, we see the apple as white inside, but we don't see the whiteness of the inside of the apple.

15. We must add another distinction, this time between what we see and what we see of what we see. The point is a delicate one to which justice must be done if we are not to be derailed. Thus when I see a closed book, the following are all typically true.

(a) I see the book.
(b) The book has pages inside.
(c) I see the book as having pages inside.
(d) I do not see the inside pages.
(e) The book has a back cover.
(f) I see the book as having a back cover.
(g) I do not see the back cover.

16. How can a volume of white apple flesh be present as actuality in the visual experience if it is not seen? The answer should be obvious. It is present by virtue of being imagined. (Notice that to get where we have arrived, much more phenomenology must have been done than is explicitly being done on this occasion. We are drawing on a store of accumulated wisdom.)

17. But notice where this leads us. The actual volume of white is experienced as contained in the actual volume of red. Yet if the actuality of the white apple flesh consists in it being imagined, it must be dependent for its existence on the perceiver; it must, in a sense to be analyzed, be "in" the perceiver.

18. Before following up this point, it should be noticed that the same is true of the red of the other side of the apple. The apple is seen as having a red opposite side. Furthermore, the phenomenologist adds, the red of the opposite side is not merely believed in; it is bodily present in the experience. Like the white, not being seen, it is present in the experience by being imagined.

19. Notice that to say that it is present in the experience by virtue of being imagined is not to say that it is presented as imagined. The fruits of careful phenomenological description are not to be read from experience by one who runs. Red may present itself as red and white present itself as white; but sensa-
tions do not present themselves as sensations, nor images as images. Otherwise philosophy would be far easier than it is.

20. The phenomenologist now asks us to take into account a phenomenon frequently noted, but as frequently misinterpreted. Consider the snow seen on a distant mountain. It looks cool. Do we see the whiteness of the snow, but only believe in its coolth. Perhaps this is sometimes so; but surely not always. Sometimes actual coolth is present in the experience, as was the white inside the apple and the red on the opposite side. Once again, we do not see the coolth of the snow, but we see the snow as cool; and we experience the actual coolth as we experience the actual whiteness of the snow. An actual coolness is bodily present in the experience as is an actual volume of white.

21. Let us combine our results into one example. We see the cool red apple. We see it as red on the facing side, as red on the opposite side, and as containing a volume of cool white apple flesh. We do not see of the apple its opposite side, or its inside, or its internal whiteness, or its coolness, or its juiciness. But while these features are not seen, they are not merely believed in. These features are present in the object of perception as actualities. They are present by virtue of being imagined.

22. We must introduce a further refinement. We see an apple. We see it as an apple. Do we see of it its applehood? We see a copper penny. We see it as a copper penny. Do we see of it its consisting-of-copperness? We see a lump of sugar. We see it as white and as soluble. We see of it its whiteness. Do we see of it its solubility? The answer to the last question is surely negative, as are the questions concerning applehood and copperness, and for the same reason. Aristotle would put it by saying that we see of objects only their occurrent proper and common sensible features. We do not see of objects their causal properties, though we see them as having them.

23. To draw the proper consequences of this we must distinguish between imagining and imaging, just as we distinguish between perceiving and sensing. Indeed the distinction to be drawn is essentially the same in both cases. Roughly imagining is an intimate blend of imaging and conceptualization, whereas perceiving is an intimate blend of sensing and imaging and conceptualization. Thus, imagining a cool juicy red apple (as a cool juicy red apple) is a matter of (a) imagining a unified structure containing as aspects images of a volume of white, surrounded by red, and of mutually pervading volumes of juiciness and coolth, (b) conceptualizing this unified image-structure as a cool juicy red apple. Notice that the proper and common sensible features enter in both by virtue of being actual features of the image and by virtue of being
items thought of or conceptualized. The applehood enters in only by virtue of being thought of (intentional in-existence).

24. On the other hand, seeing a cool juicy red apple (as a cool juicy red apple) is a matter of (a) sensing-cum-imaging a unified structure containing as aspects images of a volume of white, a sensed half-apple shaped shell of red, and an image of a volume of juiciness pervaded by a volume of white; (b) conceptualizing this unified sense-image structure as a cool juicy red apple. Notice that the proper and common sensible features enter in both by virtue of being actual features of the sense-image structure and by virtue of being items conceptualized and believed in. As before, the applehood enters in only by virtue of being thought of (believed in).

III

25. The upshot of the preceding section is that perceptual consciousness involves the constructing of sense-image models of external objects. This construction is the work of the imagination responding to the stimulation of the retina. From this point on I shall speak of these models as image-models, because although the distinction between vivid and less vivid features of the model is important, it is less important than (and subordinate to) the perspectival feature of the model (its structure as point-of-viewish and as involving containing and contained features).

26. The most significant fact is that the construction is a unified process guided by a combination of sensory input on the one hand and background beliefs, memories, and expectations on the other. The complex of abilities included in this process is what Kant calls the “productive” as contrasted with the “reproductive” imagination. The former, as we shall see, by virtue of its kinship with both sensibility and understanding unifies into one experiencing the distinctive contributions of these two faculties.

27. Notice once again that although the objects of which we are directly

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1. The essential point is that the experience involves the actual rather than merely believed in existence of the volume of white. The phenomenologist thinks of this volume as an image-volume of white. A tough-minded contemporary might insist that while the actuality is a three-dimensional neuro-physiological process of the kind correlated with stimulation by white objects, it need not be construed as an image in a more traditional sense. Nothing in the argument of this paper hinges on this controversy. One can think of the neuro-physiological process as occasionally generating image-samples of white. On the other hand, when we look, not at an opaque object but, for example, at a pink ice cube, the neuro-physiological process involves the actual existence of a volume of sensory pink.
aware in perceptual consciousness are image-models, we are not aware of them as image-models. It is by phenomenological reflection (aided by what Quine calls scientific lore) that we arrive at this theoretical interpretation of perceptual consciousness.

28. Notice also that the construction of image-models of objects in the environment goes hand in hand with the construction of an image-model of the perceiver's body, i.e., what is constructed in an image-model of oneself-in-one's environment. The perspectival character of the image model is one of its most pervasive and distinctive features. It constitutes a compelling reason for the thesis of the transcendental ideality of the image-model world. Image-models are "phenomenal objects." Their esse is to be representatives or proxies. Their being is that of being complex patterns of sensory states constructed by the productive imagination.

29. Still more important is the fact that although the image-models are perspectival in character, the objects in terms of which they are conceptualized are not. Thus, apples are not perspectival in character. The concept of an apple is not the concept of a perspectival entity. Apples are seen from a point of view. Apples are imagined from a point of view. A spatial structure is imagined from a point of view. Yet the concept of a spatial structure, e.g., a pyramid, is not the concept of a point-of-viewish object. Thus we must distinguish carefully between objects, including oneself, as conceived by the productive imagination, on the one hand and the image-models constructed by the productive imagination, on the other.

30. We are now in a position to put the elements of visual perception which we have been distinguishing together.

31. In the first place, the productive imagination is a unique blend of a capacity to form images in accordance with a recipe, and a capacity to conceive of objects in a way which supplies the relevant recipes. Kant distinguishes between the concept of a dog and the schema of a dog. The former together with the concept of a perceiver capable of changing his relation to his environment implies a family of recipes for constructing image models of perceiver-confronting-dog.

32. The best way to illustrate this is by a very simple example, for our perceptual experience does not begin with the perception of dogs and houses. The child does not yet have the resources for such experience. But though the child does not yet have the conceptual framework of dogs, houses, books, etc., he does, according to Kant, have an innate conceptual framework—a proto-theory, so to speak, of spatio-temporal physical objects capable of interacting with each other; objects—and this is the crux of the matter—which are capa-
ble of generating visual inputs which vary in systematic ways with their relation to the body of a perceiver.

33. Consider the example of a perceiver who sees a pyramid and is walking around it, looking at it. The *concept* of a red pyramid standing in various relations to a perceiver entails a *family* of concepts pertaining to sequences of *perspectival* image-models of oneself-confronting-a-pyramid. This family can be called the schema of the concept of a pyramid.

34. Notice that the pyramid schema doesn't follow from the concept of a pyramid alone. It follows from the complex concept of *pyramid in such-and-such relations to a perceiver*. This accounts for the fact that whereas the concept of a pyramid is not a point-of-viewish concept, the *schemas* concern sequences of perspectival models of a pyramid.

35. It is in terms of these considerations that Kant's distinction\(^2\) between

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2. A140ff.; B179ff. That Kant does not emphasize the role of the concept of the perceiver's body and sense organs in determining the rules of the successive apprehension of the manifold of an object (e.g., a house) is, presumably, to be accounted for by the fact that the concept of the perceiving subject and its faculties is a constant factor in the generation of all object-schemata. The source of the difference between different object-schemata is the difference between the object-concepts involved (e.g., *house*, *dog*, etc.). The reader should ponder Kant's examples of the house and the ship in explaining the distinction between subjective and objective succession (A192; B237).
(a) the concept of an object, (b) the schema of the concept, and (c) an image of the object, as well as his explication of the distinction between a house as object and the successive manifold in the apprehension of a house is to be understood. "The object is that in the appearance which contains the condition of this necessary rule of apprehension."3

36. To sum up, the productive imagination generates both the complex demonstrative conceptualization

This red pyramid facing me edgewise

and the simultaneous image-model, which is a point-of-viewish image of oneself confronting a red pyramid facing one edgewise. We are now in a position to understand Kant’s distinction between the productive and the reproductive imaginations.5 The principle of the reproductive imagination is the "association of ideas"; more exactly, the association of objects. The connection between the associated items is contingent, and dependent on the happenstances of experience. As an association of objects it presupposes the constitution of objects by the productive imagination. And the principle of such constitution is not happenstance, but conformity to recipe—schemata derived from concepts. We are also in a position to understand the precise sense in which the productive imagination mediates between "the two extremes, . . . sensibility and understanding . . ." (A124) and is " . . . an action of the understanding on the sensibility" (B152).

IV

37. In the preceding section of the paper I emphasized a distinction between what we perceive the object as and what we perceive of the object. I related this distinction to the distinction between the complex demonstrative thought component and the complex-image component of the perceptual experience. I now want to do this in a more systematic way and to relate it to Kant’s theory of categories.

38. The basic idea is that what we perceive of the object in visual percep-


4. A momentary image-model is, of course, an abstraction from the image-model sequence which realized the schema for a particular sequence of relations between perceiver and object.

5. See A120–124. The discussion of the role of the productive imagination in the second edition transcendental deduction is very abstract and emphasizes the self-consciousness involved in the construction and awareness of perceptual representations (but see B138; B150ff.). The specifics were left to the Analytic of Principles, where the account coincides with the first edition.
tion consists of those features which actually belong to the image-model, i.e., its proper and common-sensible qualities and relations. Also its perspectival structure. On the other hand, what we perceive the object as is a matter of the conceptual content of the complex demonstrative thought. I pointed out that the sensible features belong in both contexts. Thus the phrase “cube of pink (from a certain point of view)” refers both to an actual feature of the image-model and (in second intention) a component of the conceptual center of the demonstrative thought. Thus,

39. Now I emphasized that we do not perceive of the object its causal properties. What we see of it are its occurrent sensible features. This can now be generalized as follows. We do not perceive of the object its character as a substance having attributes: its character as belonging with other substances in a system of interacting substances, its character as conforming to laws of nature. In short, we do not perceive of the object what might be called “categorial” features. For the image construct does not have categorial features. It has an empirical structure which we can specify by using words which stand for perceptible qualities and relations. But it does not have logical structure; not-ness, or-ness, all-ness, some-ness are not features of the image-model. They are features of judgment. More generally we can say that the image-model does not have grammatical structure. (It will be remembered that we are construing mental judgments as analogous to sentences. A judgment, we said, is, as it were, a Mentalese sentence episode.) And, of course, Kant’s categories are grammatical classifications. They classify the grammatical structures and functions of Mentalese.

40. Thus the category of substance-attribute is the structure ‘S is P’, the form of subject-predicate judgment. The category of causality is the form ‘X implies Y’. The category of actuality is the form ‘that-p is true’. More accu-
rately, the categories are these forms or functions *specialized* to thought about spatio-temporal objects.

41. In the preceding section we were concerned with the distinction between concepts of empirical object and the schemata of these concepts, i.e., the rules for image-model sequences which are determined by the concept of object-in-various-successive-relations-to-perceiver. But Kant also uses the term schema in connection with the categories. The categories do not specify image-models. There is no image of causality as there is an image of a house. Yet they do have in their own way schemata, i.e., rules specified in terms of abstract concepts pertaining to perceptible features of the world. Thus the schema for causality is the concept of uniform sequence throughout all space and time.

42. The Humean concept could be said to have images in an extended sense. Thus a person in a thunderstorm who experiences a finite stretch of lightning-thunder uniformity could be said to have experienced an image of causality. Kant, of course, does not say this, and I introduce it only to show that this new use of "schema" is not completely foreign to the previous one.

43. The schematized category of causality, then, is the ground-consequence category where the ground (antecedent) concerns the occurrence of one kind of event, \( K_1 \), at \( t \) and the consequence concerns the occurrence of another kind of event, \( K_2 \), at \( t + \Delta t \). Since the ground is an event being of kind \( K_1 \) it must be true that whenever \( K_1 \) occurs, \( K_2 \) also occurs.

44. The categories are in *first* instance simply *identical with* the forms of judgment, a point which must be grasped if traditional puzzles about the metaphysical deduction of the categories are to be avoided. These forms of thought would be involved in thinking about *any* subject matter from perceptual objects to metaphysics and mathematics.

45. The so-called pure categories are these forms of thought specialized to thought about *objects* (matter-of-factual systems) in general. Such objects need not be spatio-temporal as are the objects of human experience. The full-blooded categories with which Kant is concerned in the *Critique* are the pure categories, specialized in their turn to thought about spatio-temporal objects. The relation of the forms of thought to the pure categories is that of genera to species, as is the relation of the pure categories to the schematized categories.

46. Let me conclude with some remarks on Kant's concept of an intuition. Consider the statements
This is a pyramid

This pyramid is made of stone

The first has the explicit grammatical form of a sentence. So does the second. But notice that the grammatical form of a sentence is lurking in the subject of the second sentence. From the standpoint of transformational grammar we would think of it as derived from the deep structure

This is a pyramid and it is made of stone

47. One might be tempted to think of “this” as a pure demonstrative having no other conceptual content than that involved in being a demonstrative. Kant does think of an act of intuition as a demonstrative thought—a Mentalese “this.” However he does not think of this Mentalese demonstrative as a bare Mentalese “this.” An example of an act of intuition would be the Mentalese counterpart of

This cube facing me edgewise

where this is not to be understood as, so to speak, a Mentalese paraphrase of

This is a cube which faces me edgewise.

48. The role of an intuition is a basic and important one. It is the role of bringing a particular object before the mind for its consideration. Thus, though there is a close relationship between

This cube facing me edgewise . . .

and

This is a cube which faces me edgewise.

the former is an irreducible kind of representation. It is a demonstrative representation which has conceptual content and grammatical form. As noted above it contains the form and content of the judgment “This is a cube.”

49. Thus for Kant intuitions are complex demonstrative thoughts which have implicit grammatical (and hence categorial) form.

50. However thin—as in the case of the child—the intuitive representation may be from the standpoint of the empirical concept involved, it nevertheless contains in embryo the concept of a physical object now, over there, interacting with other objects in a system which includes me. It embodies a proto-theory of a world which contains perceivers of objects in that world. (The reader should ponder A127–128.)
51. Kant emphasizes the difference between intuitions on the one hand and sensations and images on the other. He emphasizes that it is intuitions and not sensations or images which contain categorial form. When he speaks of synthesis in connection with perception, he has two things in mind:

1. the construction of image-models
2. the formation of intuitive representations (complex demonstratives)

There is also the synthesis which is the formation of the explicit judgment, thus

3. (This cubical substance) is a piece of ice

52. Since intuitions have categorial form, we can find categorical form in them. In this sense we can arrive at categorial concepts by abstraction from experience—but only because experience contains intuitions which have categorial* form. We cannot abstract the categories from sensations or images.

53. To sum up. Kant’s categories are forms and functions of judgment: They are grammatical summa genera. From Kant’s point of view, Aristotle’s theory of categories was a failure because, failing to distinguish between intuition and image-model, his list of categories is haphazard (though guided obscurely by grammatical intuitions); and Aristotle confuses them with generic concepts of entities in the world. There is a legitimate place for a theory of such concepts. But it must be carefully distinguished from the grammar of thought.

*Correction of “categorical” in original printing.]
Credits • Index
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1. “Inference and Meaning”

2. “Some Reflections on Language Games”

3. “Language as Thought and as Communication”

4. “Meaning as Functional Classification: A Perspective on the Relation of Syntax to Semantics”

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8. “Being and Being Known”


10. “Some Reflections on Thoughts and Things”
   Paper given as the third of the John Locke Lectures at Oxford University, 1966. Published in *Noûs* 1 (1967): 97–121.

11. “Mental Events”

12. “Phenomenalism”


14. “Philosophy and the Scientific Image of Man”
15. "...this I or he or it (the thing) which thinks..."
   Paper given as the presidential address at the meeting of the Eastern Division
   of the American Philosophical Association, December 1970. First published in
   *Proceedings and Addresses of the American Philosophical Association* 44 (1972);

16. "Some Remarks on Kant’s Theory of Experience"
   Paper given at the meeting of the Eastern Division of the American Philosoph­
   ical Association, December 1967. First published in *Journal of Philosophy* 64

17. "The Role of Imagination in Kant’s Theory of Experience"
   Paper given as the Dotterer Lecture at the Pennsylvania State University, Spring
   (University Park: Pennsylvania State University, 1978). Reprinted by permis­
   sion.
## Index

Aboutness, 285. See also Intentionality; Representation; Thought

Abstract entities. See Entities: abstract

Abstraction, 33, 211–214, 216–217, 244, 334, 367, 375, 416–417, 430, 466. See also Concept empiricism; Concepts: formation of; Entities: abstract

Abstractionism, 449. See also Abstraction

Accidents, 32, 414. See also Attributes; Essence

Accuracy of measurement, 340. See also Science

Actions, 18, 20, 28, 40–41, 48, 49, 59, 62–65, 71–72, 74, 84–85, 87, 221–222, 270–272, 283, 293–294, 322, 379–381, 384, 398, 406–408, 434; basic, 41; linguistic, 61–62, 84, 283; social, 84. See also Acts; Agency; Behavior; Episodes; Language departure transitions; Ought-to-do

Acts, 32, 34, 85, 91, 212–214, 247, 252, 258, 269–270, 346, 419, 422; conceptual, 57, 256, 266, 444–446, 450; illocutionary, 68; mental, 73, 74–75, 76, 78–79, 82, 84, 90, 216, 261–263, 266–267, 270–271, 280–281, 423, 437; locutionary, 74; linguistic, 81; speech, 82; intellectual, 209–213, 216, 226; intrinsic character of, 209; diaphanous, 261, 445. See also Actions; Behavior; Episodes; Language departure transitions; Ought-to-be

Actuality, 84, 227, 249–250, 270, 438–439. See also Actions; Acts; Agency

Actualization, 67, 71, 75–77. See also Manifestation; Realization

Adjectives, 129, 130, 142, 149, 158, 159. See also Predicates

Aesthetics, 369, 372. See also Philosophy

Agency, 59, 62, 64–65, 406, 424. See also Actions; Acts

Agent-subject, 61, 63–64. See also Concepts: formation of; Language: learning to use; Subject-matter; Training


Analysis, 371. See also Synthesis

Analyticity, 19, 25, 26–27, 38, 136, 204, 265, 267, 269, 280, 308, 313, 316, 319, 414, 439. See also Apriority; Meaning; Truth

Anscombe, G. E. M., 120

Antinomies, 425, 430, 450. See also Kant

Appearances, 394–395, 398, 404–405, 416, 418, 421, 424. See also Perception; Raw feels; Seeming; Sensation

Appearing, 314–317, 319, 333, 356; existential, 316. See also Appearances

Apperception, 412, 427–428; transcendental unity of, 345, 412; synthetic unity of, 413–
Apperception (continued) 414, 429; analytic unity of, 414; pure, 428–429, 435, 450. See also Awareness: self-; Introspection; Kant
Apprehension, direct, 251–254, 256. See also Apperception; Introspection
Apriority, 26, 267, 308, 313, 334, 349, 412, 415, 439. See also Analyticity; Knowledge
Aquinas, Thomas, 209–218, 227, 271, 358
Archimedes, 229
Arnauld, Antoine, 210
Article, definite, 166, 184–186, 197
Articulation, 119. See also Conceptual frameworks; Logical space
Assertibility, unconditional, 19–20, 37, 51, 204. See also Assertion
Assertion, 12, 14, 20, 22, 36, 40, 90, 111, 119, 125, 145, 161, 214; conditional, 19; empirical, 19, 24. See also Actions; Language; Statements; Utterances
Association, 5, 292, 383–384, 450, 462. See also Correlations; Ideas; Thought
Atomism, 394; logical, 114
Attributes, 98, 131, 136, 181, 260–262, 266, 346, 351, 414, 420, 422, 444, 447, 463; counterpart, 261, 263, 272, 280–281; empirical, 414; mental, 416; physical, 418; material, 420; substance-, 446, 463. See also Kinds; Properties; Qualities; Sorts; Universals
Augustine, 54
Austin, J. L., 61, 283
Authenticity, 341; absolute, 340–341. See also Conceptual frameworks; Given: myth of the Authority, 7, 10, 15, 16, 251–253, 322, 433. See also Ought; Rules
Authorization, 12
Autonomy, 430–432, 434–436. See also Kant
Avowals, 361. See also Assertion; Utterances
Awareness, 213, 236–237, 250–251, 254–256, 291–292, 318, 374, 428–429, 438, 460; conceptual, 22, 247–248, 293; of demands and permissions, 31–32; cognitive, 237; direct, 237, 246, 455; self-, 382, 400, 427. See also Consciousness; Experience; Thought
Ayer, A. J., 305
Baptism, 231, 236, 249
Bedeutung, 105. See also Reference
Bees, 33–34, 87, 292, 385, 378, 395, 398
Behavior, 266, 285, 382, 390–391, 408; pattern-governed, 34, 38, 39, 41, 47, 86, 88, 89; linguistic, 57, 61, 69, 73, 267: 283, 377; verbal, 73–74, 76, 79, 83, 85–86, 94, 284; linguistic, 283; overt, 284; discriminative, 366. See also Actions; Acts; Rules; Uniformities
Behaviorism, 57, 78, 211, 388, 390–393; logical, 68–72, 76–79, 264, 267–268; verbal, 83–84, 86, 89, 93. See also Psychology; Thinking-out-loud
Being-for-mind, 210
Believing in, 456–459. See also Belief; Seeing as
Bergmann, Gustav, 95, 103, 106, 108, 109, 112, 114, 116, 120, 123, 124
Berkeley, George, 312, 319
Biochemistry, 388, 390–391, 393, 406. See also Chemistry; Neurophysiology; Science
Bradley, F. H., 104
Bradley’s puzzle, 122. See also Predication
Bridge laws, 353, 363, 367. See also Science; Theories
Broad, C. D., 120
Brouwer, L. E. J., 448
Calculational devices, 330, 340, 407. See also Realism; Science; Theories
Campbell, N., 330
Capacities, 267. See also Powers; Propensity
Carnap, Rudolph, 8–12, 15, 17–22, 24, 149–150, 155, 272, 278, 330, 352–353, 452
Castaneda, Hector-Neri, 44, 412
Categorial form, 441, 443, 449, 466. See also Categories; Grammatical form; Logical form
Categorial status, 236–237, 244. See also Categories
148, 154, 159, 439; logical, 153; syntactical, 159; theory of, 242; unschematized, 244; as classifications of conceptual roles, 244; ur-, 244; determinate, 244; irreducible, 320; as concepts of functional roles, 417; epistemic, 439, 451; as concepts of logical form, 444; pure, 464. See also Concepts; Kant; Senses (Fregean); Thought
Causal order. See Order: causal
Character, 290, 294; referential, 294. See also Representational systems
Characterization, 284, 292, 294–296. See also Classification; Conceptualization
Chemistry, 362–365, 367–368, 392. See also Biochemistry; Science
Chisholm, Roderick, 77–80, 248, 253, 256–257, 283, 435
Circumstances, 18, 21, 25, 343; normal, 232–233, 241, 245, 304–306, 317, 336, 358, 392, 393, 403. See also Contexts
Classes, 132–134, 148, 162, 163–170, 174, 186, 188, 272. See also Extensions; Properties; Universals
Classification, 91, 377, 444, 463; functional, 85, 95, 97, 295, 296; illustrating, 92–93. See also Characterization; Conceptualization; Meaning
Cognition, 26, 213–214, 217, 241, 250–252, 255, 318, 320, 335, 337. See also Categories; Concepts; Thought
Cognitive order. See Order: cognitive
Cognitive states, 238, 255. See also Cognition
Collective nouns, 186. See also Common nouns
Color, 120, 233–243, 338–339, 343–345, 395, 397. See also Perception; Sensation
Commands, 49
Commitment, 126, 131, 137, 155–156; ontological, 135, 148, 151. See also Normativity; Ought; Realism
Common sense world, 304. See also Manifest image
Communication, 10–11, 57, 62, 68–69, 81–82, 283, 360, 385. See also Language; Thought
Community, 407–408, 433; linguistic, 63–64, 73. See also Groups; Persons
Computation, 345–347. See also Computers
Computers, 220, 401, 428. See also Representational systems; Robots
Concatenation, 91
Conceiving, 263, 373–376, 402, 449, 460. See also Concepts; Conceptualization
Concentration, 243
Concept empiricism, 319, 366. See also Concepts: formation of
Conceptual activity, 61, 63–64. See also Concepts
Conceptual frameworks, 13, 26, 53–54, 172, 303, 325–331, 339–340, 344, 347–348, 365, 374–375, 377, 383–385, 388, 446, 451–452; behavioristic explanatory, 82; psychological explanatory, 82–83; of qualities, 131; of conceptual episodes, 265, 267; of micro-physical entities, 265; of sense impressions, 265; of mental acts, 267, 268; of behavioral dispositions and propensities, 268; of persons and sensations, 317; of physical objects in space and time, 317, 319, 327–333, 339–345, 460; of conduct, 322; of persons and things in space and time, 326, 328, 344; priority of, 326; of private sense contents, 328–331; of scientific objects, 330; of qualitative and existential appearances, 333; of sense impressions, 333, 336–339; of perceptible objects, 336, 339–341, 348, 368; of private episodes, 336; of persons, 345, 407–408; of particulars, 349; of scientific explanation, 365; of scientific objects, 368; of conceptual thinking, 374, 384; of ideas, 383; social aspect of, 384; acquiring a, 385; autonomy of, 388; completeness of, 388; methodological dependence of, 388; of perceptible objects, 395; of space and time, 397, 449; in which change is measured, 421; of space, time, and myself, 448; of basic concepts and categories, 449, 460. See also Concepts; Logical space; Order; Representation; Thought; Translation
Conceptualization, 249–250, 254, 257, 356, 420, 430, 458–459. See also Characterization; Classification; Concepts; Perception; Sensation
Conceptual order. See Order: conceptual
Conceptual states, 247–248, 254. See also Concepts
Conditioning, 386. See also Training
Confrontation, 252
Connotation, 143
Consciousness, 218, 237–240, 246, 255, 318, 347, 390, 405, 414, 419, 435, 450; perceptual, 424, 459–460; sensory, 424. See also Awareness; Experience; Perception; Sensation
Conscious states, 398–400
Consequence, 8, 14, 21, 204; direct, 17–20. See also Entailment; Implication; Inference; Logic
Consistency, 396. See also Truth
Constants, 112, 114; individual, 9, 112, 182–183, 191, 193, 194, 198–201; predicate, 112; descriptive, 121; common noun, 198; meta-linguistic, 198. See also Logic; Names; Quantification; Singular terms; Variables
Content, 8–9, 26, 210–252, 254, 257, 258–260, 262, 367, 413, 417, 444, 463, 465; L-, 9; factual, 11, 244; cognitive, 18; general, 258, 260, 261; individual, 258–259, 261; logical, 258–259, 261; judgmental, 259; state of affairs, 261; idea-, 263. See also Concepts; Meaning; Propositions; Thought
Contexts, 36; action enjoining, 48, 49; motivating, 48; categorizing, 131, 148; common noun, 144; evaluative, 162; mentalistic, 162; nomological, 162; intra-linguistic, 176. See also Discourse; Language; Statements
Contingency, 156–158. See also Necessity
Contract theories, 267
Conversational implicature, 94
Convey, 12, 14, 20, 22, 24, 39, 74, 75, 79, 274, 278, 283
Copi, Irving, 103–105, 116, 119
Copula, 95–97, 261, 273, 286, 288. See also Meaning; Standing for
Correctness, 374, 382, 384–385, 408; semantical, 272, 279. See also Rules; Standards
Correlations, 375, 387, 390–393, 398, 404. See also Explanation; Manifest image; Scientific image
Corroboration, 265
Counterparts, 73, 105, 113, 135–137, 140, 152, 157, 180, 183, 185, 188, 195, 224, 228, 241, 261–263, 272, 280–281, 290, 307, 308, 331, 344–347, 366, 393, 398, 400, 418; categorical, 132–143, 146, 149; quasi-syntactical, 149; existentially quantified, 153; syntactical, 159. See also Analogy; Attributes; Characterization; Representational systems; Symbols
Credibility, trans-level, 332
Criteria of application, 170–172, 179–181, 279; descriptive, 170–171, 179; prescriptive, 170–171, 179–181; empirical, 171–172; generic, 172; immediate, 180–181; ultimate, 180–181; indirect, 181. See also Concepts; Meaning
Dagger, 168. See also Quotation: dot
Dedekind cut, 269. See also Philosophy
Deductive system, 331, 337. See also Logic; Science; Theories

Definition, 17–18, 331, 349, 352, 363, 391; ostensive, 25; contextual, 169, 318, 319; implicit, 338. See also Concepts; Meaning; Theories

Deliberation, 222, 379–380. See also Practical reasoning

Demands, 30–31. See also Obligation; Ought

Demonstratives, 447, 455–456, 463, 466; pure, 465. See also Perception; Sensation; Singular terms

DeMorgan, Augustus, 286, 299

Denotation, 143, 262, 263, 275–278, 285, 288–289. See also designation; Reference


Descriptions, 337, 441; Russell’s theory of, 106, 210

Designation, 155, 278. See also Denotation; Reference

Designs, 167, 172, 175–180, 192, 194, 199, 201, 225; sign, 104, 163–164, 272, 286, 289–290; script, 174; linguistic, 175, 176; predicate, 194; sentential, 194

Desires, 432, 435

Determinateness, 8, 254, 318

Determinism, 380, 424–425. See also Causation; Laws of nature; Science

Discourse: modal, 38, 56; describing, 52; indirect, 52, 83–84; prescribing, 52; semantic, 52; normative, 58; observational, 331; theoretical, 331. See also Contexts; Language; Statements


Distributive singulars, 168

Distributive singular terms. See Singular terms: distributive

Doing, 67, 71. See also Actions; Acts; Behavior

Dualism, 346, 360, 379, 386, 397, 404, 407, 408, 416, 424. See also Mind-body problem

Ducasse, C. J., 256

Duties, 369, 407, 435. See also Kant; Obligation; Ought

Eddy, Mary Baker, 257

Elementarism, 109

Embodyment, 171, 179

Emergence, 342. See also Epiphenomenalism; Mind-body problem

Emotivism, 18

Empirical form, 445

Empiricism, 4–6, 435. See also Rationalism

Entailment, 195. See also Implication; Inference; Logic

Enthymemes, 3, 5–6. See also Inference: material; Logic


Epiphenomena, 347, 349, 427. See also Epiphenomenalism

Epiphenomenalism, 346. See also Emergence; Mind-body problem

Episodes, 263, 268–269, 361; mental, 73, 265, 269; inner, 76, 78–79, 82, 264, 281, 283, 336–339, 364, 392, 401; linguistic, 84–85, 90, 168, 263, 266, 269, 271–272, 285, 445; conceptual, 263–268, 270, 272, 357; verbal, 264; non-conceptual, 357–358; pure, 359–360; postulated, 393. See also Actions; Acts; Behavior; Events; Processes; Uniformities

Epistemology, 62, 247–249, 256, 303–304, 321, 337, 340, 413, 452. See also Knowledge; Philosophy; Scepticism

Essence, 333. See also Accidents

Ethics, 17, 62, 372. See also Ought; Philosophy

Events, 163, 209, 346–347, 383, 449; sign, 213; linguistic, 282; mental, 282–283, 288, 294, 390; representational, 294; brain, 347; micro-physical, 347; physical, 438. See also Actions; Acts; Entities; Episodes; Objects; Processes

Evidence, 322, 326–327, 390. See also Knowledge

Evolution, 26, 32–34, 50, 86–87, 292, 334, 391. See also Behavior: pattern-governed
Exemplification, 103, 107–109, 121–124, 129, 132, 138, 201, 202, 261–262, 357, 358. See also Concepts; Meaning; Predication; Properties; Standing for; Universals
Expanses, 310–312, 320, 455. See also Color; Perception; Sensation; Sense contents; Sense impressions; Surfaces
Expectation, 5
Explanation, 53, 210, 215, 266, 268, 318, 334–335, 337, 367–368, 385–386, 391–393, 396, 397, 404, 408, 426. See also Science; Theories
Expression, 57, 62, 65, 66, 69–78, 80, 84, 103, 109, 191, 194–195, 204, 256, 263, 264, 270, 271, 351–352, 354, 380, 385, 392, 400–401; primary, 70; action sense of, 72; causal sense of, 72, 76, 77; logical sense of, 72; person, 79; utterance, 79. See also Assertion; Belief; Concepts; Language; Meaning; Standing for; Thought
Extensionality, 318
Extensions, 262, 263, 267, 272, 275, 278. See also Classes; Intensions; Meaning
Family resemblance, 65–66
Feelings, 350, 356, 358, 390, 397, 398, 402, 406. See also Appearing; Raw feels; Seeming; Thought
Feigl, Herbert, 350
First matter, 421–423
Firstness, 244
Firth, Roderick, 230–240, 244, 247–250, 253–255
Force, 14, 158, 160, 161, 192, 195, 224; normative, 169
Form, 144, 212, 216, 258
Formal mode of speech, 160, 162, 182, 183, 185, 187, 188–189. See also Material mode of speech; Metalanguage; Object-language
Form of life, 125
Formulation, 278
Framework conception, 381. See also Conceptual frameworks
Framework feature, 395, 450. See also Conceptual frameworks
Framework principle, 381. See also Conceptual frameworks
Freedom, 430, 434–435. See also Spontaneity; Will
Free will. See Will: freedom of the
Functional role, 89, 98–99. See also Inferential role; Linguistic roles
Functional similarity, 98–99
Functions, 186, 189, 286, 295
Games, 17, 29, 41, 48, 83, 98, 171–172, 179–181, 194, 385; rules of, 29; playing, 30–31, 47; of reasoning, 31; learning to play, 32, 35, 47, 385; transitions of, 36; rule, 47; scientific, 55; formal varieties of, 172; game-vocabulary, 172; material varieties of, 172. See also Concepts; Language; Language games; Moves; Pieces; Positions; Rules
Gappiness, 159–160. See also Unsaturated
Geach, Peter, 127, 136–143, 154, 219
Generality, 146
Generalizations, 324–328, 331, 334, 339–340, 449; empirical, 11; accidentally autobiographical, 325–328; essentially autobiographical, 325–328. See also Induction; Science
Generic, 318
Geometry, 55, 98, 121, 345, 449. See also Mathematics
Given, 229–230, 245, 247–248, 250–251, 359, 364; myth of the, 229, 236–237, 242, 243–244, 246, 251; thickness of, 248; classical theory of, 359. See also Authority; Awareness; Consciousness; Experience; Knowledge; Self-presenting states; Sense contents; Sense impressions
Index

Good, 382, 433
Grammar, 237, 305, 306, 333, 463, 465–466; logical, 48, 344, 347; surface, 168, 274, 277; depth, 273, 290, 465; transformational, 465. See also Adjectives; Common nouns; Language; Logic; Predicates; Singular terms; Syntax; Verbs
Grammatical form, 465. See also Logical form; Sentential function
Grammatical subjects, 140, 142, 144, 182. See also Logical subjects
Groups, 384–386, 407. See also Community; Persons
Guided missiles, 220. See also Computers; Robots
Habit, 5, 16, 25, 44, 175, 379–381, 450. See also Behavior; Uniformities
Happiness, 431–432, 434
Harman, Gilbert, 81–82
Hegel, G. W. F., 384, 385, 413
Hempel, Carl, 330, 431
History, 370
Hobbes, Thomas, 345–347, 349, 399
Hochberg, Herbert, 289
Holism, 374
Hume, David, 5, 16, 292, 297, 397, 431, 443, 449, 464
Husserl, Edmund, 373
Hypothetical-deductive method, 329, 334. See also Realism: hypothetical-deductive; Science
Hypothetical imperative, 431–432. See also Kant
Hypotheticals, 269
Idealism, 7, 210, 439, 450
idealizations, 373, 387. See also Theories
Ideas, 312; adequate, 227; classical theory of, 258. See also Association
Identity, 276, 419; logical, 419–420. See also Logic
Identity theory of mind. See Mind: identity theory of
Illustrating sign design principle, 195–197, 201. See also Designs: sign; Language: perspicuous
Image-models, 459–464, 466. See also Images; Imagination; Perception; Sensation
tion; Imaging; Imagining; Perception; Sensation
Images of man-in-the-world. See Manifest image; Scientific image
Imagination, 5, 161, 249, 286, 373, 442, 454, 457–459; productive, 441, 442, 454, 459–460, 462; reproductive, 459, 462. See also Experience; Images; Imaging; Imagining; Observation; Perception; Sensation
Imaging, 458–459. See also Imagination
Imagining, 458. See also Imagination
Immateriality, 215–216, 222, 227. See also Intelect
Implication, 147, 198; causal, 147; logical, 147, 217; natural, 147. See also Consequence; Entailment; Inference; Logic
‘in’, 260–262. See also Objects; Parts
INDCON, 196–197, 200, 204, 205. See also Jumblese; Language: perspicuous; PRECON
Indispensibility, 7, 10
abstract, 127, 138–139, 184, 186–188, 191–192; distributive, 185, 187–192; linguistic, 187–190; quality-, 446; relation-, 446. See also Entities; Objects; Particulars
Induction, 38, 53–54, 56, 167, 220–221, 265, 308, 313, 324, 326–331, 340, 354, 368, 375, 449; correlational, 375. See also Causation; Explanation; Science
Ineffable, 109, 123–125. See also Meaning
Inference, 3–11, 14–16, 34, 36, 40, 53, 55, 64, 84, 85, 87–88, 125, 149, 221, 222, 251, 270, 292, 293–294, 352, 375, 434, 449, 450, 451; material, 3–8, 12–16, 25, 26, 38, 40; formal, 4–5, 6–8, 15, 16, 26, 38; inductive, 4; causal, 5, 16; logical, 5, 8, 13, 297; extra-logical, 8, 58; L-valid, 9, 22, 25; P-valid, 9; primitive, 292; practical, 293–294; Aristotelian, 297, 304–305, 332–335; Humean, 297; existential, 318, 319; trans-level, 332, 336. See also Concepts; Consequence; Entailment; Implication; Inferential role; Logic; Moves: intra-linguistic
Inferential role, 296. See also Functional role; Linguistic roles
Ing/ed ambiguity, 65, 236, 438
Innate abilities, 292
Innateness, 334, 449, 453
Inner episodes. See Episodes: inner
Inner speech, 263–264, 281. See also Language; Thought
Inner states, 227–228. See also Episodes: inner Inscription, 91, 94, 97, 98, 100, 175, 352. See also Language; Linguistic expressions; Tokens; Utterances; Words
InteIlect, 209–219, 223; 226–228, 318; immateriality of, 209, 212, 213, 227; first act of, 211–212, 217–218, 228; second act of, 211–212, 218, 228; forms of, 212; possible, 212, 218; developed, 218. See also Cognition; Mind; Rationality; Thought
Intellectual order. See Order: intellectual
Intelligible order. See Order: intelligible
Intensionality, 283. See also Intensions
Intensions, 261–263, 266–267, 272–274, 278, 430; individual, 262, 266; state of affairs, 262; universal, 262. See also Concepts; Extensions; Meaning; Predicates; Senses (Fregian)
Intention, 64, 65, 75, 84, 85, 283, 285, 295, 382; community, 408; rehearse an, 408. See also Actions; Behavior; Volition; Will
Intentional in-existence, 245, 459. See also InteIllect
Intentionality, 57, 79–80, 215, 217, 223, 261, 283, 285, 287, 296, 337, 356, 459; pseudo-, 214, 217; intrinsic, 285; functionalist theory of, 287. See also Concepts; Language; Meaning; ‘of’; Representation; Thought
Intentional order. See Order: intentional
Interrogatives, 140–141
Inter-subjectivity, 260, 385, 433. See also Community
Introspection, 399, 40, 416, 424, 450. See also Apperception; Awareness; direct
Intuition, 265, 415, 418, 441, 447–449, 451, 464–466; empirical, 441; forms of, 447. See also Perception; Receptivity; Sensation
Intuitionism, 18
Isomorphism, 209, 215, 217–218, 222–223, 225–228, 359; structural, 217. See also Representational systems
James, William, 300
Judgmental form, 445
Judgments, 4, 36, 214, 218, 241, 316, 358, 416, 440, 443–448, 450, 455–456, 466; perceptual, 214, 218, 442; expressive, 230–231; form of, 258, 318, 464–466; categorical, 422–423; singular, 422; subject-predicate, 422, 441; empirical, 438; mental, 463. See also Belief; Cognition; Statements; Thought
Jumblese, 104, 112–114, 116–118, 193–201. See also INDICON; Language: perspicuous; PMese; PRECON
Justification, 230–231, 251–252, 326, 332, 440. See also Epistemology; Evidence; Knowledge
Kinds, 132–136, 142, 147–148, 150, 162, 163–170, 184–189, 217, 236, 327, 333; linguistic, 89, 164–165, 444; empirical, 149. See also Attributes; Classes; Qualities; Sorts; Universals
Kneale, William, 367
Knowing how, 93, 369–370. See also Knowing that; Knowledge
Knowing how to go on, 88
Knowing one’s way around, 369–371. See also Knowledge; Philosophy
Knowing that, 310, 316, 369–370. See also Knowing how; Knowledge
Konstatierungen, 336

Langford, A. H., 166
47, 50, 63, 73, 84, 85–89, 160, 218, 231–238, 305, 326, 334; rule, 42–43, 44, 47–48; theoretical, 54; practical, 64; teaching a, 64; illustrating, 92; as activity, 93–94; as product, 93–94; pieces, 98, 99; perspicuous, 104, 106–114, 116–117, 121–123, 168–169, 178, 182, 193, 204, 205, 280, 286, 290; ordinary, 129–130, 147, 236, 241, 287, 324; human, 172; pertaining to vs. in, 188; subject/predicate, 201, 294–296. See also Behavior: verbal; Concepts; Discourse; Games; Grammar; Language departure transitions; Language entry transitions; Language games; Linguistic expressions; Linguistic roles; Logic; Sentences; Statements; Thought; Words

Language departure transitions, 36, 39, 41, 42, 43, 45–47, 49, 88, 89, 179. See also Actions; Acts; Language

Language entry transitions, 36, 39, 41, 42, 43, 45–47, 55, 87, 89, 179, 442, 451, 453. See also Language; Observation; Perception; Sensation

Language games, 30–39, 41–47, 50–54, 172. See also Games; Language

Laws of nature, 5, 9, 38, 40, 50, 51, 53, 58, 322, 343, 367, 389–390, 398, 401, 406, 449, 450, 451, 453, 463. See also Causation; Explanation; Science

Leibniz, Gottfried, 276, 298

Lewis, C. I., 26, 230–231, 235, 244, 440

Lifeworld, 282

Linguistic activity, 84, 89; free, 64; tied, 64. See also Language

Linguistic expressions, 189–190, 263, 296, 443; structural properties of, 17; design, 21. See also Language; Sentences; Tokens; Words

Linguistic norms, 103. See also Normativity; Rules

Linguistic order, 124

Linguistic performances, 269, 271. See also Behavior: verbal; Language


Linguistics: structural, 88; empirical, 452; transcendental, 452. See also Language; Science

Locke, John, 5, 230, 312, 329, 424, 449

Logic, 105, 120, 223, 335, 372, 422, 446; syntactical conception of, 8; of action words, 40; propositional, 296; quantificational, 296, 297, 299; epistemic, 412; transcendental, 412, 439, 440, 453. See also Constants; Entailment; Implication; Inference; Language; Logical space; Quantification; Representational systems: logical; Truth-functional connectives; Variables

Logical connectives, 192. See also: Logic; Truth-functional connectives

Logical equivalence, 277. See also Logic; Material equivalence

Logical form, 25, 118, 292, 333, 419, 443–446. See also Grammatical form

Logical order, 168, 203, 217–218, 221, 225

Logical space, 117, 120, 178; of concepts, 334; of sense impressions, 335, 338; of colors, 344; of color, 353; of universals, 353; of empirical properties, 354; of impressions, 359, 365; of perceptible qualities and relations of physical objects, 359, 367; of raw feel qualities and relations, 359, 366; of neurophysiological states, 362; closure of, 367–368. See also Conceptual frameworks; Logic; Order

Logical subjects, 106, 132, 342–346, 349, 350, 362, 365, 418–420. See also Grammatical subjects; Persons

‘looks’ talk, 230–235, 240–242, 247–248, 305–306. See also Appearances; Language; Perception; Seeming; Sensation

Magnitudes, physical, 415

Malcolm, Norman, 268

Manifestation, 66–67, 69–71, 73, 77, 226, 285, 292, 343. See also Actualization; Expression; Realization

Manifest image, 242, 282–283, 373–387, 389, 390, 391, 393–395, 397–408; transcendence of, 382–384; ultimate homogeneity pertaining to, 394–395, 403–405. See also Conceptual frameworks; Correlations; Original image; Refinement; Scientific image

Manifold, 26, 413, 441, 449, 453, 461, 462

Man-in-the-world, 373–379, 385–386, 393, 400. See also Manifest image; Original image; Scientific image
Maps, 221–222, 292–293, 372, 376. See also Picturing; Representational systems; Signification
Mass terms, 237. See also Common nouns
Material equivalence, 276–278. See also Intensions; Logical equivalence
Materialism, 417, 419, 421, 423–424. See also Naturalism; Physicalism
Materialization, 171
Material mode of speech, 20, 149, 156, 159, 160–162, 168, 183, 185, 190, 192, 195, 199, 202, 312, 361. See also Formal mode of speech; Metalanguage; Object-language
Mathematics, 272, 369, 464
Matter, 238, 346. See also Objects: material
McTaggert, J. M. E., 421
Meaning, 6–7, 16, 39–40, 51, 52, 57, 74–75, 77–80, 81–82, 84, 86, 93–98, 100, 106, 111, 124–125, 143–144, 150–154, 156–157, 161–162, 178, 183, 216, 223, 231, 235, 285–289, 304, 336, 345, 348–349, 407–408, 443, 451; as inferential role, 7; descriptive, 18, 25, 43; conceptual, 231; 24, 65; normative, 44; factual, 55; as classification, 79; theories of, 81–82; knowledge of, 93; as use, 95–96, 225, 349, 352–355; picture theory of, 103; mode of, 143; sense, 230; functionalist theory of, 288. See also Categories; Classification: functional; Concepts; Conceptual frameworks; Content; Inferential role; Intensions; Language; Linguistic roles; Senses (Fregean); Standing for; Statements; Thought
Medicine, 392
Memory, 248, 294, 419, 459
Mental episodes. See Episodes: mental
Mental mode of speech, 20, 149, 156, 159, 160–162, 168, 183, 185, 190, 192, 195, 199, 202, 312, 361. See also Formal mode of speech; Metalanguage; Object-language
Mathematics, 272, 369, 464
Matter, 238, 346. See also Objects: material
Maxwell, Grover, 204
May-be, 64. See also Ought-to-be
McTaggert, J. M. E., 421
Meaning, 6–7, 16, 39–40, 51, 52, 57, 74–75, 77–80, 81–82, 84, 86, 93–98, 100, 106, 111, 124–125, 143–144, 150–154, 156–157, 161–162, 178, 183, 216, 223, 231, 235, 285–289, 304, 336, 345, 348–349, 407–408, 443, 451; as inferential role, 7; descriptive, 18, 25, 43; conceptual, 23, 24, 65; normative, 44; factual, 55; as classification, 79; theories of, 81–82; knowledge of, 93; as use, 95–96, 225, 349, 352–355; picture theory of, 103; mode of, 143; sense, 230; functionalist theory of, 288. See also Categories; Classification: functional; Concepts; Conceptual frameworks; Content; Inferential role; Intensions; Language; Linguistic roles; Senses (Fregean); Standing for; Statements; Thought
Medical practice, 392
Memory, 248, 294, 419, 459
Mental episodes. See Episodes: mental
Mental state, 243, 252, 382, 391, 428, 440. See also Episodes: mental; Events: mental; Mind; Thought
Metagame, 34, 41, 43. See also Games; Metalanguage
Meta-language, 16, 28–29, 31, 35, 37, 43, 45–46, 52, 53, 85, 89, 93, 96, 100, 168, 185, 187, 190, 192, 195–197, 199–201, 202, 271, 334, 451; syntactic, 8, 17, 20, 38, 44–47. See also Language; Object-language
Metaphysical deduction, 417, 446, 464. See also Kant
Metaphysics, 243–244, 412, 438, 464
Metaphysicus, 3–4, 12–13, 26, 30–32
Metrical form, 348–349
Micro-physical particles. See Objects: micro-physical
Micro-physical theories, 79, 82, 265, 282–283, 330, 340–343, 347–349, 361–368, 401. See also Explanation; Physics; Science
Mill, J. S., 320, 375
Mind, 229, 260–263, 282–288, 294, 334, 346, 351, 384, 397, 400, 407, 416–418, 424, 427, 440, 450, 465; classical view of, 283–285; identity theory of, 350–351, 355, 359–367, 404. See also Apperception; Awareness; Belief; Consciousness; Judgments; Perception; Sensation; Thought; Understanding; Will
Mind-body problem, 151, 350–351, 379, 386
Moment, 413
Moral law, 432, 433, 435
Moves, 30, 32, 34, 39, 41, 43, 47, 170–171, 402; material, 38, 40, 50–54, 55, 297; linguistic, 40, 43; syntactical, 45–47; intra-linguistic, 48, 87 formal, 52, 54, 55; coordinating, 55; inductive, 220; logical, 220; mathematical, 220; inferential, 292. See also Games; Pieces; Positions
Myth of Jones. See Ryleans
Myth of the given. See Given: myth of the
Name-forming practice, 179–180. See also Names
Names, 96–97, 103–106, 108–109, 111–118, 121, 123, 127–128, 132, 133, 137, 143, 163, 191, 192, 195, 211, 286, 287, 289, 353–354; configurations of, 105, 123; common, 169; illustrating, 286. See also Constants; Descriptions; Language; Singular terms
Naturalism, 57, 288, 436. See also Science
Naturalistic fallacy, 170. See also Ought
Natural order. See Order: natural
Necessity, 3, 32, 37, 56, 147, 168, 182, 202, 204, 265, 274, 439; logical, 3, 21; material, 3; conceptual, 278–279; physical, 425–426. See also Contingency; Language; Possibility
Negation, 99, 266, 298–299. See also Rejection
Nervous system, 228, 360–361, 405–406. See
also Neurophysiology; Representational systems
Neurophysiological processes, 90. See also Neurophysiology
Neurophysiological states, 364. See also Neurophysiology
Neurophysiological processes, 347–349, 366, 390, 392–393, 398–399, 401–405, 417, 427, 459. See also Biochemistry; Brain states; Nervous system; Science
Neustic/phrastic distinction, 90
Nexus, 109, 120, 123. See also Exemplification; Predication
Nominalism, 50–51, 97, 108, 162, 169, 289, 352. See also Platonism; Realism; Syntactic therapy
Nomination, 354. See also Denotation; Reference
Nonconceptual states, 440–441. See also Concepts; Experience; Sensation
Normativity, 18, 25, 28, 62, 204. See also Commitment; Community; Ought; Rules
Nomina, 418, 435. See also Kant
Nominal mechanism, 429
Nominal realm, 420, 424, 429
Nominal subjects, 419
Nominal world, 341

Object game, 41. See also Games; Metagame
Objectivity, 260, 355, 424, 426–427, 429
Object-language, 8, 11–12, 16, 38, 44–47, 89, 93, 150, 196, 199, 200, 276, 446. See also Language; Metalinguage
Obligation, 22, 433. See also Commitment; Normativity; Ought
Observation, 53, 71, 149, 221–222, 231, 310, 331, 348, 352, 360, 393, 401. See also Experience; Perception; Sense; Sensation
Observation base, 330. See also Reduction; Theories
Obtaining, 262. See also State of affairs
Occurrence: vacuous, 8; essential, 8. See also Constants; Logic; Variables
Ockham’s Razor, 4
‘of’, 261–262, 357–358. See also Intentionality
One/many problem, 165–169, 186, 260
Ontological status, 283
Ontology, 91, 96, 105, 114, 192, 256, 304, 307, 321
Open texture, 264
Operations, logical, 296, 300
Operators, 266
Order: intellectual, 210, 334; intentional, 213–214, 218–219; of signification, 213, 223–226, 228; cognitive, 214; spatial-temporal-causal, 246; of being, 283, 284; of knowing, 283; priority in, 283; conceptual, 335; intelligible, 385; causal, 423; of material events, 424; natural, 424; temporal, 426–427, 429. See also Conceptual frameworks; Logical space; Manifest image; Scientific image
Original image, 375, 377–379, 381, 386, 387. See also Manifest image; Man-in-the-world; Scientific image
Ought, 18, 21, 24, 30, 44, 48, 49, 58, 64, 385, 407; categorical, 58–59, 62; hypothetical, 58–59, 62. See also Authority; Commitment; Ethics; Normativity; Obligation; Ought-to-be; Ought-to-do; Rules; Shall
Ought-to-be, 59–65, 87, 271–272, 451, 453; linguistic, 64. See also Acts; Behavior: pattern-governed; Language; Ought; Rules
Ought-to-do, 59–65, 87, 271; primary epistemic, 62. See also Actions; Behavior: pattern-governed; Language; Ought; Rules
Paradigm of man’s encounter with himself, 374. See also Manifest image
Paralogisms, 411–412, 418, 420, 444. See also Kant
Parmenides, 259, 267
Parts, 394. See also Objects: composite
Passivity, 424–429, 430, 432, 442
Pattern-governed behavior. See Behavior: pattern-governed
Patterns, 33–34, 222, 225–226, 272, 293, 303, 310, 316, 323–328, 335, 352, 383, 389–390, 401–402, 460. See also Uniformities
Peirce, C. S., 164, 212, 244–245, 269, 355
Perceptual states, 232, 246, 426. See also Perception
Performatives, 68. See also Language
Persons, 328, 344–349, 360–362, 365, 416, 418–419, 429, 433, 435; core, 360–361, 365, 377–380, 384, 386, 390, 397, 403, 406–408; character of, 379–381, 406; nature of, 380–381; truncated, 381–382; irreducible of, 407; nounenal, 418. See also Community; Groups; Logical subjects; Manifest image
Phantasms, 346–347
Phenomenalism, 247, 303–305, 320, 326–329; classical, 303, 305–308, 310, 316, 319, 323–324, 328–329, 331, 333, 335, 339, 343; new, 329–331, 339. See also Objects; Observation; Perception; Realism; Sensation
Phenomenal world, 341. See also Kant
Phenomenology, 240–245, 249, 255–256, 264–265, 283, 337, 367, 454, 456–458, 460. See also Apperception; Awareness; Introspection; Perception; Philosophy; Reflection
Philosophy, 269, 369–373, 376–377, 379, 382–383, 386–387, 427 political, 267; of mind, 288, 294–295; history of, 303, 378; analytic, 371–372, 383; synoptic, 372, 377, 383, 386–387, 393–394, 402, 405; American, 376, 383, 412; ancient. 376; British, 376, 383, 412; common sense, 376, 387, 395; continental, 376; medieval, 376, 446; ordinary usage, 376, 387; perennial, 376, 383–384, 386, 388–389; critical, 413. See also Aesthetics; Epistemology; Ethics; Knowing one’s way around; Metaphysics; Phenomenology
Physicalism, 365; logical, 77; two types of, 365. See also Materialism; Naturalism; Science
Pictures, 106. See also Maps
Picturing, 168, 218–228; truth-functionality of, 222. See also Representational systems; Signification; Truth
Pieces, 38–39, 43, 51, 171–172, 179, 194, 402. See also Games; Moves; Positions; Rules
Physics, 77, 377–378, 388, 390, 392, 406. See also Micro-physical theories; Science
Physiology, 388, 390, 391. See also Neurophysiology; Science
Platonism, 30, 96, 98, 128, 130, 146–150, 157, 161, 163, 202–204, 260, 262, 352, 355. See also Nominalism; Realism
Plural terms, 168. See also Singular terms
PMese, 83, 105, 111–114, 116, 193–195, 199–201, 289, 299. See also Jumblese; Language
Positions, 34, 36, 39, 41, 43, 47, 48, 49, 51, 170–171; initial, 35; free, 36; auxiliary, 37, 297; material, 38; observation, 39; metalinguistic, 53. See also Games; Moves; Pieces; Rules
Positivism, 330, 412
Possibility, 369. See also Necessity
Postulational hypotheses, 375. See also Explanation; Micro-physical theories; Theories; Science
Potentialities, 421
Powers, 343, 367, 421–424; epistemic, 444, 447; logical, 444–448, 452. See also Capacities; Dispositions
Practical reasoning, 58, 85, 89, 279, 431–435
Index

Pragmatism, 39-40, 64
PRECON, 196-197. See also INDCON;
Jumblese: Language: perspicuous
Predicates, 23, 105, 117, 129, 137-138, 147,
159, 183-185, 187-189, 191, 193, 194, 211,
218, 230, 261, 273, 280, 289, 294, 351-354,
361, 414, 422-423, 444, 448; formal, 17; de-
scriptive, 23; observation, 23, 24; form of,
113; primitive, 118, 342-343, 348, 365;
analogue, 266; sortal, 266, 286; modal, 272;
defined, 342, 365; micro-theoretical, 343;
brain state, 355; raw feel, 355, 359, 361,
364, 366; intrinsic, 359; other-ascriptive use
of, 361, 364; theoretical, 361, 364; micro-
physical, 363; chemical, 363-364; anybody-
ascriptive use of, 364; self-ascriptive use of,
364; sense impression, 365; empirical, 446,
452. See also Common nouns; Concepts;
Exemplification; Language; Predication;
Predicative terms; Senses (Fregean); Singular
Predication, 92, 104, 202, 236, 244, 275, 289,
414-415; self-, 169; theory of, 288-289;
substratum theory of, 414-415. See also
Exemplification; Language; Predicates;
Truth
Prediction, 380-382, 392, 406. See also Expla-
nation; Science
Pretending, 71
Price, H. H., 320
Prichard, H. A., 250
Privileged access, 359. See also Knowledge: di-
rect
Processes, 64, 304, 305, 358-359. See also Epi-
isodes; Events
Projection, 222
Promising, 82
Proof theory, 203
Propensity, 83, 211, 222, 267-268, 279, 284,
291-293, 298-299; proximate, 86; behav-
ioral, 269; representational, 299. See also
Dispositions
Proper sensibles, 213
Properties, 131, 133, 135, 137-139, 141-144,
153-154, 272, 352, 354, 377, 394-395; ma-
terial, 119; micro-physical, 365; iffy, 392-
393. See also Classes; Entities: abstract;
Kinds; Predicates; Propositions; Qualities;
Realism; Sorts; Universals
Propositional attitudes, 356-358, 366. See also
Belief; Judgments; Propositions
Propositional form, 292
Propositional functions, 160, 194
Propositional sign, 119
Propositional state, 295, 298
Propositions, 72, 104, 105, 127, 134, 136, 146-
148, 150, 155, 157, 163-169, 181, 188, 204,
254, 256, 272, 296, 356-357, 412, 414, 415;
atomic, 112, 115-116, 120; elementary, 116,
119, 120; unsaturated, 145; basic, 295. See also
Entities: abstract; Facts; Predication;
Properties; Qualities; Sentences; State-
ments; State of affairs; Universals
Psyche, 344
Psychologist's fallacy, 300
Psychology, 370, 383, 387, 390; rational, 411-
412, 414, 435; transcendental, 411-412,
451-452. See also Behaviorism; Biochemis-
try; Cognition; Mind; Neurophysiology;
Science; Thought
Qualia, 244. See also Sense impressions
Qualities, 106, 110, 116, 120, 128, 130-132,
136, 145-148, 150, 156, 158-159, 162, 163-
170, 183-189, 191, 202, 217, 305, 328, 334,
339, 342, 348, 357-358, 366-368, 395, 398,
404, 406; sensible, 217; primary and sec-
ondary, 319, 415-416, 423. See also Attrib-
utes; Entities: abstract; Kinds; Properties;
Realism; Universals
Quantification, 112, 114, 126-130, 135, 140,
192, 198, 275, 400; existential, 106, 126,
135-136, 161; covert, 198; overt, 199. See also
Constants; Inference; Logic; Variables
Quasi-stuffs, 246
Quine, W. V., 135-136, 138, 272, 297, 460
Quotation, 86, 92, 95, 99, 151, 154, 174, 176,
179, 192, 201, 286, 287; dot, 79, 91-92,
124, 163, 167, 179-181, 211, 275, 279-281,
286, 296; asterisk, 163, 169, 172; direct,
177; ordinary, 178. See also Entities: ab-
stract; Language; Metalanguage; Object-
language
Rationalism, 6, 7, 25-26, 435. See also Empiri-
cism
Rationality, 223, 266-268, 385, 407-408, 432,
435. See also Actions; Cognition; Concepts;
Representation; Thought
Rational reconstruction, 179, 182, 183, 186,
192, 197, 198, 200, 236, 267, 279, 281, 339.
See also Analogy; Ryleans
Raw feels, 350–351, 355, 358, 360–361, 363–364, 368; characteristics of, 350; theory of, 355, 364; non-conceptual character of, 356; intrinsic character of, 358–359. See also Appearances; Feelings; Sensation; Taking

Realism, 108, 202–203, 211, 289, 325–329, 343, 348, 352, 367–368; scientific, 79, 247, 283, 368, 435; conceptual, 150; American, 209; British, 209; naive, 304; direct, 304–308, 333, 335, 339–341; hypothetical-deductive, 329–331, 339. See also Attributes; Entities: abstract; Kinds; Nominalism; Platonism; Properties; Qualities; Singular terms: abstract; Syntactic therapy; Universal

Realization, 83, 163, 192, 195. See also Manifestation

Realm of becoming, 202

Realm of being, 202

Real order, 124, 168, 203, 210, 212, 217–219, 222–228

Reason, 59, 428, 431, 435–436; pure, 5

Reasoning, 221–222, 316

Reasons, 53

Receptivity, 440–441. See also Passivity; Spontaneity

Recognition, 59–60. See also Awareness; Cognition; Groups

Reduction, 265, 364–368, 374, 404, 407, 421, 423–424; perceptual, 249. See also Explanation; Science; Theories

Reference, 69, 75, 82, 175, 176, 214, 263, 278, 284, 287, 289, 292–295–296, 351, 353–354, 411, 422; covert, 231. See also Denotation; Descriptions; Language; Names; Representation; Singular terms

Refinement, 375, 377–379, 387, 400; categorial, 375, 377–378, 387, 400; empirical, 375, 400. See also Manifest image; Original image

Reflection, 369–376, 379, 386, 417, 427, 460

Refutation of idealism, 424, 437. See also Kant Reichenbach, Hans, 330

Rejection, 298–299. See also Negation

Relations, 103, 106, 109, 115, 124, 150, 377, 447, 463; empirical, 103, 107, 109, 116, 163–170, 183, 188, 202; subjective term of, 261. See also Properties; Universals

Relation theory, 217

Relevance, 374, 384–385

Religion, 372

Renaissance, 209

Reports, 336, 352. See also Assertion; Avowals; Observation

Representation, 62, 105, 106, 110, 116, 283–284, 290–299, 346, 384–385, 413, 415–420, 422, 424–426, 437–438, 460, 465–466; standing, 297, 300. See also Categories; Concepts; Counterparts; Expression; Language; Meaning; Representational systems; Standing for; Thought

Representational activity, 284. See also Representation; Representational systems

Representationalism, 332. See also Representation; Representational systems

Representational states, 292–296; basic, 297. See also Representation; Representational systems

Representational systems, 283–284, 288, 290–298; parasitical, 293; linguistic, 294–295; logical, 295–299; propositional, 295–296; Aristotelian, 297–300; Humean, 297–300. See also Characterization; Conceptual frameworks; Counterparts; Language; Logical space; Order; Reference; Representation; Thought

Representing, 258–261, 279, 440–443, 447–448, 451; conceptual, 441; general, 441; nongeneral, 441; complex, 443; forms of, 447; non-conceptual, 449. See also Representation; Representational systems

Rights, 407

Robots, 220–226, 345. See also Computers; Representational systems

Rules, 4–5, 6, 18, 20, 28, 34, 41, 58–59, 62, 85, 87, 98–99, 170, 353, 385. 442, 448, 452, 464; extra-logical, 8–10; logical, 8, 12–13, 26; syntactical, 8, 17, 19–20, 21, 24, 96; transformation, 8, 10, 17, 18, 25, 34–35, 64, 85, 179, 431; L-, 9–12, 353; P-, 9–12, 14–15, 25, 353; of language, 12, 17, 22, 61, 86, 271; force of, 17; moral, 17; normative character of, 18; recognition of, 21; semantic, 24–25, 231, 233–234; obeying, 25, 29, 32, 34, 41, 47–48; learning to obey, 28; conforming to, 29–30, 32, 60, 64–65; formulation of, 30; formation, 34–35, 64, 85, 276; ought-to-be, 63; ought-to-do, 63; formal, 179; material, 179; generic, 180; correspondence, 331, 337, 340–341, 348–349, 353; derivation, 331. See also Behavior; pattern-governed; Concepts; Correctness; Games;
Language; Moves; Normativity; Ought; Ought-to-be; Ought-to-do; Pieces; Positions

Rules of action. See Ought-to-do

Rules of criticism. See Ought-to-be

Rules of performance. See Ought-to-do

Russell, Bertrand, 106, 110, 115, 167, 186, 210, 261, 263, 276, 337

Ryle, Gilbert, 20, 40, 48, 93, 269, 271

Ryleans, 270–271, 279–281. See also Analogy; Concepts: formation of

Saying, 63, 71, 83–84, 90, 93. See also Assertion; Utterances

Scepticism, 210, 248, 265, 397, 438–439. See also Epistemology; Knowledge

Schemata, 446–447, 460–462, 464. See also Images; Kant

Schematism, 446

Science, 11, 52, 216, 282, 304, 329–333, 336–349, 354–355, 360–368, 370–372, 376–377, 383, 385, 387–393, 397, 404, 406, 408, 417; empirical, 13; formal, 13; unification of, 371, 388–390. See also Biochemistry; Causation; Chemistry; Explanation; Laws of nature; Nature; Neurophysiology; Physics; Psychology; Realism; Reduction; Scientific image; Sociology; Theories

Scientific image, 373–379, 383, 385–394, 397–398, 400, 402, 404–408, 435. See also Manifest image; Man-in-the-world; Original image; Science

Scientific revolution, 371, 382

Second nature, 450

Seeing, 240–243, 246, 304, 307, 311, 314, 331, 347, 356, 424, 455, 458–459; ostensible, 241–243, 245–246, 252; pure-, 308; basic, 309; derivative, 309; direct, 309, 320, 332. See also Appearances; Observation; Perception; Seeing as; Seeing of; Seeing that; Seeing; Sensation; Taking

Seeing as, 453–456, 458, 462–463. See also Seeing

Seeing of, 458, 462–463. See also Seeing

Seeing that, 241, 310, 314; direct, 310, 320. See also Seeing

Seeing, 241, 247–248, 307–308, 333, 356, 404; existential, 308; qualitative, 308. See also Appearances; Observation; Perception; Seeing; Sensation; Taking

Self: noumenal, 413, 416, 419, 429–430; phenomenal, 413; empirical, 416, 420, 424–427, 437–438, 450. See also Kant; Persons

Self-presenting states, 250–254, 256–257. See also Awareness: direct; Given; Introspection

Sellars, Wilfrid, works of (continued) 259, 278; "Towards a Theory of the Categories," 417
Semantics, 81, 283, 285; Tarski-Carnap, 272–275. See also Concepts; Content; Meaning; Truth
Sensa, 346–349, 365. See also Mind: identity theory of; Science; Scientific image; Sense fields; Sense impressions
Sensationalism, 211
Sensation, 10, 35, 209, 213–218, 227, 231–251, 255–257, 310–320, 324, 329–339, 346–348, 357, 382, 384, 390, 397, 398–400, 402–406, 424, 437, 441–442, 458, 466; acts of, 213–218; objects of, 215; kinds of, 216; intrinsic character of, 403. See also Appearing; Observation; Perception; Seeing; Seeming; Sense; Sense contents; Sense impressions; Taking
Sensationalism, 211
Sense: inner, 424, 426, 427–430, 440; outer, 424, 426, 429, 440; external, 427. See also Sensation
Sense contents, 303, 305–316, 318, 323–331, 334–335, 340, 343; private, 309; conditional, 320, 324, 326–328; possible, 320–323. See also Sensation; Sense impressions
Sense-datum theory, 106, 248–249, 320, 357. See also Given
Sense fields, 405. See also Science; Sensa
Sense-images, 459. See also Images.
Senses (Fregean), 75, 82, 106, 197, 202, 262–263, 266–267, 271–278, 280, 285; individual, 191–192, 276; predicative, 192, 276; rule-, 271; connective, 276; propositional, 276. See also Concepts; Extensions; Intensions; Meaning; Predication; Propositions
Sensibility, 428, 449, 459, 462. See also Kant; Sensation; Understanding, the
Sentences, 130, 149, 159, 161, 217, 296, 444, 455, 463, 465; L-valid, 9; P-valid, 9; primitive, 11–12, 19, 37, 50; quasi-syntactical, 20; modal, 21, 24; rule, 30, 41; observation, 35–36, 43, 53, 54, 219–220, 222; imperative, 48, 50; normative, 48, 49; singular, 49, 222; universal, 50, 51; nomological, 54, 55; well-formed, 128–129, 151–152; classifying, 159; gappy, 159–160; resolutive, 220; practical, 271. See also Assertion; Language; Propositions; Statements; Utterances
Sentential function, 111. See also Propositional functions
Shall, 64
Sign designs. See Designs: sign
Signification, 213–214, 218–220, 223–227; theory of, 223–225. See also Picturing; Representational systems
Signs, 213. See also Designs: sign; Language; Symbols; Tokens; Words
'Since' clause, 14–15
Sophists, 263
Sortal, 79, 91, 94, 236, 290, 295, 446, 447; illustrating, 91, 95, 99; metalinguistic, 96–97; functional, 97–99, 296; derivative, 290. See also Classification; Common nouns; Predicates; Sorts
Sors, 163–167, 417. See also Attributes; Kinds; Properties; Qualities; Types; Universals
Space, 107, 437, 440, 447
Spinoza, Baruch, 376–377, 386, 401, 432
Spirits, 379; Objective, 263
Spontaneity, 68, 74, 76, 78, 84, 271, 284, 427–431, 441–442, 450. See also Actions; Freedom; Receptivity; Rules; Understanding, the
Standards, 406. See also Community; Correctness
Statement functions, 112
Statements, 111–112, 114, 124, 146, 214, 227, 296, 444; relational, 103–104, 107, 113, 290; atomic, 113–114, 117–118; form of, 113;
monadic, 113; descriptive, 114; empirical, 126, 332, 451; existential, 129, 148, 154; quantified, 129; general, 130, 137, 141; existence, 135–136, 138, 148; singular, 136, 166; informative, 143; predicative implication, 148; truth-functional, 148; categorizing, 149–150, 161–162; quasi-syntactical, 156; syntactical, 162; universal, 203; signification, 225; diagnostic, 262; classificatory, 273; semantic, 274, 278; meaning, 286. See also Assertion; Propositions; Sentences; Utterances

State of affairs, 109, 118, 160, 210, 252–254, 295, 317, 413, 438, 445, 450; atomic, 109; conceptual, 317; empirical, 451. See also Facts; Objects; Propositions

Stimulus-response, 34, 391. See also Behaviorism; Conditioning; Psychology

Strawson, P. F., 131, 268, 296, 360, 416, 418, 424, 426

Structuralism, 348

Structures, mathematical theory of, 171

Subject-matter, 61, 63–64, 211, 265, 370–371. See also Agent-subject; Training

Subjunctive conditionals, 12–16, 343

Subjunctive mood, 14

Subsistence, 210. See also Existence

Substance, 91, 133, 163, 244, 346, 379, 401, 415, 416, 421–423, 444–446, 463; individual, 238; immaterial, 346; primary, 411; inental, 417, 419; material, 418, 423, 425–426; corporeal, 424–425. See also Attributes; Dualism

Surfaces, 306–309, 332, 455. See also Color; Expanes; Perception; Sensation

Syllogism, 8, 37, 221. See also Inference; Logic

Symbols, 223, 226, 290–293, 298; logical, 8; -events, 22–23; manipulating, 31; auxiliary, 290–291, 294; characterizing, 294; referential, 294; predicate, 295; subject, 295. See also Designs: sign; Representational systems; Signs; Tokens; Words

Synaesthesia, 249

Syntactical form, 291. See also Grammatical form

Syntactic therapy, 150–151, 156, 162. See also Nominalism; Platonism; Realism

Syntax, 10, 39, 43, 85, 274, 283, 285, 289; general, 452. See also Grammar; Language; Semantics

Synthesis, 428–429, 431, 450, 466. See also Analysis

Synthetic universal principles, 439. See also Analyticity

Taking, 250–252, 256, 270–271, 309, 456. See also Appearances; Perception; Seeming; Sensation

Tarski, Alfred, 24, 272

Teleology, 26

Theoretical constructs, 54–55. See also Theories

Theoretical principles, 389–390. See also Theories

Theoretical reasoning, 89. See also Theories

Theoretical vocabulary, 55. See also Theories

Theories, 329–337, 339–343, 346–348, 354, 375, 389. See also Bridge laws; Conceptual frameworks; Counterparts; Explanation; Reduction; Science

Thinking-out-loud, 68–69, 71–72, 74, 76–77, 80, 83–84, 85–86, 88, 90, 92–93, 270–271, 279–281, 284. See also Behaviorism: verbal; Language; Thought

Thinking out loud, 74–75, 77. See also Thinking-out-loud

Thought, 4, 6, 36, 41, 57, 62, 65, 66–79, 81–84, 86, 89, 150, 175, 177, 209–210, 220–222, 226–227, 251, 257, 260–261, 263–264, 270, 280, 283–285, 316, 337, 344–345, 356–358, 382–385, 390, 397–401, 411–420, 424–425, 429, 435, 459; primary episodic, 68; classical account of, 90; linguistic model of, 90; logical forms of, 264; conceptual, 374, 383–386, 398–405, 424; constituents of, 383; social character of, 384, 405; introspectible qualities of, 399, 402; intrinsic character of, 402; forms of, 413, 464. See also Awareness; Belief; Categories; Concepts; Consciousness; Experience; Feelings; Judgments; Mind; Perception; Sensation; Understanding

Time, 107, 421, 437, 447

Tokens, 20, 91, 100, 204, 212, 214–215, 227, 273, 296; design, 169; linguistic, 198. See also Designs: sign; Language; Linguistic expressions; Types; Words

Training, 60–61, 64, 86–89, 218, 291, 335–336, 361, 451; self, 86, 89. See also Agent-subject; Behavior; Concepts: formation of; Games; Language: learning to use;
Training (continued)
Ought-to-be; Ought-to-do; Subject-matter; Uniformities
Transcendental aesthetic, 421. See also Kant
Transcendental analytic, 411, 413, 430, 438. See also Kant
Transcendental deduction, 412, 443, 462. See also Kant
Transcendental dialectic, 430. See also Kant
Transcendental ideality, 460. See also Kant
Translation, 51, 96, 103, 106, 124, 154, 156–157, 178, 179–180, 181, 199, 226, 330, 348–349. See also Concepts; Conceptual frameworks; Meaning
Truth, 51, 82, 97, 124–125, 149, 202–203, 230, 260, 278, 285, 396, 413, 438–440, 446, 451; logical, 15, 264, 323, 347; synthetic apriori, 26–27, 308, 439; semantical definition of, 154–155; non-accidental, 167; conceptual, 264, 265; synthetic necessary, 265. See also Facts; Meaning; Picturing; Signification
Truth conditions, 275. See also Meaning
Truth-functional connectives, 116, 125–126, 146, 217, 272, 275. See also Logic
Truth values, 272
Types, 194, 197, 212; linguistic, 164, 170, 177–180, 183, 192, 199. See also Kinds; Sorts; Tokens
Understanding, 51, 111, 115, 153, 158, 160, 180, 204, 216, 373. See also Concepts; Meaning; Translation
Understanding, the, 25, 428, 431, 442, 459, 462. See also Kant; Sensibility
Uniformities, 64–65, 86, 96, 271, 293, 325–328, 343, 352, 451, 453; associative, 25; learned, 25; negative, 86; positive, 86; semantical, 272, 274, 278; dependant, 328; law-like, 340–341; empirical, 445. See also Actions; Behavior; Patterns; Rules
Universality, 433
physical, 362–365; sense-impression, 365. See also Attributes; Classes; Concepts; Entities: abstract; Extensions; Kinds; Nominalism; Objects; Platonism; Properties; Propositions; Qualities; Realism; Relations; Singular terms: abstract; Sorts
Unsaturated, 144–145. See also Gappiness
Use/mention distinction, 116, 152, 160, 161, 184–186, 224, 286, 300, 345. See also Formal mode of speech; Language; Material mode of speech; Metalanguage; Object-language
Utterances, 63, 84, 85–86, 90, 93, 442, 452. See also Assertion; Sentences; Statements
Validity, 3; logical, 8–9; extra-logical, 8–9. See also Inference; Logic
Variables, 111–112, 114, 127–131, 133, 135–136, 194–195, 197, 275, 389; predicate, 111–113, 127, 131, 161; individual, 112; relation, 113; common noun, 128, 136, 140, 147, 178, 198; type 0, 130, 135–136; singular term, 132, 135, 155; adjective, 136, 147; sentence, 136, 147, 155, 161; metalinguistic, 198; object language, 198. See also Constants; Logic; Quantification
Vehicles of functions, 89
Verbal imagery, 226
Verbs, 130; transitive, 143, 152–153; intransitive, 152. See also Grammar; Predicates
Visual space, 243
Vocation, 84, 88, 270
Voluntary, 73–74
Warrant, 253. See also Knowledge
Weber, Max, 373
Will, 431; freedom of the, 407
Wilson, Cook, 250
Wittgenstein, Ludwig, 64, 88, 103–125, 193, 211, 219, 222, 383
Words, 5–7, 65, 85, 106, 152, 163–164, 224, 227; descriptive, 8, 10, 15–16, 24, 25; mentalistic, 20; modal, 22–23; normative, 22–23; psychologial, 22–23; action, 40, 48; observation, 41, 55; position, 41–42; success, 42; empirical, 50; logical, 86, 89, 211, 214, 217–218; descriptive, 89; function, 116; category, 128, 130–131, 133, 136; move-, 171; piece-, 171; position-, 171; mental, 211–215, 218, 220, 226–228; intel-
Index

lectual, 213, 218; predicative, 213; sensitive, 213; color, 237. See also Adjectives; Common nouns; Designs; sign; Discourse; Grammar; Language; Linguistic expressions; Predicates; Singular terms; Tokens; Verbs

World, 383–384, 413, 452; constituents of, 383; intelligible structure of, 383–384; phenomenal, 413, 421, 423–424; represented, 413. See also Conceptual frameworks; Logical space; Order

World picture, 54. See also Picturing

Ziff, Paul, 272