2

Wittgenstein's Critique of Theories of Meaning

1

This chapter begins my examination of Wittgenstein's critique of theories of meaning. The aim here is to show that the arguments prior to the paradox about following a rule do not succeed in eliminating all theoretical conceptions of meaning. Chapters 3 and 4 complete the examination by showing that the theory that escapes those arguments also escapes the paradox.

I will use the following plan to achieve the aim of this chapter. I will set out, alongside each other, two lines of argument. One is Wittgenstein's line of argument against theories of meaning as it unfolds from the very beginning of the *Philosophical Investigations* up to the paradox about following a rule. The other is a line of argument that I will develop for a particular theory of meaning. At each point where these two lines of argument intersect, I will look to see whether development of the theory is blocked by the arguments at that point in the first line of argument. If it is not blocked, I will go on to the next point of intersection, continuing this process as far as necessary. If Wittgenstein's case against theories of meaning is airtight, the second line of development will be blocked at some point before it can reach its goal of a theory of meaning. If it is not blocked at any point, there is nothing in Wittgenstein's line of argument to refute the theory of meaning in question, and consequently, this phase of Wittgenstein's critique of theories of meaning fails.

The direction of the second line of argument is the resolution of two vectors. One is a commitment to constructing a theory of meaning that explains a set of semantic facts. Thus, like Wittgenstein's, my line of argument begins with a set of familiar semantic facts relating to natural language, but it proceeds in an opposite direction, toward semantic explanation. The other vector is a commitment to maximizing the differences between the theory under construction and the theories against which Wittgenstein explicitly directed his arguments. This vector is designed to provide a stronger test of Wittgenstein's

critique than it has had thus far. By and large, Wittgenstein's arguments work well against the theories of Frege, Russell, and the *Tractatus*, and, because those have been generally assumed to be the only theories that need be considered, the flaws in his arguments have not yet come to light. My working hypothesis is that Wittgenstein's arguments fail against theories of meaning in general, but that their flaws emerge only when the arguments are applied to theories that are maximally different from those to which he himself applied them in framing his critique.

If I am right, the basic problem with Wittgenstein's overall argument against theories of meaning is, ironically, the same type of mistake he pointed out in Augustine's account of meaning. Wittgenstein, quite rightly, accuses Augustine of reaching his conception of meaning by generalizing beyond the cases that the conception fits. My objection to Wittgenstein's critique will be that its negative conclusion is a generalization beyond the cases that his arguments refute. To establish this objection, I will show that the theory that comes out of the second line of argument is sufficiently different from those considered in the critique to escape it entirely. Starting with quite ordinary and familiar facts about meaning in natural language, I will try to show that we can proceed to a semantic theory in a step-by-step fashion, where no step—in particular, not the step from factual description to theoretical explanation—runs afoul of any of Wittgenstein's arguments. If this can be shown, it follows that, in devising those arguments, Wittgenstein did not pay sufficient attention to differences among kinds of theories. He thought primarily of theories like those of Frege, Russell, and his early philosophical self, and of certain similar theories in the history of philosophy; the remaining kinds of theory he regarded "as something that would take care of itself."

Although Wittgenstein was wrong about theories of meaning generally, he was right, and deeply so, about theories in the Fregean tradition. It is a subtheme of this chapter and of the book as a whole that Frege's semantics has, in various ways, misdirected intensionalist thinking. The unfortunate fate of intensionalism in the middle of the twentieth century is due, I believe, to a widespread, but false, identification of intensionalist semantics with Fregean semantics. I will try to show that, once an intensional semantics alternative to Frege's is developed, Wittgenstein's criticism of Fregean views of meaning, language, and theory construction become part of the case for this alternative. Most importantly, Wittgenstein's arguments in this connection help to explain how theory construction within the

Fregean tradition mishandled the critical transition from pretheoretical semantic observations to a theory of meaning.

2

Wittgenstein's critique of theories of meaning begins at the very beginning of the *Philosophical Investigations* with a quotation from Augustine. The strategy of beginning with this passage, which seems to consist entirely of obvious truths about languages and the way they are learned, encourages readers to see their own views—or views they would find it plausible to accept—in the positions expressed by Wittgenstein's interlocutor and thereby eases those readers into identifying with the interlocutor and taking the interlocutor to speak for them. This beginning can seem a bit peculiar to the professional philosopher, since it appears to facilitate contact with readers at the expense of going directly to the doctrines about language of Frege, Russell, and the early Wittgenstein with which the early sections of the book are centrally concerned. For Augustine's truisms, although related to those highly complex and recondite doctrines, cannot be identified with them in any straightforward way.

But this way of beginning highlights something common to Augustine, Frege, Russell, and the early Wittgenstein which is of more immediate concern to Wittgenstein than a direct confrontation with their specific doctrines. This is the idea that linguistic understanding comes via discovery of a hidden semantic reality on the basis of inferences from something public. Augustine says that learning a language is a process of inferring private mental states of speakers from their public use of the words. Frege, Russell, and the early Wittgenstein conceive of linguistic understanding as a matter of inferring the hidden logical form of sentences beneath their surface grammatical form. These philosophers take linguistic understanding to be, in a sense, like the scientific understanding derived from theories that penetrate the surface of things to reveal secrets of nature. The child's and the philosopher's feat is analogous to the scientist's theoretical inference which pictures a discrete physical reality underlying the uniform appearance of matter. The child's and the philosopher's acquisition, respectively, of language and, of significant truths about language, requires something tantamount to a theoretical inference in order to picture the semantic reality underlying the misleading appearance of sentences.[1]

Although the Augustine quotation that begins the *Philosophical Investigations* expresses essentially the same theoretical conception of

linguistic understanding as the highly technical theories of Frege, Russell, and early Wittgenstein, it expresses this conception in so common-sensical a form that its various theses strike most readers as obvious truths. But it is Wittgenstein's point that the very fact that these theses strike readers as obvious truths is a clear sign of their having already embraced a rudimentary form of the scientific conception of linguistic understanding, and, in a certain sense, already embarked on a course of philosophizing of the sort mapped out by Frege, Russell, or the early Wittgenstein. Augustine's common-sense conception of linguistic understanding is one starting point in a process of theory construction whose final point might well be a theory of the language taking a form something like a Begriffsschrift theory.

Once we see Wittgenstein's idea, the seeming peculiarity of the beginning of the *Philosophical Investigations* disappears. We can appreciate, first, how crucial a role Wittgenstein thinks such first steps play in "the bewitchment of our intelligence by means of language" (PI: 129) and, second, how unaware are those who think of Augustine's reflections on linguistic understanding as innocent truisms, of the deep waters they are in. Wittgenstein's first remarks are intended to jolt his readers out of this complacency and make them realize how much philosophy they have, in fact, already bought into.[2] Wittgenstein is here making the initial moves in his attempt to show his reader how important a role seemingly innocent beliefs about a hidden semantic reality can play in trapping us in a philosophical problem. Seen retrospectively, these moves begin a line of investigation whose purpose is to show that the course charted by philosophers leads not to the answers to philosophical questions, but to endless "torment . . . by questions which bring [philosophy] *itself* into question" (PI: 133).

This way of beginning the book has the further advantage of making it possible for Wittgenstein to confront our theorizing about the nature of language without its already having the protection of a philosophically and technically sophisticated metaphysical position. Focusing on common-sense theories like Augustine's enables Wittgenstein to investigate embryonic theories before they grow into dogmatically held metaphysical pictures of what reality must be (PI: 131). Another advantage for Wittgenstein in this way of beginning is that, to some extent, he can recreate the process by which philosophers end up with such pictures, enabling him to enter that process, not only at the initial stage where the impulse to theorize begins to work, but also at subsequent stages where it has produced metaphysical pictures. Their production can be examined at various steps

in the process from fresh viewpoints informed by criticism of earlier steps.

Wittgenstein's focus in this examination is to exhibit the special role that theoretical conceptions of linguistic understanding play in the etiology of philosophical problems. On such conceptions, what is philosophically significant, "the *essence* of language, of propositions, of thought," is "something that lies *beneath* the surface. Something that lies within, which we see when we look *into* the thing, and which an analysis digs out. *'The essence is hidden from us'*: this is the form our problem now assumes." (PI: 92) With such a conception, we fabricate simulacra of scientific theories, containing technical vocabulary and exact formulations like theories in science. Such simulacra involve metaphysical ways of speaking, since there is nothing in the natural world corresponding to what they picture: ". . . our forms of expression prevent us in all sorts of ways from seeing that nothing out of the ordinary is involved, by sending us in pursuit of *chimeras*" (PI: 94). Theoretical conceptions of linguistic understanding seduce us into looking beyond the ordinary naturalistic facts of language in search of explanatory semantic atoms, but in so doing we become "entangled in our own rules" (PI: 125). Metaphysical ways of speaking outstrip the power of the rules of our language to confer sense on its signs.

From the very start, Wittgenstein's criticisms do double duty. In addition to being criticisms of philosophy as it is done, they are illustrations of a quite different idea of how philosophy should be done. Wittgenstein says that "the work of the philosopher consists in assembling reminders for a particular purpose" (PI: 127). Indeed, the very first criticism of the *Philosophical Investigations* is the reminder that there are different kinds of words (PI: 1). Its purpose is to show us that Augustine's seemingly innocent truisms about language rest on an unnoticed and unwarranted generalization from the presence of a property in a narrow range of cases to a conclusion about its presence in a different, quite wider range. These truisms harbor the idea that typical features of the semantics of ordinary nouns are a reliable basis from which to extrapolate to features of the semantics of all parts of speech. Wittgenstein's reminder about "names of actions and properties" is intended to separate relatively harmless thoughts, such as that "table" names an object, from dangerous thoughts, such as that "five" denotes an object. Separating them enables one to evaluate the dangerous thoughts outside the context of the generalization that represents them as part of the discovery of a deep regularity. The idea is that, when a thought such as that "five"

denotes an object, stands by itself, its queerness can be revealed by simply comparing the use of "five" with the use of ordinary nouns like "table."

Reminders, e.g., about how the word "five" is used, help us to see that a certain case included under the generalization is not sufficiently like the plausible cases from which the generalization was made for that case to count as fitting the generalization. Before such reminders, the philosopher can't get a clear view of the linguistic facts. The generalization, seen as capturing a deep regularity about meaning, obscures the fact that there are cases that do not fit (PI: 5). Behind such generalizations, then, is the lure of discovering the underlying semantic essence of words, which leads philosophers to impose a metaphysical interpretation on recalcitrant cases, under which those cases appear to fit perfectly. Thus, in making number words fit the generalization that the meaning of a word is the object for which it stands, philosophers, being unable to say that such words name natural objects, say that they name non-natural objects, viz., abstract objects. In this way philosophers, misled by the parallel with scientific explanation, come to think that they have discovered a deep philosophical truth about reality.

As Wittgenstein sees it, instead of discovering a deep truth, such philosophers have only succeeded in creating an intractable problem, since now they must explain how we have knowledge of objects with which we can have no causal contact. Wittgenstein says: "One thinks that one is tracing the outline of the thing's nature over and over again, and one is merely tracing round the frame through which we look at it." (PI: 114) Wittgenstein's reminder that there are differences between the use of number words and that of words like "table" is designed to free us from such epistemological problems by getting us to see that such a route to Platonism is based on a false generalization. Thus, Wittgenstein's reminders are often accompanied by a gloss to clarify the point. Accordingly, he next explains that the overlooked differences between kinds of words are a matter of use. He presents an example to show that attention to the details of the use of words in ordinary circumstances can raise doubts about what might otherwise seem a direct route to metaphysical revelation The shopping example is designed to raise such doubts. Wittgenstein's gloss: "No such thing [as the meaning of the word "five"] was in question here, only how the word "five" was used." (PI: 1)

This remark exemplifies the basic aim of Wittgenstein's therapeutic practice: to make philosophers see that there are only descriptive truths about the use of words, not metaphysical truths about a theoretical meaning, and thereby to extricate them from intractable prob-

lems that result from the mistaken belief that philosophy, like science, seeks to uncover truths about reality. As Wittgenstein at one point expressed himself,

> . . . our considerations could not be scientific ones. . . . And we may not advance any kind of theory. There must not be anything hypothetical in our considerations. We must do away with all *explanation,* and description alone must take its place. And description gets its light, that is to say its purpose, from philosophical problems. These are, of course, not empirical problems; they are solved, rather, by looking into the workings of our language, and that in such a way as to make us recognize those workings: *in spite of* an urge to misunderstand them. The problems are solved, not by giving new information, but by arranging what we have always known. (PI: 109)

Such arrangings are valuable in spite of the fact that they seem to destroy "everything interesting," for the explanations destroyed are "nothing but houses of cards" (PI: 118). Their destruction is "the real discovery . . . that gives philosophy peace" (PI: 133).

3

The line of theoretical development I will initiate is in the sharpest possible conflict with Wittgenstein's position that a philosophically promising approach to language "could not be scientific." My diagnosis of the difficulties with the theories of language of Frege, Russell, and the early Wittgenstein is not that those theories were too scientific but that they were not scientific enough. In this line of development, I want to provide a theory of meaning which is scientific in being an explanatory theory in linguistics concerned with the semantic phenomena of natural language and which is also of philosophical significance in contributing to our understanding of philosophical problems in the traditional metaphysical sense. It is hard to see how there could be an approach more opposed to Wittgenstein's position. This is, of course, as it should be, since our aim is to provide the strongest possible test of Wittgenstein's arguments against theories of meaning in the *Philosophical Investigations.*

On one point my theoretical approach is in full agreement with Wittgenstein's anti-theoretical approach, namely, that the study of natural language involves a primary and undischargeable responsibility to be faithful to the facts of natural languages. If one undertakes to develop a theory of natural language from a scientific standpoint, there is no less an obligation to do justice to the linguistic facts than

there is in the case of someone who undertakes to describe the language with the therapeutic aim of "bring[ing] words back from their metaphysical to their everyday use" (PI: 116). But agreement on this responsibility still leaves room for disagreement about the nature and significance of various linguistic facts. Linguistic facts, like other kinds of facts, often do not wear their true nature on their sleeves. That linguistic facts can require some interpretation if we are to see them in a revealing light is not a controversial point. Wittgenstein uses analogies with tools and games to get us to see certain linguistic facts in the right light.

The linguistic facts with which my line of development begins are those to which speakers refer in certain judgments about the language. Speakers use their language to talk about ships, shoes, and sealing wax, but they also use it to talk about the language itself. Speakers have always had a lively interest in matters of language. The record of that interest is found in the rich metalinguistic vocabulary of the language, for example, words like "noun", "verb", "rhyme", "alliteration", "nonsense", "ambiguity", "pun", "palindrome", "antilogy", "acronym", "synonym", "antonym", "eponym", and even "anonym". Just as Eskimo has a large number of words referring to different kinds of snow, so English has a large number referring to different kinds of linguistic phenomena.

Now among the facts to which such terms refer, we make a distinction between those which concern the application of expressions, for example, the fact that "ship" refers to ships and "Santa Claus" refers to no one, and those which concern grammatical structure, such as that "Santa Claus" is a noun like "ship", that "ship" rhymes with "blip", and that "open" and "closed" are antonyms. And among the grammatical facts, we make a distinction between those which concern facts of pronunciation or syntax and those which concern facts about meaning. Among the latter, some arouse our interest as semantic curiosities. Consider the following:

(i) Although "soluble" and "insoluble" are antonyms, "flammable" and "inflammable" are synonyms.
(ii) "Valuable" and "invaluable" are neither antonyms nor synonyms.
(iii) "Pocket watch" is similar in meaning to "pocket comb," but the similarity does not extend to "pocket battleship."
(iv) The expressions "free gift" and "true fact" are redundant.
(v) "Bank" and "dust" are ambiguous, but only the latter is an antilogy, i.e., a word with antonymous senses.
(vi) "Flammable integer" and "the color of contradiction" are not

(fully) meaningful.

(vii) All the senses of the individual words in expressions like "Kick the bucket", "The fat's in the fire", and "Cat got your tongue?" occur in their non-idiomatic senses, but not all the senses of the individual words occur in their idiomatic senses.

(viii) The sentences "A sister is a sibling" and "A square is a rectangle" are analytic, i.e., have pleonastic predicates.

I have chosen (i)–(viii) as illustrations of semantic facts for which I will try to develop a theory because, as curiosities, they cry out for explanation. On first encounter, we wonder how the members of the second pair of words in (i) can be the same in meaning when the members of the first are opposed in meaning. We wonder what the point of expressions like those in (iv) can be when the sense of the noun already tells us what is contributed by the sense of its modifier. In the other cases, we at least find the constructions intriguing. Such cases sometimes lead to linguistic discussions and sometimes to speculations about what is going on. But, typically, such discussions are abandoned before they really get very far, since their participants are ordinary people, with more pressing concerns, indulging their curiosity, rather than linguists working in their discipline.

Nonetheless, such parlor semantics, like other intelligent amateur concerns, must be based on some general knowledge of the subject matter. Discussions of facts (i)–(viii) presuppose something like the following principles: some expressions have a sense, though some do not; some expressions have the same sense, some different senses; some have only different senses, some different and opposed senses; some expressions have more than one sense; there is similarity among expressions both in number and in content of sense; senses of expressions appear as parts of the senses of other expressions; syntactically complex expressions can have both senses that contain the senses of their component words and senses that do not.

I will refer collectively to such principles as "folk semantics." In saying that our everyday discussions of semantic facts like those in (i)–(viii) presuppose folk semantics, I mean nothing more than that such discussions are couched in terms of senses and of the relations among senses expressed in the above principles. Thus, for example, it makes no sense to talk about ambiguous, synonymous, or antonymous expressions if, in no sense of "sense", are there senses that may be multiple, the same, or opposed. I want to make clear that I take nothing in such talk to specify what we are talking about when we talk about senses. Since nothing is assumed about the nature of sen-

ses, nothing of philosophical significance follows just from the fact that we talk in these ways about semantic phenomena.

Facts like (i)–(viii) involve, on the one hand, a linguistic form or forms (in the case of these particular examples, particular English expressions), and on the other, a certain semantic property or relation, e.g., synonymy, antonymy, ambiguity, redundancy, similarity in meaning, meaningfulness, and meaninglessness (less than full meaningfulness). These properties and relations are exhibited by the form or forms in virtue of their sense. Folk semantics therefore contains a common-sense notion of meaning or sense, namely, *whatever it is that is the same in synonymous linguistic forms, that is opposed in antonymous linguistic forms, that there is more than one of in ambiguous linguistic forms, that is duplicated in redundant linguistic forms, and so on.* Like everyday semantic discussions and the folk semantics involved in them, this common-sense notion doesn't tell us what senses are, that is, what is the same in the case of synonymous expressions or what sameness is, what is opposed in the case of antonymous expressions or what opposition is, etc. The notion only connects talk about sense (and meaning) with talk about those properties and relations. We may express these connections as follows:

> (1) Virtually all the words, phrases, and sentences of a natural language have meaning. Their meaning consists in senses, which are what ambiguous expressions have more than one of, what meaningless expressions have none of, and what synonymous expressions have in common (in virtue of which they are so related). Senses can be more or less alike, as well as opposed. The senses of the syntactic constituents of non-idiomatic expressions *seem* to occur in the senses of the expressions, whereas the senses of the syntactic constituents of idiomatic expressions *seem* not to occur in them. The senses of expressions and sentences can make them redundant.[3]

Since folk semantics takes no position on the nature of senses, philosophers and linguists are free to speculate about what its talk of synonymy, ambiguity, and so on is really about—intensional objects, extensions, inner psychological objects, behavior, the use of words, or inscriptions. Thus, folk semantics can be taken as a jumping-off point for our line of argument to provide a theory of meaning. Starting in this way makes no assumption that the attempt to construct such an argument will be successful. Whether or not the argument constructed leads to a scientific semantics with the proper philosophical import is a matter of what the subsequent steps of the argument are. Hence, assuming facts like (i)–(viii) and the principles of folk se-

mantics is not something with which Wittgenstein would quarrel. His criticisms do not target our ordinary talk about sense and meaning. He has no objection to saying that a word has a meaning or that two sentences have the same sense. He, too, thinks that such talk is one thing and what we try to make of it another.

Of course, a quarrel must eventually come, since at some point my line of argument must try to understand facts like (i)–(viii) in terms of intensional objects. Wittgenstein's objection will come on behalf of his very different idea of what such facts and vocabulary are about. His most explicit statement of this idea is his remark that "for a *large* class of cases—though not for all—in which we employ the word 'meaning' it can be defined thus: the meaning of a word is its use in the language" (PI: 43). Wittgenstein is not here putting forth a general statement about meaning or a standard definition of the term—indeed, it would be inconsistent of him to do so. But he is expressing a view about what semantic talk is predominately about, and I believe he is expressing the view that, in the cases that figure significantly in the issues facing us, reference to the meanings of words is reference to their use in the language.

4

Some Wittgensteinians will object to taking folk semantics as a jumping-off point for the construction of a scientific theory of meaning with philosophical significance. They think there is no appropriate relation between our ordinary and philosophical talk of semantic properties and relations and the technical notions that would reconstruct them in such a theory. On this basis, they would attempt to rule out the possibility of such a theory in advance. This section considers such an attempt.

J. V. Canfield claims that our ordinary disputes about sameness and difference of meaning are one thing, and disputes in linguistics which also seem to be about sameness and differences of meaning are quite another.[4] Canfield thinks that theories in linguistics set their own requirements on what counts as sameness and difference of meaning, whereas the participants in an ordinary dispute make "substantive claims, whose content requires that we take seriously and literally the idea of 'meaning change'"; hence, he thinks that the linguist, in large part, stipulates the requirements on such semantic relations, so that linguistic accounts of them perforce contain a large arbitrary element, guaranteeing, at best, only a "rough extensional equivalence" between the ordinary notions and their theoretical correlations.[5]

But Canfield supplies no reason for thinking that there have to be limits on theories in linguistics which prevent them from making "substantive claims." Canfield says nothing to show that linguists cannot take the notion of meaning in "ordinary dispute[s]" as their object of study. This is precisely what I propose to do in taking the beliefs in (1), extracted from ordinary facts such as (i)–(viii), as the starting point in developing a theory of meaning suitable for linguistics. If sciences like mathematics and physics can develop out of common-sense reflections on number and the behavior of matter without turning out not to be about the objects of such reflection, why can't scientific semantics, assuming there is such a thing, develop out of folk semantics without a change of subject matter? In advance of having a scientific semantics whose character we may examine, how could there be reasons for ruling out the possibility of scientific theories that specify the actual conditions under which sentences and their constituents are synonymous or non-synonymous?[6]

It seems to me that Canfield and others who take the same view of the limits of science in relation to natural language have too narrow a conception of theories in linguistics. I suspect that they have in mind either a Begriffsschrift theory of Frege's sort or its Carnapian offspring. Such theories, having been invented as ideal languages, are the theories that fit Canfield's account of theories out of touch with ordinary language. The fit is especially good in the case of Carnap's conception of language construction, with its "principle of tolerance."[7] In allowing enormous latitude to depart from ordinary language, Carnap precludes the possibility of making "substantive claims" about meaning in ordinary discourse.

But the Begriffsschrift model is neither the only model nor the natural model for a linguist to use in constructing a semantic theory of natural language. The linguist can try to construct a theory of meaning along the lines of scientific theories, in the way theories of phonology and syntax have been constructed in linguistics. Instead of the principle of tolerance, the linguist would be guided by the familiar principle of faithfulness to the facts, in this case the semantic facts of natural languages such as (i)–(viii). Clearly, nothing prevents us from setting our sights on a scientific theory that is literally concerned with the semantic notions in ordinary talk about meaning and change of meaning. Of course, we may be setting our sights too high, and we may be in for no end of philosophical trouble, just as Wittgenstein warned. Still, if we succeed in constructing such a theory, its characterization of meaning and meaning change in natural language would go beyond "rough extensional equivalence." Those who hold Canfield's view simply overlook the option of trying to construct a

scientific theory of meaning for a natural language, probably because their only models for such a theory are Carnapian ideal languages.

5

We have embarked upon the program of showing that the commonsense notion of meaning, based on (1), leads by an acceptable route from folk semantics to scientific semantics. Acceptability requires two things. First, the route must terminate in a theory that explains semantic facts like (i)–(viii) in terms of the hypothesis that senses are underlying intensional objects. Second, at no point can the development of the theory run afoul of any substantial argument in the *Philosophical Investigations.*

With respect to the very tiny part of that book that we have looked at so far, we are off on the right foot. For it is clear that none of its arguments against Augustinian theories that take the meanings of expressions to be extensional objects, are, at least as they stand, arguments against a theory that takes the meaning of expressions to be intensional objects. Thus, Wittgenstein's arguments at the very beginning of the *Philosophical Investigations,* as well as those later in the book which continue the argument against extensional theories of meaning, are inapplicable to the theory I will be developing. Similarly, my theory avoids the familiar objections to conceptions of meaning like the one Russell held early in the century, e.g., the objection that co-referential expressions like "creature with a heart" and "creature with a kidney" are not synonymous or the objection that an expression like "the largest integer" is not meaningless.[8] Such objections are restricted to theories that take the beliefs in (1) to be about the referents of linguistic expressions.[9]

Though our program rejects the identification of sense with reference, it certainly does not deny that sense is somehow related to reference. But I assume, as seems reasonable, that the folk semantics with which we have begun says nothing about the nature of the relation between them, and it will be wise for us at this early stage to say nothing positive about it, since, in fact, this will turn out to be an extremely complex question whose answer depends on general features of the intensional theory at which we will arrive. Thus, in working out a position on the relation between sense and reference, we will not assume any commitment to any doctrine about it, even, and especially, any commitment to traditional doctrines like Frege's.[10] Accordingly, we add the weak principle (1'):

> (1') Sense and reference are different, but related somehow to each other.

6

In addition to criticizing meaning as extension, Wittgenstein's discussion in section 5 fashions a technique for criticizing other general notions of meaning. In this respect his most portentous remark in the first five sections is his response to the interlocutor's protest that the meaning of the word "five" has been left out in treating the shopping example. Wittgenstein responds: "No such thing was in question here, only how the word 'five' was used." (PI: 1) This response gives the example a cast on which it reflects one of the central themes of the *Philosophical Investigations.* The example becomes an illustration of the general point that the significant semantic facts of language are examples of the use of language and, in themselves, do not involve philosophical concepts of meaning, which are introduced into our thinking under the impulse to explain but which serve only to obscure facts about use. We can maintain a clear view of those facts only if we keep in mind that the significant semantic facts are facts about the use of words, as they are in the shopping example.

The discussion in section 5 is thus illustrative of how a general concept of meaning can begin life as an oversimplification and, under the impulse to explain, end as a purported metaphysical truth. Under pressure to explain, a descriptive generalization, first based on a restricted set of cases, is extended to cover the full range. The restrictions are lost sight of with the promotion of the generalization to the status of explanation. Cases that do not fit the generalization are then construed, from the higher perspective of the explanation, as conforming to it in ways that reveal a deeper truth about those cases. Thus, the oversimplification is protected against counterexample. As a result, the oversimplification—now celebrated for its insights into the essence of language—becomes the lens through which the language is seen and, hence, blocks a clear view of linguistic facts.

Wittgenstein has such a process in mind when he says that Augustine's notion of meaning "surrounds the workings of language with a haze which makes clear vision impossible" (PI: 5). Thus, the first order of business is to find a way to provide the reader, whose vision can be presumed to be obscured to some extent, with a clear view of the language. Wittgenstein's approach is to return to philosophical basics: the validity of a generalization about meaning (or anything else) must be judged, first and foremost, by how well it fits all the facts. Wittgenstein thinks that, if philosophers can be kept descriptively honest, explanatory generalizations purporting to reveal something about the essence of language can be exposed as the false descriptions they are. They can be shown to be descriptively mis-

taken about many of the cases to which they apply. At a later point, Wittgenstein will explain why such generalizations have to be false. He will say that it is in the nature of the case that linguistic generalizations will fail to be comprehensive: such generalizations, properly seen, express only resemblances; there are no essences for them to capture (PI: 65–67).

Here, however, Wittgenstein's particular interest is in finding a way of overcoming the effects of an explanatory approach to language and focusing the reader's attention on the linguistic facts long enough for them to be given their due. How to do this when the reader may have already gone beyond linguistic description and already have an obscured view of the linguistic facts? Wittgenstein comes up with an ingenious solution. He observes that there is an equivalence between "a primitive idea of the way language functions" and "the idea of a language more primitive than ours" (PI: 2). Thus, someone's overly simplified generalization about our language, such as Augustine's conception of meaning, can be put in the form of an entirely appropriate generalization about a language that is overly simple in comparison to ours. Putting oversimplifications in this way provides readers with a new perspective on the language from which their view of the linguistic facts is no longer obscured by a cherished theory. It thus confronts readers with a clear picture of what they are taking the language to be in adopting an explanatory conception of meaning. The contrast between their language and the more primitive language presented to them in this picture forces them to recognize the distortions that arise when a generalization fitting a restricted range of cases is taken as an account of the whole language. There is a good chance that, once they recognize that they have been representing the whole language as something that is so obviously just a fragment of it, they will see that, under the impulse to theorize, they have failed to give the linguistic facts their due.

Wittgenstein's example of a builder's language in section 2 implements this solution. It is intended to show how much of the workings of language are overlooked in Augustine's conception of meaning. The example is, moreover, the first appearance of Wittgenstein's "language-games." From here on, such examples are a principal means for exhibiting aspects of the use of language obscured by a general concept of meaning.

In the course of criticizing Augustine's account of meaning, Wittgenstein introduces the idea that *use* is the critical aspect of language in evaluating such accounts. In sections 2–10 Wittgenstein's criticisms of Augustine's account of meaning are based on showing that the account overlooks one or another feature of the use of signs. From

the beginning (PI: 1, 5–9) Wittgenstein takes it as somehow given that the only facts relevant for evaluating claims about meaning or for developing proper ways of talking about meaning, are facts about use. Thus, he sums up by saying: "But assimilating the description of uses of words in this way cannot make the uses themselves any more like one another." (PI: 10)

The move to present semantic facts as facts about use is taken further in the next section, where Wittgenstein encourages the reader to think of words on analogy with tools. This section presents the "function" or "application" of words as the semantically significant thing about them. The phraseology Wittgenstein uses when he says that use is what dispels the confusion caused by "the uniform appearance of words" strongly suggests that use is now being accorded the place of honor once held by Fregean senses in the discussion of how the surface grammar of a sentence can mislead us concerning its logical powers. By the time we reach sections 11 and 12, we have been subtly led to think that the analogies with tools and artifacts reveal what is semantically significant about words.

Partly by virtue of the unobtrusive way in which use has been brought into the criticism of Augustine's conception of meaning—a conception which is so clearly mistaken that the reader feels no inclination to take up its defense—and partly by virtue of the fact that use works well enough for this purpose, we are eased into thinking of meaning as primarily a matter of use. The seemingly innocent way in which this happens keeps us from pausing at any point to ask whether perhaps things haven't gone a bit too fast. We do not ask the question that needs to be asked about what happens in the course of sections 1–12, namely, whether there might be competition for Wittgenstein's view that semantic facts are facts about use. When, in retrospect, we see how much of the subsequent argument in the *Philosophical Investigations* hangs on securing this view in these early sections, we should recall Wittgenstein's own words: "The decisive movement of the conjuring trick has been made, and it is the very one that we thought quite innocent." (PI: 308)

In making this criticism, I am not saying that Wittgenstein doesn't eventually consider competing views of meaning which could also explain what is wrong with Augustine's generalization that the meaning of a word is the object for which it stands. Rather, I am saying that, in proceeding as he does at the outset, he gains an unearned advantage for his own view of meaning and for his arguments against theories of meaning. By giving no hint of other possible semantic facts and by making it seem as if use were the true source of the facts

that expose wrongheaded conceptions like Augustine's, Wittgenstein conditions his readers from the very start to rely on use in evaluating semantic claims. This conditioning facilitates getting his readers to shift from thinking of language in terms of general concepts of meaning to thinking of it in terms of how speakers employ verbal artifacts and, hence, to judging claims about linguistic meaning in these terms. Accordingly, when Wittgenstein later does criticize intensionalist views like those of Frege and Moore, the criticisms receive a more sympathetic reception than they actually deserve.

Wittgenstein's only explicit motivation for introducing use at the end of section 1 is the fact that it provides a basis for criticizing Augustine's theory. Although he makes no attempt to show that nothing else would work as well in exposing the defects of that theory, it is fairly obvious that, for *this* purpose, use is dispensable. As we have seen, Frege presents us with an equally good basis for exposing the defects of extensionalist theories. Fregean arguments—such as that if the meaning of an expression were the object for which it stands, then expressions that stand for the same object, say, "the morning star" and "the evening star", would be the same in meaning, or that an expression standing for no object, say, "the largest integer", would be meaningless—do not invoke use. These arguments make no reference to what someone does with an utterance. Rather, their conclusions are based on a direct recognition that the expressions "the morning star" and "the evening star" are nonsynomyous and that the expression "the largest integer" is meaningful. Such recognition suffices to show that the sense properties and relations of these expressions do not correspond to their referential properties and relations, as required. Of course, it would be possible to claim that facts about synonymy, meaningfulness, and the other sense properties and relations are somehow facts about use, but this would have to be argued, and my criticism of Wittgenstein at this point is only that this is something he does not do.

The issue here is one to which I will be devoting a great deal of attention. I mention the prospect of an alternative view of the nature of semantic facts now because bringing it out into the open as early as possible helps to put the argument for Wittgenstein's view in perspective. I think that Wittgenstein's view reflects the naturalist's desire to understand sense in terms of the linguistic behavior of speakers within a language community with a particular history. But one could as well think that the order goes the other way around. That is, one could think that reference to use is *inter alia* reference to sense. Behind this thought is the non-naturalist desire to understand

linguistic behavior as the exercise of a speaker's knowledge of autonomous semantic structures. Knowledge that "the morning star" and "the evening star" are nonsynonymous is simply knowledge that their senses are not identical.

I submit that Wittgenstein is up to much more in the beginning of the *Philosophical Investigations* than just arguing that an obviously inadequate account of meaning is obviously inadequate. He is laying the groundwork for a broad attack on theories of meaning generally, which, if successful, would leave non-naturalistic approaches with no semantic leg to stand on. Therefore, his attempt to gain acceptance for the idea that use is the proper basis for evaluating accounts of meaning is anything but innocuous. If the idea is left unchallenged, Wittgenstein himself gets to determine the kind of fact to which a description of a language must be faithful. This would certainly concede too much, since his argument that there is no legitimate way to proceed from a description of linguistic facts to a general concept of meaning depends, in part, on linguistic facts' being taken to be facts about the use of signs. On the other hand, the existence of an independent body of linguistic facts having to do with the senses of expressions would offer the possibility of proceeding from a description of linguistic facts to a general concept of meaning.

I have left it open whether the facts concerning sense properties and relations such as those in (i)–(viii) are properly interpreted as facts about use or as facts about a *sui generis* sense structure, conceived of as an aspect of grammatical structure along with syntactic and phonological structure. The fact that Wittgenstein presents no argument in sections 1–12 to rule out the latter interpretation is enough justification for us to take that interpretation as a starting point for developing a theory of meaning. If we can start from the assumption that facts about sense properties and relations are facts about such *sui generis* sense, and then, in the sense indicated, safely reach a theory of meaning, it would not matter whether Wittgenstein succeeds in arguing that a theory of meaning cannot be reached starting with facts about use. His argument would be a demonstration that such facts are the wrong starting point.

Let us now look a bit further into the distinction between facts about sense and facts manifestly about use. My aim in doing this is not actually to draw the distinction, but to clarify somewhat the difference between the two interpretations of facts like (i)–(viii) and, to a certain extent, motivate the grammatical interpretation of facts about sense. To begin, note that, *prima facie* at least, we can conceptually distinguish between facts like (i)–(viii) and facts about use such

as Wittgenstein employs to criticize Augustine's theory. Facts of the latter kind are about what someone does with an utterance in speech; for example, a builder requests a thickly cut stone by calling out "slab". Facts of the former kind, in contrast, do not, as they stand, involve either speakers or utterances. The fact that the senses of "creature with a heart" and "creature with a kidney" are different from each other is a fact about two English expressions, to wit, that they do not bear the synonymy relation to each other. The fact that "the largest integer" has a sense is a fact about an English expression, to wit, that it has the property of being meaningful. On their face, facts about sense involve no reference to speakers, utterances, or inscriptions.

There is a reason for this difference. Facts about the sense of expressions of a language are facts about linguistic *types*, whereas facts about use, being facts about what people do with their articulatory organs or hands at a particular time and place, are facts about linguistic *tokens*. Charles Sanders Peirce drew the distinction between types and tokens in this way:

> There will ordinarily be about twenty "the"s on a page, and of course they count as twenty words. In another sense of the word "word", however, there is but one "the" in the English language; . . . it is impossible that this word should lie visibly on a page or be heard in any voice.[11]

Given the type/token difference, the interpretation of facts about sense on which they are really about use will have to say that facts about types are just facts about tokens under some appropriate resemblance relation. On the other hand, the interpretation on which they are facts about a *sui generis* grammatical structure will say that facts about types are autonomous, that is, not reducible to facts about their tokens. On this latter interpretation, types provide the principal component of a conformity relation which imposes categorical structure on linguistic tokens. On the former interpretation, something else, logically prior to types, is required to provide the relation of resemblance that imposes appropriate structure on linguistic tokens. As we shall see below, the latter interpretation leads to a "top-down" approach to semantic phenomena in which the structure of concrete tokens is an exemplification of the structure of abstract types, while the former leads to a "bottom-up" approach in which such abstract structure, or what passes for it, is only a generalization of similarities among tokens.

7

In sections 1–15 Wittgenstein equates facts about meaning with facts about use, ignoring the question of whether facts about use are the only facts or the privileged facts for evaluating alternative views of meaning. I have raised the possibility that facts like (i)–(viii) might not be facts about use, but are instead facts about autonomous senses, and that, in some way, as yet not spelled out, facts about use might reflect facts about senses. In this section I want to motivate this possibility in order to explain why it should be taken seriously. To do this, I will present some reason for thinking that equating facts like those in (i)–(viii) with facts about use involves difficulties that do not arise when such facts are equated with facts about autonomous senses.

One such reason is that social conventions on the part of speakers and the connotations of words conspire to make speakers use words with the same sense differently. For example, the juvenile connotation of "pee-pee", the vulgar connotation of "piss", and the absence of those connotations in the case of "urine" result in speakers' using those words in quite different ways despite the fact that they have the same sense. A biomedical scientist reporting to colleagues at a conference will use not the word "piss" or "pee-pee" but the word "urine". But Tennessee Williams, choosing between these synonyms in writing dialogue for the loutish Stanley Kowalski in *Streetcar Named Desire,* will select "piss" over the others. Middle-class parents are likely to use "pee-pee" in socializing their young children. There are many other sets of words that raise this problem, e.g., "rabbit" and "bunny", and also other connotations, e.g., pejorative connotations of words referring to members of races or religions. Such problems are like the problems posed by the existence of conflicting dispositions for attempts to define mental concepts in terms of dispositions to respond: the responsive behavior is under the influence of concerns that are quite extraneous to the concepts in question.

Of course, those who wish to interpret facts like those in (i)–(viii) as facts about use need not cave in in the face of such problems. One line of defense, taken by a number of philosophers, is to replace the ordinary notion of use with a technical notion that idealizes away from unwanted aspects of use such as connotation. This line is taken by Anglo-American philosophers of language like Austin, Alston, Searle, and Strawson. They see the ordinary notion of use as too undiscriminating, and so they advocate a theoretically constructed notion that is less inclusive. Such a theoretical notion would identify linguistic meaning with some special set of uses. Austin's classifica-

tion of locutionary acts into illocutionary and perlocutionary made it possible to formulate a technical notion of use in terms of the potential of expressions and sentences to perform one or another type of speech act.[12] Followers of Austin like Searle take the type to be illocutionary acts; followers of Grice take the type to be a special class of perlocutionary acts in which the speaker intends to bring about a certain belief in his or her hearers in virtue of their recognition of his or her intention.[13] However, this line, insofar as it involves theory and technical construction, is, of course, not open to Wittgenstein. He can hardly abandon the ordinary notion of use in favor of a theoretical one (PI: 109–127).

Another line of defense is to argue that connotation *is* part of sense. On this line, words like "pee-pee", "piss", and "urine" are not the same in meaning because connotation is as much a part of their meaning as the concept of liquid. It is hard to deny that the English word "meaning" is elastic enough to cover connotation. After all, it covers reference, as, for example, in the sign "Trespassers will be prosecuted, and that means you!". But, as this example suggests, the scope of the English word "meaning" is not a deciding factor. The issue is whether there is a kind of meaning covered by the English word which corresponds to the intuitive notion of sense in (i)–(viii) and which is distinguishable from such things as connotation in the way that reference—which also happens to be covered by the inclusive English word "meaning"—is distinguishable from sense. Are there considerations like those which Frege uses to distinguish sense from reference which can be used to distinguish a notion of sense from the notion of connotation?

Various considerations come to mind. For one thing, connotation does not support valid implication. Sentences like "There is urine (piss, pee-pee) on the floor" entail the sentence "There is a liquid on the floor"; but the sentence "There is pee-pee on the floor" does not entail sentences such as "A child pee-peed on the floor", "A child is speaking", or "A child is being spoken to". The truth of sentences identifying the speaker or addressee as a child is no doubt pragmatically suggested, but that is clearly a different matter. For another thing, there are certain contexts that distinguish cognitive content from connotation. Witnesses in a court of law testifying under oath who use "piss" instead of "urine" or use "flatfoot" instead of "police officer" are not guilty of perjury, though they may be in contempt of court.[14]

Other reasons for thinking that it might be wrong to equate facts like those in (i)–(viii) with facts about use have to do the role of sentence size and complexity in determining sentence use. Ordinary

people often observe that there seems to be no longest sentence of English, because any sentence can be turned into a longer one in a number of ways. Children often catch on to the trick with the primitive device of adding another occurrence of an intensifying adjective or adverb, e.g., "I want one", "I want a big one", "I want a big big one", . . . or "They are mean", "They are very mean", "They are very very mean". . . . There are more sophisticated devices for starting with an English sentence of length *n*, i.e., with *n* words, and forming another sentence of length $n + k$. For instance, "Mary is one year old or (and) Mary is two years old or (and) Mary is three years old . . ." and "I thought about myself thinking about myself thinking about myself . . .". Linguists who have studied such things have come to the same conclusion: English sentences get longer and longer without limit.[15]

But even if one does not accept the view that there is no longest English sentence, it seems obvious enough that syntactic mechanisms of sentence formation produce sentences that, given reasonable assumptions about the biological and physical constraints on behavior, are too long ever to occur in speech or writing. It also seems obvious that indefinitely many such megasentences, as I shall call them, are fully meaningful. If S_n is a meaningful sentence, then the sentence that results from conjoining S_n with a meaningful sentence S_m of the same type is meaningful. The meaning of the sentence "S_n and S_m" is just the joint assertion of S_n and S_m, and the meaning of "S_n or S_m" is the assertion of the truth of at least one. Thus, there are meaningful English megasentences; hence, having a meaning does not correspond with having a use.[16]

Some will not find such considerations compelling because they reject the idea that there are infinitely many English sentences, and even the idea that there are megasentences. The linguistic counterparts of extreme constructivists in mathematics will think that, with increases in the length of the to-be-conjoined sentences, and no other changes, there eventually comes a point at which the next sentence is no longer grammatically well-formed. They think this because they think that human constructivity is the basis of sentencehood, just as the mathematical constructivists think that it is the basis of numberhood. We will return to the constructivist position in chapter 7. Here it should be pointed out that it is just such facts about sentence size that, in the minds of the ideologically uncommitted, cast doubt on such constructivist views.

But the argument for a divergence between meaning and use can be made without challenging constructivism. We can construct well-formed meaningful sentences that cannot be used.[17] The sentence

"The man who the boy who the students recognized pointed out is a friend of mine" involves the embedding of one clausal structure within another of the same syntactic type, as, for instance in this case, embedding the clause "who the students recognized" within the clause "who the boy pointed out". As this example shows, even two self-embeddings make a sentence difficult to produce or understand. Sentences with, say, ten or twenty self-embeddings, although not of mega length, are clearly unprocessable, and hence, beyond the range of human use. Nonetheless, given our knowledge of their grammatical construction, it is relatively easy to see that such multiple-self-embedded sentences are meaningful. Their embeddings can be undone in a way that provides a synonymous sentence that is clearly meaningful. For instance, Chomsky's example can be transformed into the comprehensible sentence "The man is a friend of mine and the boy pointed out the man and the students recognized the boy". Pairs consisting of an unusable self-embedded sentence and its easily usable transform provide an example of synonymous sentences that are different in use, and the first member of the pair provides an example of a sentence that is meaningful but not usable. These examples illustrate the divergence between meaning and use in a particularly clean form. In this case, there is no issue of whether the feature that produces the difference in use is part of meaning, as in the case of connotation, and there is no complaint that the critical examples cannot be constructed, as in the case of megasentences.[18]

I will not pursue these matters further. I am not trying to establish an autonomous grammatical interpretation for facts about sense, but only to build credibility for such an interpretation by exhibiting certain difficulties with Wittgenstein's introduction of use as the basis for evaluating claims about meaning.

8

The last two sections of this chapter took the first step from (1) in the direction of a theory of meaning. Their aim was to establish the possibility of a route to such a theory whose starting point is recognition of facts about sense like (i)–(viii) and whose termination is a theoretical explanation of these facts in terms of the postulate that autonomous senses are part of the grammatical structure of sentences. We now take the next step of pulling together the various strands of our discussion of facts about sense, subjecting them to autonomous grammatical interpretation, and identifying the common-sense notion of meaning with an aspect of the grammatical structure of lin-

guistic types. To do this, we explicitly adopt a distinction between sense and use parallel to the distinction between sense and references. Thus:

> (2) The domains of meaning and use are different. Meaning is an inherent aspect of the grammatical structure of expression and sentence types (like their syntactic form). Thus, facts about sense properties and relations such as synonymy, meaningfulness, etc. are also inherent aspects of the grammatical structure of linguistic types. In contrast, use cannot be an aspect of types: it is something speakers do with utterances and inscriptions, something forming part of the causal nexus.
>
> (2′) Meaning is related to use, but the relation is one on which the meaning of expression and sentence tokens is derivative from the meaning of linguistic types.

Putting (1), (1′), (2), and (2′) together, we get a first approximation to a linguistic/extralinguistic distinction for semantics. The general idea is that the linguistic is concerned with those phonological, syntactic, and semantic properties and relations which depend upon the structure of sentence types, whereas the extralinguistic, although it may in part depend on sentence structure, depends also on things falling beyond it. For example, rhyme is linguistic, but being a tongue twister is extralinguistic. Since it interprets facts like (i)–(viii) as facts about the structure of sentence types in the sense in which facts about rhyme are facts about the structure of sentence types, thesis (1) states that sense properties and relations such as synonymy, meaningfulness, ambiguity, redundancy, antonymy, etc. depend on the semantic part of the structure of sentences. Thesis (2) states that use, as such, falls outside the structure of sentence types—as do tongue twisters. Use is partly a product of extralinguistic factors like connotation, socialization, etc.—just as being a tongue twister is partly a product of peculiarities of the articulatory mechanism.

These considerations lead directly to a principle for deciding what belongs to the semantics of sentence types and what belongs outside it. The principle is this: information is semantic just in case it directly determines sense properties and relations, that is, just in case the information is the basis of sentences having synonymy relations, ambiguities, redundancies, etc. If the sense properties and relations of sentences can be determined without assuming that certain information is part of their grammatical structure, parsimony tells us it is nonsemantic.[19] We can illustrate the principle in connection with what Grice has called a "generalized conversational implicature."[20] One of his examples of such implicatures is the inference from "John

is meeting a woman" to the conclusion that the woman in question is not his wife. Was Grice right in thinking that this inference is not given by the meaning of the sentence? That is, is the inference extralinguistic rather than linguistic? Applying our principle, we can easily see that, as Grice thought, it is extralinguistic. The premise is not synonymous with "John is meeting a woman who is not his wife", and furthermore the clause "who is not his wife" in this latter sentence does not occur redundantly in the way "who is naked" occurs redundantly in "nude who is naked". Also, "John is meeting a woman who is his wife" is not contradictory in the manner of "John is meeting a woman who is male". Since the information about the woman in the Gricean conclusion is not part of the premise, Grice was correct to think that an account of the inference would have to go beyond considerations of sentence meaning.

I have developed this linguistic/extralinguistic distinction in order to bring my line of development into its first direct conflict with Wittgenstein's line of development in the *Philosophical Investigations.* In section 16, Wittgenstein claims that "it is most natural, and causes least confusion" to count such things as color samples among the words of the language. The case of color samples may seem *prima facie* to be trivial, but it is the thin edge of the wedge. If color samples count as linguistic, on a par with actual words, it is hard to see how all sorts of other things can be prevented from counting as linguistic. Since almost anything can be a sample, there could be no sharp linguistic/extralinguistic distinction at all.

If Wittgenstein has a good argument for counting color samples as part of the language, our line of development will be blocked after its first step. His argument is the following:

> . . . when I say to someone: "Pronounce the word 'the'," you will count the second 'the' as part of the sentence. Yet it has a role just like that of the colour-sample in the language-game (8); that is, it is a sample of what the other is meant to say. (PI: 16)

The word "sentence" has the type/token ambiguity Peirce describes. We can understand the word in the sense of 'sentence type', as when a linguist says that the sentence "John loves Mary" is a declarative sentence of English, or in the sense of 'sentence token', as when a master of ceremonies says, "The words of the next sentence you hear will be those of our esteemed president".[21] To be sure, in the case of Wittgenstein's request to pronounce the word "the", the word "sentence" has the token sense and refers to Wittgenstein's utterance on the occasion.[22] But it does not follow from "the"'s being part of the sentence in this sense of "sentence" that it is "part of the *language*",

unless, of course, the notion of language itself is to be understood exclusively in a token sense. In the present context, however, such an understanding cannot be taken for granted, because there is a notion of language in the type sense. Given the above linguistic/extralinguistic distinction, we have a notion of language on which languages are collections of sentence types.

With the possibility of this type notion of language, it is clear that Wittgenstein's argument does not go through. There is no way to validly move from the premise that something is part of an utterance of sentential form to a conclusion that it is part of a sentence in the type sense and, hence, part of a language in the type sense. With respect to the type-notion of language, being part of a sentence (type) automatically means being part of a language, but, surely, being part of a sentence token does not mean being part of a language. We don't count all parts of a speaker's utterance as parts of the sentence that the utterance is a token of. We discount the soft sweet voice, the flattering tone, the alcoholic slur, the repeated words, the false starts and stops, the "uhs" and "ahs", the belches and burps. These come out of the speaker's mouth, and some are even utterances, but they are not part of his or her *sentence* in the sense of that term which we use in referring to sentences of English.

We can identify a category of utterance components, which excludes vocal quality, repeated words, etc., such that when an utterance belonging to that category occurs in an utterance of sentential form, there is a constituent of a sentence type of which the component is a token. When we see what that category is, it will be clear why such things as color samples do not belong to it, nor to sentences, nor, therefore, to the language.

Since Frege's distinction between mention and use, philosophers have been sensitive to the differences between quoting, and other ways of presenting signs in order to talk about them, on the one hand, and, on the other, the employment of signs to talk about their referents. In the present context, the significant thing about mention is its permissiveness. Grammatical devices for mentioning accommodate nearly anything that the mouth or hand can produce, including obscene noises, hiccups, animal imitations, elaborate pictures, doodles, words of foreign tongues, musical compositions, and so on. They are not restricted to the standard signs of the language, and, accordingly, the occurrence of something in a "mention" context is no grounds for thinking that it belongs to the stock of English words. In contrast, contexts of use are so restricted, and, accordingly, the occurrence of something in a context of use, other things being equal, authorizes us to take it to be part of English. For example, words like

"Wiener schnitzel" and "kibitz" now seem to be part of English, since presumably it is English to say "I like Wiener schnitzel, but not ice cream" or "Don't keep kibitzing". But "sagen" cannot claim the same status, since it is not English to say "We sagen that life is a bowl of cherries."

Occurrence in contexts of use is the real test of whether an item is part of the vocabulary of English. This test identifies the category of utterance components which token genuine vocabulary items and, thereby, enables us to see why Wittgenstein's argument does not go through. In the utterance that his example concerns, the component "the" to which color samples are compared is mentioned, not used. Thus, the argument employs the wrong context to establish that something is part of the language. The inclination that readers have to suppose that the mention context in Wittgenstein's example confers the status of English vocabulary on an item occurring in it is due, not to the context's being a reasonable test for this status, but to the fact that the context seems to be such because it is initially employed to authenticate the word "the" which is antecedently known to be an English word.

The argument of PI section 16 which we have been examining is an important element in Wittgenstein's overall critique of theories of meaning. It is intended not only to challenge the legitimacy of theoretically drawn sharp boundaries for languages, but also to prepare the way for the next stage of the critique where the related idea of a complete language is explicitly challenged. Theories of meaning, especially those in the *Begriffsschrift* tradition, assume an in-principle completeness of language. Hence, if section 16 had succeeded in showing that there is nothing to bar such things as color samples from the language, it would, in effect, have shown that languages are open-ended and subject to continuous accretion. This in itself would undercut the idea of a complete language. Section 18 explicitly raises the issue of the completeness of a natural language, and sections 19 and 20 address it directly.

Wittgenstein introduces the issue by urging us not to be troubled by the fact that the languages of sections 2 and 8 consist entirely of orders, saying: "If you want to say that this shews them to be incomplete, ask yourself whether our language is complete." (PI: 18). He suggests that our language was not complete "before the symbolism of chemistry and the notation of the infinitesimal calculus were incorporated in it" (PI: 18). The implication is, of course, that the march of science will continually extend our language and, consequently, that it is as foolish to think that it is or will someday be complete as it is to think that scientific progress will someday stop. At this point,

Wittgenstein presents his urban metaphor of the history of language. That metaphor expresses his alternative conception of a natural language as susceptible to limitless development in directions dictated by unpredictable scientific and cultural events. On this conception, it makes no sense to speak of absolute completeness. One must speak comparatively. It makes sense to speak of greater "completeness" only relative to other stages of the language or to comparable stages of other languages. In such comparisons, our judgment is like describing the language game in section 2 as "a language more primitive than ours."

Wittgenstein's striking metaphor is not accompanied by an argument against the notion of absolute completeness for a language. He presumably thinks we have only to be reminded of something we know about language and linguistic change for us to see that the notion of absolute completeness is confused or mistaken. But such a reminder is not enough when there exists a conception of language and language change for which the notion of absolute completeness makes sense and is not obviously wrong. The Fregean tradition provides such a notion, and what Wittgenstein says here about the dependency of linguistic development on scientific and cultural development is relevant only to the different notion of completeness that he thinks proper. Frege talked about how "with a few syllables [language] can express an incalculable number of thoughts, so that even a thought grasped by a human being for the very first time can be put into a form of words which will be understood by someone to whom the thought is entirely new."[23] Tarski once said that "a characteristic feature of colloquial language" is that whatever we can speak meaningfully about "we can speak meaningfully about . . . in colloquial language."[24] The notion of completeness in these discussions is *expressive completeness*. Wittgenstein's remarks seem to concern only a notion of *notational completeness*. Expressive completeness does not require that the stock of signs of a language contain every sign that can or will enter it at some point in its history, but requires only that the notational and semantic resources of the language suffice for full expressibility—roughly, the relation between sentences and senses in a language such that, for any thought, there is at least one sentence of the language with a sense which is that thought. My claim is not that the notion of expressive completeness is without its problems—Frege himself was aware of some of them—but only that we have a different notion of completeness which might well be suitably explicated.

Wittgenstein is doubtless right that the stock of signs of a natural language grows without limit and, hence, that there is no such thing

as a notationally complete natural language. But notational incompleteness does not entail expressive incompleteness. A natural language without a particular specialized vocabulary may express the same thoughts as a natural language with the highly specialized vocabulary. This is because grammatical devices compensate for the absence of special signs. For example, English contains no word corresponding to "starve" which means 'die from lack of water', but the compositional meaning of the expression "die from lack of water" plugs the lexical gap for purely expressive purposes. Even lack of a scientific notation can be got around if we are prepared to accept high levels of prolixity in synonymous forms. Thus, a language does not have to have the symbol π to express geometrical truths, since these can be expressed using "the ratio of the circumference of a circle to its diameter". No doubt verbiage can reach enormous proportions, but prolixity is irrelevant in the present discussion because it concerns only the stylistic side effects of expressing information one way rather than another.

The possibility for expressive completeness in the face of notational incompleteness is provided both by the potential of syntactic principles of natural languages for forming infinitely many sentences from a modest finite vocabulary of lexical items and by the potential of semantic principles for forming senses out of senses and relating them to syntactic structures. Together these principles constitute a theory of compositional meaning, that is, a theory of how the meaning of syntactically complex expressions is a function of the meanings of their constituents and their syntax.[25]

Of course, Wittgenstein has arguments against compositional meaning. Therefore, we cannot assume that his failure to consider the alternative notion of expressive completeness here is of philosophical significance. It may be a tactical matter, and his argument thus far may look ahead to those arguments against compositional meaning. Nonetheless, we can claim that there is nothing up to this point in Wittgenstein's critique of theories of meaning to show that natural languages are more than notationally incomplete. We can thus provisionally assume that there might be principles of compositional meaning which compensate for the absence of vocabulary and which provide natural languages with full expressive power.

9

From a naturalistic viewpoint, languages evolve, by causal processes, from less to more complex forms. The learning of a language is seen in a similar way. This viewpoint does not actually dictate a conception

of semantic facts about expression types on which they reflect conditions of the use of expression tokens, but it does lead quite naturally to such a conception. As Wittgenstein recognized, from this viewpoint, the very idea of absolute completeness seems foolishly confused. Consider something that is, indisputably, a product of evolutionary development, say, Western civilization. It *is* analogous to a city with its ancient and modern parts; it wasn't complete before Einstein, Freud, and Darwin, and it isn't complete now.

But, whereas there is no other perspective to take on Western civilization, there is another perspective that can be taken on language. One can look at the domain of language in something like the way that a realist in mathematics looks at the domain of sets, understanding languages, as suggested above, as collections of sentence-types. From this viewpoint, abstract grammatical structure constrains the evolution of linguistic forms in the way that mathematical structure constrains the evolution of natural forms. The directions that linguistic evolution and linguistic acquisition can take are set by the range of possibilities in the grammatical structure of language.[26]

On this perspective, evolutionary and developmental processes do not bring languages into existence. They only produce competence in them on the part of communities and individuals. Causal processes only bring it about that people come to have knowledge of a natural language, that is, psychological representations of abstract grammatical structures. This perspective also reverses the naturalist's picture of the order of things in the use of language. The relation between a language and its use is now seen as a complex relation involving, first, a relation between knowledge and the language that is known, and, second, the exercise of such knowledge in speech. Accordingly, the use of language is a "top-down" affair in which the categorical structure of linguistic tokens derives from their subsumption under linguistic types in the exercise of a knowledge of the system of types.

Although some "top-down" direction is possible within the naturalistic perspective on language, no naturalistic approach can be fully "top-down"; in particular, none can, as it were, start at the top. In comparing his approach of generative grammar to the inductive approach of taxonomic grammarians, Chomsky describes his as "top-down."[27] Taxonomic grammarians took the facts of language to be facts about the distributional relations among utterances in speech. The phonological and syntactic categorical structure of those utterances was thought to be inherent in the co-occurrence patterns of segments of utterances. Explicit grammatical statements of such structure were taken to be "bottom-up" inductive generalizations

from such co-occurrence patterns. Chomsky began linguistics as a taxonomic grammarian, his first major descriptive project being to write a taxonomic grammar of Hebrew. He describes the turning point in his thinking as coming when he realized that the attempt to inductively project Hebrew phonological and syntactic categories from distributional regularities could not succeed and that the only alternative was to proceed the other way around by imposing categories from above.

Chomsky's idea was that phonological and syntactic categories could be specified directly in generative grammars, set out in the manner of logical calculi, and that such grammars could then be related to linguistic phenomena. To relate them, Chomsky interpreted generative grammars as psychological theories of the speaker's linguistic knowledge.[28] An account of the categorical structure of speech is then an account of how speech is produced in the exercise of the speaker's linguistic knowledge. The grammatical categories are thus part of the psychological makeup of speakers, and the assignment of linguistic tokens to particular grammatical types is supposed to come via relations established in the exercise of linguistic knowledge.

Thus, for Chomsky, the category structure of language has its reality in the mind, naturalistically conceived. The approach is Kantian—that is, it regards category structure as imposed on phenomena by the mind—in contrast to inductive approaches, which take experience to write category structure on the *tabula rasa* of the mind. However, this degree of "top-down" direction does not amount to a full "top-down" assignment of linguistic tokens to linguistic *types*. Generative grammars, on Chomsky's view, are theories dealing with concrete psychological or neurological systems in the mind/brains of speakers. Since such systems are concrete things, located in particular places, at particular times, and involved in causal interactions with other concrete things, there are no types in them, since types, by definition, have no temporal, spatial, or causal properties. Therefore, if there is a full "top-down" path to linguistic phenomena, the psychological route from competence to performance that Chomsky describes is surely not it.

Apart from the Wittgensteinian issues of concern here, the posit of a full "top-down" approach can be motivated on the same sort of grounds that motivated Chomsky to posit his quasi–"top-down" approach. Just as Chomsky found in earlier taxonomic theory a problem of how the inductivist methodology applied to the concrete material of speech could deliver phonological and syntactic categories, we shall find a problem in his theory of how these can be delivered by

the theories of the concrete stuff of the mind/brain. Since such categories, e.g., 'noun', are second-order types, that is, types that encompass particular sentences and their constituents, how could they, any more than first-order types, have the temporal, spatial, and causal properties required for existence in mind/brains? In chapters 3, 4, and 7, we shall see that attempts to solve this problem with a dose of psychology are as hopeless as are attempts to solve the parallel problem for taxonomic theory with a dose of inductive methodology. Here, however, I want only to make two points: the "top-down" approach I have introduced is different from what Chomsky calls a "top-down" approach; his approach is, in a perfectly straightforward sense, not really *top*-down.

Given that neither taxonomic grammarians nor Chomskyan grammarians can explain how linguistic tokens are assigned to linguistic types and how linguistic types are assigned to higher-order linguistic types, and given further that linguistics is the study of sentences in the type sense, there is a rationale for a "top-down" approach to language within linguistics. The best alternative approach to language available to naturalists is, then, Wittgenstein's deflationary approach. The strength of this approach lies in the fact that it does not face the problem found in taxonomic theory and in Chomsky's theory. It denies the legitimacy of the notions of universal language and of the essence of language on which the problem depends. Hence, in adopting a "top-down" approach, I am sharpening the opposition between my attempt to vindicate a theoretical conception of language and meaning and Wittgenstein's attempt to resist such conceptions of them. On my approach, a language, being a collection of sentence types which are ineliminable and irreducible, cannot evolve historically, by causal processes, from less to more complex forms—though, of course, the speaker's knowledge of it can so evolve. Facts of language, unlike facts of fluency, have nothing to do with developmental processes. The notion that a natural language is complete makes perfectly good sense.

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Sections 19 and 20 of the *Philosophical Investigations,* which we shall consider when we return to Wittgenstein, are extremely important for the issue of whether the notion of meaning in (1) and (2′) can be developed into a theory of meaning. Those sections initiate his argument against construing ellipsis as a sign of the existence of underlying grammatical structure. Since the aim of theory, as the term is understood here, is to reveal underlying structure, and since sense

structure, as I understand it, must be grammatical structure, a theory of meaning must be a theory of underlying grammatical structure. Now, there is a long tradition in linguistics of using ellipsis and related phenomena to justify theoretical inference to underlying grammatical structure—a tradition going back at least to the *Port-Royal Grammar* and to Santius's *Minerva*.[29] In my critical step beyond the description of observable sentence structure to the explanation of unobservable underlying semantic structure, my justification will be an extension of this tradition's use of ellipsis. I depart from the tradition only in the novel application of such a rationale to the case of sense structure. Thus, Wittgenstein's arguments in those sections will directly oppose our line of development.

It has been noted that the reasoning of grammarians trying to justify underlying syntactic structure on the basis of the insufficiency of surface syntax to account for the properties of ellipsis seems parallel to the reasoning of early physicists trying to justify molecular structure on the basis of the insufficiency of observable features of matter to account for its properties. In both cases, the posit of underlying structure is justified on the grounds that it makes otherwise incomprehensible properties comprehensible. "Democritean" grammarians claim that a full description of the surface syntactic structure of an elliptical construction fails to account for certain of its syntactic properties and relations. For example, the surface syntax of an imperative like "Clean yourself!" does not account for the well-formedness of this sentence or for related facts such as that "Clean yourselves!" is well formed, but "Clean itself!", "Clean themselves!", and "Clean herself!" are not. Such grammarians argue that, if imperative sentences had an underlying structure with a second-person subject, somehow not realized in surface syntax, such patterns of well-formedness and ill-formedness would be immediately comprehensible on the basis of the otherwise well-established rule of English grammar that reflexive direct objects agree with their subjects.

There is, of course, a corresponding "Democritean" tradition in modern logic which advocates posits of underlying logical structure to overcome the insufficiency of surface grammar to account for certain logical inferences. Recall Frege's view that surface similarities and differences among sentences can be misleading concerning their logical powers and also his view that precise reasoning requires a "conceptual notation" in which conceptual content is perfectly reflected in the syntax of formulas.[30] Many Anglo-American philosophers consider Russell's treatment of sentences with definite descriptions as a paradigm of logical analysis.[31]

Before taking up Wittgenstein's arguments in sections 19 and 20, I have to spell out how my use of ellipsis and related phenomena to justify underlying sense structure differs from their use in the Democritean traditions within linguistics and logic. My main purpose in doing this is to make very clear how my use of ellipsis and related phenomena differs from the use of them by Wittgenstein's interlocutor. It will be my contention that the interlocutor's use of ellipsis and related phenomena does not exploit their full potential for justifying theoretical inference. Once this difference is explained, I will turn immediately to sections 19 and 20 and try to show how my justification of theoretical inference escapes Wittgenstein's arguments. My claim will be that his arguments are not general enough to block an inference to underlying structure which exploits the full potential of the phenomena and the full resources of theoretical inference in linguistics.

From the standpoint of the present work, the Democritean traditions in linguistics and logic each suffer from a shortcoming that prevents them from providing a satisfactory justification for underlying sense structure. The shortcoming of the tradition in linguistics is that the idea of inference to underlying grammatical structure, although now a secure explanatory paradigm in the study of phonological and syntactic structure, has not become sufficiently entrenched in the study of sense structure to provide anything like an explanatory paradigm there. There are various reasons. The most influential of them is Quinean and other forms of skepticism about intensional semantics. These will be dealt with in chapters 5 and 6. Apart from such skepticism, the principal reason is that semantic posits are seen as different in kind from phonological and syntactic posits. The latter seem to have a conservative character in virtue of the fact that the underlying structures posited are of the same sort as the surface structures on the basis of which they are posited. For example, the inference to an underlying second-person subject in imperative sentences may extend grammatical structure beyond surface structure, but the posit itself, a second-person-pronoun subject, is something we already encounter in surface structure. In contrast, inferences to sense structure seem to introduce structure not to be found in surface grammatical form, i.e., in the observable sound or sign configurations of the language. So semantic inferences are seen as enlarging the domain of grammatical structure. It is possible to argue that, since there is no prior need to acknowledge the existence of sense structure, there is a comparatively heavy burden on the theoretical inference to underlying sense structure: it must justify both an underlying grammatical level *and* a new grammatical kind.

The shortcoming of the Democritean tradition in logic is that it provides no clear position on the relation of formulas in a conceptual notation to sentences of a natural language. Indeed, much of the philosophy of language and the philosophy of logic seem to be about the question to what degree such formulas capture, or should capture, the logical powers of sentences in natural language. On the one hand, one of Frege's basic claims, echoed by everyone in this tradition, was that, since natural languages are logically imperfect, one task of a conceptual notation is to perfect them and, if possible, to provide us with an ideal logical language. On the other hand, neither Frege nor, presumably, anyone else in this tradition thinks that the construction of a conceptual notation can completely ignore natural language. Almost everyone in the tradition thinks that sentences of natural languages have logical powers and that the formulas of an ideal logical language to some extent represent the logical forms from which those powers derive. But, at this point, things become murky. There is no well-established doctrine to reconcile the many issues that arise in practice when faithfulness to grammatical features of the natural language comes into conflict with the freedom to improve logical calculi.

The main figures in this tradition have contributed little to solving this problem.[32] Carnap's proposal of explication is vague just where the problem requires precision. In a typical passage, speaking about "the various interpretations of descriptions by Frege, Russell, and others," he writes:

> [they] may be regarded as so many different explications for phrases of the form 'the so-and-so'; each of these explications consists in laying down rules for the use of corresponding expressions in language systems to be constructed. The interpretation which we shall adopt following a suggestion of Frege . . . deviates deliberately from the meaning of descriptions in ordinary language. Generally speaking, it is not required that the explicatum have, as nearly as possible, the same meaning as the explicandum; it should, however, correspond to the explicandum in such a way that it can be used instead of the latter.[33]

How close to the meaning of the explicandum should the meaning of the explicatum be? It is mind-boggling to contemplate the semantic range in explicata that can replace the explicandum.

Or consider Quine's pronouncement on the issue:

> [the job of paraphrasing ordinary language into the theory] will usually present little difficulty to one familiar with the canonical notation. For normally he himself is the one who has uttered, as

> part of some present job, the sentence of ordinary language concerned; and he can then judge outright whether his ends are served by the paraphrase.[34]

In this passage Quine sounds remarkably like the Carnap of the principle of tolerance. Both seem to be saying that the only issue is the practical one of whether a chosen explication (paraphrase) does the job the philosopher wants it to do, as if the explication (paraphrase) were a personal choice like picking a tie. It is hard to believe that Quine would maintain this attitude of tolerance if a philosopher tried to vindicate the analytic/synthetic distinction on the grounds of its serving certain of his or her ends.[35]

Since my attempt to develop a theory of meaning draws on both Democritean traditions, the first order of business is to show how their shortcomings are overcome. Recall that, apart from skepticism about intensional semantics, the reason that the tradition in linguistics lacks a well-worked-out inferential paradigm for underlying sense structure is that, unlike phonology and syntax, theoretical inference in semantics seems to have to justify a new grammatical kind over and above a new underlying grammatical level. I want to show that, properly understood, theoretical inference in semantics does this.

First, the step beyond surface grammatical structure to a level of underlying grammatical structure is already justified by the theoretical inferences in phonology and syntax. The critical step from the observable to the unobservable has already been taken. Whatever objections there are to introducing underlying grammatical structure have presumably been met, if they have been, by the arguments for the theoretical inferences in phonology and syntax. That they are met can be seen by looking at those arguments.

Second, once the option of underlying grammatical structure is secured, there is no problem of justifying a new kind of underlying grammatical structure beyond showing that it is required to account for grammatical facts. The idea that there is a further problem, because the new kind of grammatical structure is not exhibited in the surface form of sentences, is just a holdover from the "bottom-up" approach of taxonomic theory. Since, on that approach, categories are established by working up inductively from surface grammatical structure, whatever is not part of the sounds or signs of surface grammatical structure is not part of grammatical structure. This is why semantic structure was never part of grammatical structure at the time when the taxonomic theory dominated linguistics. But, as Chomsky recognized in his criticism of that theory, the phonological

and syntactic facts with which inferences to underlying grammatical structure properly begin go well beyond what is found in surface structure, and the inferences themselves require no more justification than the fact that they account for grammatical facts that cannot be accounted for otherwise. This is well illustrated in Chomsky's famous example of the sentences "John is easy to please" and "John is eager to please". Here the syntactic facts are that "John" is the object of the verb "please" in the former sentence but its subject in the latter. The facts are evident to fluent speakers of the language despite there being nothing in the surface structure of the sentences which reflects them. Posits of underlying syntactic structure which successfully account for the syntactic relations speakers recognize require no further substantiation.[36]

Third, an appropriate paradigm of theoretical inference in semantics can be obtained by modeling it on theoretical inference in syntax. I will first show how the theoretical inference in syntax works and then construct theoretical inference in semantics to work the same way. In formulating a paradigm of inference to underlying sense structure, sense properties and relations play the role that syntactic properties and relations play in inferences to underlying syntactic structure, namely, the role of providing the facts for posits of underlying grammatical structure to explain. Inferences to underlying sense structure in sentences are based on properties and relations like meaningfulness, ambiguity, synonymy, redundancy, antonymy, etc. in a way that is exactly parallel to the way in which inferences to underlying structure in syntax are based on such properties and relations as well-formedness, subject and direct-object relations, and agreement.

The two basic features of this formulation will be, first, an explanation of why a posit of semantic structure is required over and above posits of syntactic structure and, second, an explanation of why description by itself is inadequate to account for the facts about semantic properties and relations, so that appeal must be made to underlying sense structure to account for them. With both of these explanations in place, the justification of underlying sense structure is a special case of a justificatory paradigm used elsewhere in linguistics, which, in turn, is a special case of justificatory paradigms elsewhere in science.

The shortcoming of the Democritean tradition in logic was that there is no clear position on the relation of formulas in a conceptual notation to sentences of a natural language. I will avoid this shortcoming by agreeing with Wittgenstein that natural languages are in no need of improving, reforming, or perfecting. My inquiry into the

grammatical locus of the inferential potential of sentences aims at nothing more than discovering what it is. Indeed, this modest policy seems to be demanded by a commitment to developing a theory of meaning within the science of linguistics, since the aim of a science is to reveal the nature of the phenomena it studies, not to improve, reform, or perfect them. Linguists have no more business being dissatisfied with ambiguity and other features of natural languages which have been called "limitations" or "imperfections" than physicists have being dissatisfied with the speed of light as the limiting velocity in nature. Moreover, such a "hands off" policy has the significant advantage for my argument in this chapter of deflecting Wittgenstein's acute criticisms of theories that try to improve, reform, or perfect language.

My aim is to construct a theory in the sense of a set of statements about the nonobservable structure of objects from which we can derive facts about their intrinsic properties and relations. This aim ensures that the line of development I am pursuing is on a collision course with Wittgenstein's line of argument in the *Philosophical Investigations.* As I understand the term, a *theory* explains why objects in its domain have certain properties and relations—which are unexplained on the basis of their observable structure—by picturing a hidden structure that is such that any objects having that structure would have those properties and relations. In the present case, I will understand an observable aspect of objects to be a perceivable aspect of the configuration of signs that constitutes those objects. (For example, a grammarian's claim that "Clean yourself!" has a second-person subject is a claim about a nonobservable structure insofar as the configuration of signs out of which this imperative is formed does not contain the sign "you" in subject position.) Further, I use the qualification "intrinsic" to restrict attention to properties and relations that reflect something about the nature of the objects. For example, being ambiguous is an instrinsic property of sentences, just as being prime is an intrinsic property of numbers, but being the subject of Jespersen's meditations on English is not an intrinsic property of an English sentence.

Thesis (1) provides an initial set of intrinsic properties and relations for the senses of linguistic forms in natural language. Thus, an inquiry into the semantics of natural language in our sense will try to say what it is in virtue of which expressions are meaningful or meaningless, ambiguous or univocal, synonymous with certain expressions and not others, redundant, and so on. Of course, such an inquiry does not begin by assuming that it will have to resort to the-

ory in order to account for such properties and relations. If it does resort to theory, it must have already exhausted what observation can tell us without having learned what it needs to know about the properties and relations. That is, the step from semantic description to semantic explanation is legitimate only if the attempt to account for intrinsic properties and relations cannot be carried to a successful conclusion on the basis of observational evidence, and then only if the postulated structure actually offers sufficient basis on which to account for the properties and relations in the language.

To model the step from semantic description to semantic explanation on the step from syntactic description to syntactic explanation, we require an example of the latter. I have chosen what is perhaps the best known example of such a step in the literature, namely, Chomsky's cases "John is easy to please" and "John is eager to please".[37] Chomsky argued that description of the observable syntactic structure in those sentences does not provide a sufficient basis on which to account for the syntactic fact that "John" is the direct object of the verb in the former sentence, but the subject of the verb in the latter. The observable structure in the sentences gives no clue to this difference in intrinsic grammatical relations, since in both sentences the noun phrase "John" is followed by the copula, then a predicate, and then the infinitive "to please". That is, the single lexical difference, that the predicate is "easy" in one case and "eager" in the other, does not suffice to account for the dramatic grammatical difference in the way that "John" relates to the verb in the two sentences. Accordingly, on the basis of what we know about subject and direct-object relations in sentences like "John loves Mary", Chomsky hypothesized appropriately different underlying syntactic structures. In the underlying structure for "John is easy to please", "John" is related to the verb "please" in the same way that "Mary" is related to "love" in "John loves Mary". In the underlying structure for "John is eager to please", "John" is related to the verb "please" in the same way that "John" is related to "love" in "John loves Mary". Using the notation of phrase markers, the hypotheses are, respectively,

$$((\text{someone})_{NP}\ ((\text{please})_{V}\ (\text{John})_{NP})_{VP})_{S}$$

and

$$((\text{John})_{NP}\ ((\text{please})_{V}\ (\text{someone})_{NP})_{VP})_{S}.$$

The main feature of these phrase markers is that the former places "John" within the verb phrase, but the latter places it outside the verb phrase, respectively, the canonical positions for the direct object and subject in constituent structure.

Let me pause to reassure the reader that I am aware that Wittgenstein's discussion of ellipsis contains objections even to posits of underlying syntactic structure such as Chomsky's. Those objections will not be ignored. I am now simply formulating the position that will subsequently be confronted with those objections. Thus, we can provisionally accept Chomsky's syntactic explanation in order to ask how a parallel semantic explanation might be modeled on it.

In semantic description, the domain is the same as in syntactic description, namely, sentences of the language, but sense properties and relations like those in (i)–(viii) take the place of the syntactic properties and relations. Corresponding to the aim of syntactic description, the aim of semantic description is to account for the fact that sentences have the sense properties and relations they do have. The correctness of a semantic account is a matter of whether what the account says about the sense properties and relations of sentences is true of them, and the completeness of an account is a matter of whether it says everything that is true about their sense properties and relations.

Since the only difference between semantics and syntax is the set of properties and relations to be accounted for, semantic description, too, ought to give way to semantic explanation when sticking to description prevents us from obtaining a complete and correct account of the relevant properties and relations and when moving from one level of grammatical structure to another makes it possible to do so. Hence, the critical question here is whether there is a point at which progress toward a complete and correct account of sense properties and relations forces us to abandon sheer description and resort to explanation on the basis of hypotheses about underlying sense structure.

To see why a posit of semantic structure is required, it suffices to show why semantic explanation cannot simply piggyback on Chomsky's transition from surface to underlying syntactic structure. One might suppose that it is possible to account for sense properties and relations on the basis of the underlying syntactic structure already introduced to account for syntactic properties and relations. But, for such a "free ride" approach to work, sense structure would have to be reducible to underlying syntactic structure. The semantic facts strongly suggest that this is not the case. For one thing, sameness and difference of syntactic representation do not coincide with sameness and difference of semantic representation. The syntactic representations of "bachelor" and "adult human male who has not married" differ far more than the syntactic representations of "bachelor" and "spinster". Also, nothing in syntax distinguishes the

meaningless expression "slippery number" from the meaningful expression "slippery worm". Furthermore, the parallel syntactic structure of expressions like "free gift" and "free dish" offers no hope of accounting for the redundancy of the former and the nonredundancy of the latter. Finally, syntactic structure fails in both directions as a basis for accounting for sense ambiguity, since an ambiguous word like "bank" does not have multiple syntactic structures, and an unambiguous expression like "It was done with an automated processing device" does, viz., ((automated processing) (device)) or ((automated) (processing device)).[38]

Semantic facts like these show that sense structure cannot be reduced to syntactic structure. We are thus forced to suppose that sentences have senses over and above their syntactic form, and, as our knowledge of facts like (i)–(viii) shows, that we are somehow acquainted with the senses of words, phrases, and sentences in our acquaintance with language. Hence, if we are to successfully make the transition from semantic description to semantic explanation, there must be a point at which we can legitimately move from "surface semantics" to "deep semantics." To determine that point, we can see how far it is possible to push the null hypothesis: the hypothesis that description of surface semantics suffices for a complete and correct account of sense properties and relations. I will call this the Fregean view.[39] The view involves the following theses:

(a) The existence of senses, as well as their identity and difference, can be determined on the basis of synonymy, analyticity, analytic entailment, etc. (e.g., in connection with identity sentences like "Hesperus is Hesperus" and "Hesperus is Phosphorus" or substitution into opaque contexts).
(b) The sense of each meaningful syntactic simple (i.e., morpheme) is itself simple.
(c) The simple senses are just the semantic elements necessary for the meaning of all nonidiomatic syntactically complex expressions and sentences of a language to be compositional.

Now if we can show that the Fregean view is wrong, i.e., that surface semantics (in the sense of that view) is insufficient for an account of sense properties and relations whereas deep semantics in an appropriate sense is sufficient, then we have an argument for semantic explanation. To be sure, the argument still has to be tested against Wittgenstein's objections, but at this point we are merely formulating the position that will be put to the test. The claim so far is only that such an argument is on a par with Chomsky-style arguments for un-

derlying syntactic structure—a claim with which Wittgenstein would no doubt agree.

To explain the insufficiency of the Fregean view, consider the following partial formalization. The primitive vocabulary for the semantic notation contains a list of atomic symbols representing the senses of the syntactic simples of the language (i.e., the morphemes). The signs for this vocabulary might be the numerals "1", "2", . . . , "*n*" (it might be other signs, since it doesn't matter from a formal viewpoint). The full notation, which includes non-atomic symbols for representing compositionally formed senses, would take the form of constructions out of such a numeral vocabulary (i.e., complex numeral configurations). And representations of meaning might be sets of such simple or complex numeral configurations. Given such a notation, a number of sense properties and relations can be defined. We can define a meaningless expression (e.g., "slippery number") as an expression whose representation is the null set of numeral configurations, a meaningful expression (e.g., "slippery worm") as one whose representation is a set containing at least one numeral configuration, an ambiguous expression (e.g., "bank") as one whose representation is a set of numeral configurations, and expressions synonymous on a sense (e.g., "dough" and "money") as ones whose representations are sets with a common numeral configuration.

The Fregean view will be inadequate in case such a notation fails, in principle, to provide a complete and correct account of the semantic properties and relations in natural language. No doubt, the numeral notation works well enough over a certain range of sense properties and relations; the notation enables us to define 'meaningless', 'meaningful', 'ambiguous', and 'synonymous'. But what about sense properties and relations outside that range? In Chomsky's argument for deep syntactic structure, we saw that the relations of 'subject of the verb' and 'direct object of the verb' could be defined in terms of surface syntactic structure over a certain range of sentences (e.g., "John loves Mary"), but that those relations could not be defined in terms of surface grammatical structure for all sentences, because syntactic relations are not always faithfully preserved in such structure. Our question is whether semantic representation on the Fregean view fails in a similar way.

To identify a set of parallel cases, we have to find cases where the semantic structure required to define sense properties and relations is not reflected in syntactic structure even at underlying levels. There are two kinds of sense properties and relations. We will call them "expressional" and "nonexpressional." Expressional properties and relations hold of expressions themselves, rather than senses, in virtue

of the senses they express. It makes no sense to apply an expressional property or relation to a sense. Thus, 'being meaningful' and 'being ambiguous' are expressional sense properties because it makes no sense to apply them to the sense of a sentence, whereas it makes perfectly good sense to apply them to sentences, e.g., to say that "I met you at the bank" is meaningful and ambiguous. This is because meaningfulness and ambiguity are properties that an expression has in virtue of the number of senses it has. On the other hand, saying that a sense itself is meaningful or ambiguous is nonsense (tantamount to saying that a sense has at least one sense or has two or more senses). Expressional properties and relations are, as it were, counts of the senses of expressions.

Nonexpressional properties and relations, like 'being redundant', 'being analytic', 'being a superordinate of', 'being antonymous with', and 'being contradictory', hold directly and absolutely of senses, and only indirectly and relatively of expressions. Nonexpressionality can be illustrated by a sentence that is analytic on one of its senses but contradictory on another. We can say that one of the senses of "Dusting a surface is removing dust from it" is analytic (and the other contradictory) or, what amounts to the same thing, that the sentence is analytic *on one of its senses* (and contradictory on the other), but we cannot say, directly and without relativization, that the *sentence* is analytic. Rather than simply presenting a count, nonexpressional properties and relations say something about the structure of individual senses. Attributing analyticity to a sense of a sentence says something about how parts of the sense are related—in an example like "Bachelors are unmarried", the attribution says that the sense of the subject includes the sense of the predicate.

The Fregean view works well enough for expressional properties and relations, but fails for nonexpressional properties and relations. It fails for the latter because they must be defined in terms of the structure of senses, and, in a wide range of cases, sense structure does not coincide with syntactic structure at any level. To see how the numeral notation fails in such cases, consider the nonexpressional property of redundancy. The numeral notation can capture redundancy in a case like "a woman who is a woman" because the inclusion of the sense of the modifier in the sense of the head is reflected in the syntactic structure of the expression. (We could define an expression as redundant when the numeral representing the sense of the modifier is the same as the numeral representing the sense of the head.) But the notation cannot capture redundancy in cases of redundant expressions like "a woman who is a female", "a sister who is a sibling", and "a free gift". In such expressions, the redundancy is not

reflected in syntactic structure, and, as a consequence, the numeral notation will represent the sense of the modifier and the sense of the head as distinct numerals. Accordingly, the Fregean view treats such redundant expressions in the same manner that it treats nonredundant expressions like "a woman who is frail", "a sister who is a hireling", and "an expensive gift".

The Fregean view prevents us from giving a full account of sense properties and relations in natural language. As long as we hold on to that view, our notation for describing sense structure will be restricted to a vocabulary in which the symbols representing semantic simples stand for senses of syntactic simples. In this case, we will be unable to account for the redundancy of expressions like "a woman who is female". These expressions are redundant in an intuitively obvious sense; viz., the meaning of their modifier is already part of the meaning of their head. But the complex sense structure that involves the containment of the meaning of "female" in the meaning of "woman" is masked by the syntactically simple form of the morpheme "woman", making it impossible to exploit that structure to account for the redundancy of the expressions. Expressions like "woman who is female", "sister who is a sibling", and "free gift" present a new type of ellipsis which frustrates the surface-semantics hypothesis every bit as effectively as the syntactic ellipsis in "John is easy to please" and "John is eager to please" frustrates the surface-syntax hypothesis.

But once we abandon the surface-semantics hypothesis, we can construct a notation to represent the semantically complex senses of syntactic simples.[40] In this notation, atomic symbols are replaced with symbol complexes whose parts represent the sense components and relations in complex senses of syntactic simples. We can then account for cases like "a woman who is female". We postulate that the sense of the syntactic simple "woman" is complex, consisting of the sense of "human", the sense of "adult", and the sense of "female". On this postulation of a decompositional sense structure for "woman", the redundancy of "a woman who is female" is immediately accounted for with the same intuitively obvious notion of redundancy that accounts for the redundancy of expressions like "a woman who is a woman".

This case is exactly parallel to that in which Chomsky postulated an underlying syntactic structure in order to extend the account of subject and direct-object relations in sentences like "John loves Mary" to sentences like "John is easy to please" and "John is eager to please". By parity of reasoning, we postulate an underlying semantic structure in order to extend the account of redundancy in expressions

like "woman who is a woman" to expressions like "woman who is female". Decompositional postulations require a grammatical locus for the unobservable complex senses they postulate; so we are led to taking the step of positing that grammatical structure contains an underlying level of sense structure.

Like Chomsky's postulation of underlying syntactic structure, our postulation of underlying sense structure accounts for a wide range of grammatical properties and relations. Consider the nonexpressional relation of superordination. With this postulation, we can suppose that a syntactic simple like "house" has a complex sense, and, hence, we can account for the superordination relation between "dwelling" and "house" on the decompositional hypothesis that the sense of "house" contains two components, one identical with the sense of the superordinate "dwelling" and the other specifying what it is about dwellings and dwellers that distinguishes "house" from "prison", "barracks", etc. Semantic properties and relations like analyticity and analytic entailment, which also depend on sense containment, can be accounted for on the same decompositional hypotheses used to account for redundancy and superordination.

The postulation of underlying sense structure is also required for a full account of synonymy and antonymy. That this is so can be seen from cases like the synonymy of "sister" and "female sibling" and the antonymy of "open" and "closed". A numeral notation fails in the former case because these synonymous expressions will not be assigned the same numeral representation; it fails in the latter case because, although the antonymous expressions will be assigned distinct numeral representations, such representations will not be relevantly different from the distinct representations assigned to the merely non-synonymous expressions "open" and "destroy".

To account for their antonymy, the senses of "open" and "closed" must be represented as complex, containing, among the sense components in each, concepts expressing mutually exclusive positions. For instance, we might represent the senses of "open" and "closed" as, respectively, the concepts 'positioned to allow passage from one side of a contained space to the other' and 'positioned other than to allow passage from one side of a contained space to the other'. Here the concepts themselves have a built-in notion of negation taking the form of an 'other than' relation that represents exclusive positions on some dimension (such as spatial disposition, color, and age). Each concept representing a point on the dimension is incompatible with every other such concept. Thus, when a grammatically negative element occurs, as in "not open" or "not closed", it is not the external, truth-functional operator of logical negation, but what is sometimes

distinguished from it as "internal negation." Rather than an operator on propositions, it is an operator on concepts, turning a concept in its scope into a concept specifying another position on the dimension. With negation available from the sense structure of syntactic simples, the contradictoriness of "The open door is closed" can be accounted for in terms of the occurrence of more than one concept from the same antonymy dimension within its predicate structure.[41]

We have now formulated the core of our inference to underlying sense structure. The rationale for the inference is that it is the only way to discharge the obligation to account for the semantic facts. Only by postulating underlying sense structure and constructing a decompositional semantics can we obtain the set of natural generalizations about sense properties and relations which enables us to account for the nonexpressional sense properties and relations in the case of sentences with syntactic simples. We will call the formulation we have thus far the "proto-theory"—to emphasize that it is only a first approximation to a full theory of decompositional sense structure.

Moreover, as our discussion makes clear, the inference to complex underlying sense structure in the case of syntactic simples is parallel to the syntactician's inference to underlying syntactic complexity. Hence, we can claim that our semantic inference to deep sense structure is on a par with the syntactician's inference to deep syntactic structure and that both of them are on a par with explanatory inferences in other sciences.

Thus, we may introduce the following:

> (3) The senses of syntactic simples in natural language can have complex structure, i.e., have component senses, and an account of the semantics of natural languages must represent such *decompositional* sense structure, as well as representing compositional sense structure. Since decompositional sense structure is, by definition, underlying sense structure, an account of senses in a natural language must be a theory.

11

The appropriateness of the proto-theory for linguistics may be accepted without accepting its appropriateness for philosophy. Especially since the formulation here is so sketchy, it is easy to anticipate the question of how it is relevant to the philosophical issues with which Frege, Russell, and Wittgenstein were concerned. In this section I want to show that the proto-theory is directly relevant to those issues. I want to do this by exhibiting the power of the theory to deal

with problems that Wittgenstein encountered in the *Tractatus* when he tried to use Frege's and Russell's logical ideas to treat the logical form of sentences in natural language. The unavailability of a solution to those problems within their logical theories was an important factor in Wittgenstein's change from the positive attitude he had toward theory in the *Tractatus* to the negative attitude he has toward it in the *Philosophical Investigations*. The availability of a solution within the proto-theory would establish at least its relevance to the issues in question.

In the *Tractatus*, Wittgenstein tried to fashion an account of the semantics of a language on the basis of the ideas in the *Begriffsschrift* and in *Principia Mathematica*. Of special importance was the idea that the grammatical form of sentences disguises their logical form, so that theory is necessary to reveal the hidden aspects of logical form and state them with precision. Frege's was what we might call a "prosthetic" conception of the relation between grammatical form in natural language and logical form as expressed in a conceptual notation. Just as a prosthetic device artificially compensates for the deficiencies of a natural organ, so a conceptual notation artificially compensates for the imperfections of natural languages.[42] But this analogy, even together with the other things Frege says about the relation between conceptual notation and natural language, leaves the relation unclear in much the same ways in which, as we indicated above, the relation is still unclear in the work of Carnap and Quine.

Now, in the *Tractatus*, Wittgenstein needed to be very clear about the relation between formulas of a logical calculus and sentences of a natural language because he was trying to exploit logical semantics to show that metaphysical sentences are literally nonsense. If one is trying to establish that the sentences of some class have no sense according to the rules of the language, then it is necessary to show how those sentences differ from sentences that are meaningful but whose meaning is hidden or disguised. Thus, Wittgenstein's project requires that there be a way to infer the hidden senses of sentences on the basis of aspects of them that are open to inspection. But how could he exhibit a way of making such inferences, of distinguishing the sentences which really lack a sense from those which merely have theirs deeply hidden, when the relation between a calculus and a language is itself unclear? Wittgenstein struggled with the problem, ultimately concluding that there simply is no way to infer them:

> Language disguises thought. So much so, that from the outward form of the clothing it is impossible to infer the form of the thought beneath it, because the outward form of the clothing is

> not designed to reveal the form of the body, but for entirely different reasons.[43]

Let us look at one of the most important aspects of this problem. In the case of negation, the logical powers expressed in formulas of calculi developed on the basis of Frege's or Russell's work diverge significantly from intuitively clear logical powers of the sentences that are their obvious counterparts. Because the *Tractatus* employs logical notation in a semantics for language, the occurrence of negative elements in sentences are represented by the truth-functional operator $\sim$: the proposition $\sim p$ is true just in case the proposition p is false.[44] Formulas employing this negation operator are appropriate as representations of the logical powers of compound sentences containing an external or propositional negation operating on a sentence. But, as Wittgenstein saw, such formulas cause trouble when taken as representations of simple sentences like "The spot is blue", "The spot is red", and "The spot is green". Wittgenstein wrote:

> One could say, the denial is already related to the logical place determined by the proposition that is denied.
>
> The denying proposition determines a logical place *other* than does the proposition denied.
>
> The denying proposition determines this logical place, with the help of the logical place of the proposition denied, saying that it lies outside the latter place.[45]

On this account, there is a form of incompatibility in sentences which seems to go beyond the representational capacities of external negation, i.e., the incompatibility found in sentences like "The spot is completely blue at every time" and "The spot is not completely blue at every time". Such incompatibility seems to depend on an unformalized negation in color concepts. This negation might be something like the negation in the simple sentence "The spot is non-blue," meaning that the sentence is synonymous with "The spot is some color other than blue". But such an account, however intuitively plausible, conflicts with the doctrines about logical necessity and logical possibility to which Wittgenstein commits himself in adopting Frege-Russell logic in a semantics for the language. Wittgenstein writes:

> As there is only a *logical* necessity, so there is only a *logical* impossibility.
>
> 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.

> Let us consider how this contradiction presents itself in physics. Somewhat as follows: That a particle cannot at the same time have two velocities, i.e., that at the time it cannot be in two places, i.e., that particles in different places at the same time cannot be identical.
>
> (It is clear that the logical product of two elementary propositions can neither be a tautology nor a contradiction. The assertion that a point in the visual field has two different colors at the same time, is a contradiction.)[46]

If the only impossibility is logical impossibility and if, therefore, two elementary propositions cannot contradict each other, then how can the logical product of two elementary sentences, one asserting that a point has one color and the other asserting that the point has another color, be a contradiction?

Wittgenstein returns to this difficulty in the only paper he published, remarking that "Atomic propositions, though they cannot contradict, may exclude each other."[47] This doesn't help, since in the logical framework within which he was still working, there is no content to the notion of a relation of exclusion which is not logical incompatibility. And, in the *Philosophical Remarks,* Wittgenstein concedes that not all necessary propositions can be accounted for as tautologies and denials of tautologies.[48] Thus, at this point, he seems to abandon the fundamental thesis of the *Tractatus*'s logical framework that atomic propositions are logically independent and to accept the view that certain words belonging to the extralogical apparatus of a language give rise, in virtue of intrinsic aspects of their sense, to genuine logical properties and relations like contradiction.

Wittgenstein came to regard the fact that such logical properties and relations in sentences of natural language cannot be represented in formulas of logical calculi as a challenge to the basic assumptions of his early philosophy. He saw, quite rightly, that the difficulty that had surfaced in connection with logical relations between atomic propositions was a clear sign that there is something fundamentally wrong with trying to use logic in a comprehensive semantics for natural language. But what? And what is to be done? Answers to these questions had to be found if Wittgenstein was still to carry through his critical project of showing that metaphysical sentences have no sense.

Wittgenstein's way out of this impasse was to abandon the entire *Tractatus* approach to meaning—with its calculus model, hidden senses, and ideal of a logically perfect language—in favor of the use-oriented approach in the *Philosophical Investigations*. This choice made

it possible for Wittgenstein to give a uniform treatment of the logical powers of sentences like "The spot is simultaneously red all over and blue all over" and sentences like "The spot is red and it is not the case that the spot is red" in terms of linguistic practices for the use of so-called logical and extralogical words. Much of Wittgenstein's late philosophy can be seen as having its genesis in this solution to the impasse to which his early philosophy had come.

There are, however, *two* other ways out of the impasse. One of them is to hold on to the Frege-Russell framework but abandon Frege's notion of sense. This way out denies Frege's claim that sense is a genuine logical concept, required for a complete statement of laws of logic. This way out is taken by Quine and his followers.[49] It is motivated by the fear that making use of Frege's concept of sense to extend logical properties and relations to the extralogical vocabulary opens up a Pandora's box of ontological ills. Quine's skeptical arguments against analyticity and synonymy make it possible to pursue this way out by purporting to show that no objective scientific sense can be made of the concept of sense. If senses are on all fours with Homer's gods, then the concept of sense is unacceptable scientifically, and if, as Quine would have it, extralogical words have only stimulus meaning, then extralogical words cannot give rise to necessary truths and necessary falsehoods.

The Wittgensteinian and the Quinean directions have been the standard ways out of the impasse. The choice between them is, in effect, the choice that Kripke talks about in the quotation with which this book began—the Chomskyan approach being simply a more linguistically sophisticated version of the Quinean (see chapter 8 of this book for further discussion).

The third way out is to preserve a notion of sense something like Frege's and his conception of logical structure, but separate them. This way rests on a different diagnosis of the impasse. On this diagnosis, there is nothing wrong about the application of a logic like Frege's to natural language, except insofar as the application is supposed to play a role in perfecting the language, and there is nothing wrong with Frege's introduction of senses, except insofar as they are supposed to be defined in terms of reference. Rather, what is wrong is Frege's unification of logic and the semantics of natural language in his definition of analyticity.

Frege joined semantics and logic in the course of reconstructing Kant's account of analyticity. Kant had given two definitions of analyticity: a semantic definition, namely that analytic propositions are those whose predicate concept is contained in their subject concept,

and a logical definition, namely that analytic propositions are those whose denials are logical contradictions.[50] Frege combined these definitions. He defined analytic truths as "truths deducible from general laws of logic and definitions without assumptions taken from the sphere of a special science."[51] On this definition, the analytic sentence "All bachelors are unmarried men" is a definitional variant of the analytic sentence "All unmarried men are unmarried men", and, in virtue of this, both sentences are treated as instances of the logical truth "For anything there is, if it is *F* and *G*, then it is *F* and *G*". But in order to treat them in this way and, thereby, bring both types of sentence under a single concept of analyticity, it is necessary to assume that there is no semantic difference between the grammatically simple and the grammatically complex sentence. Therefore, in order to initiate the third way out, we require some basis for denying that the simple sentence "All bachelors are unmarried men" is an instance of "For anything there is, if it is both unmarried and a man, then it is both unmarried and a man".[52]

The third way out dissolves Frege's union of logic and semantics. The possibility of resolving the impasse this way is rarely considered because, I think, of Frege's enormous prestige. But there is nothing necessary about the connection between semantics and logic. If we cut that connection, necessary truths and falsehoods in language can be distinguished from necessary truths and falsehoods in logic, and each type of truth and falsehood can be explained as arising from a different kind of structure. If there is a different basis for each type, it would be no surprise that even Wittgenstein could not assimilate necessarily false propositions like "The spot is simultaneously red all over and blue all over" to necessarily false propositions like "The spot is red and it is not the case that the spot is red".

The key idea underlying the first way out is Wittgenstein's idea that facts about the use of language are the fundamental facts about meaning in natural language. The key idea underlying the second way out is Quine's idea that the concepts of the theory of meaning are not proper scientific concepts: we cannot make objective sense of them on the basis of any of the methods for clarifying logico-linguistic concepts in the sciences. The key idea underlying the third way out is the independence of sense structure from logical structure.

The proto-theory of the last section is the necessary linguistic means of implementing the third way out. The principal claim of the proto-theory is that the senses of syntactically simple words generally have a semantically complex, decompositional structure. That is, their senses decompose into simpler senses or concepts. This idea is

inherent in the Kantian definition of analyticity which says that analytic judgments are those which add "nothing through the predicate to the concept of the subject, but merely break . . . it up into those constituent concepts that have all along been thought in it."[53] This definition needs only to be separated from Kant's logical definition of analyticity and translated into a systematic linguistic doctrine about lexical meaning, in order to locate the source of the analyticity of sentences like "Bachelors are unmarried men" and "A red spot is not blue" in the decompositional sense structure of the words "bachelor", "unmarried", "man", "red", and "blue" and to distinguish such truths from those arising from the logical structure of complex sentences.

The case of antonymy is, of course, of special interest in connection with the impasse Wittgenstein reached in connection with elementary sentences. "The spot is red" and "The spot is blue" contradict each other; yet cannot do so within the semantics of the *Tractatus*, since, being elementary, they contain no logical operators, and their nonlogical vocabulary cannot contribute a form of negation. The problem is intractable as long as we try to solve it within a semantics derived from logic, where, as Wittgenstein said, "the *application* of logic decides what elementary propositions there are"—and what propositional structure is related to necessary incompatibility.[54] There is simply no negative element to account for the incompatibility of the sentences.

But once we separate semantics from logic and adopt the proto-theory's decompositional view of sense structure, there is an appropriate negative element. Now logic is not the only conception of propositional structure which provides us with a notion of an elementary proposition. Logic gives us the notion of a *logically* elementary proposition, and linguistics, in the form of the proto-theory, gives us a notion of a *semantically* elementary proposition. And, as we have seen, the semantically elementary propositions do not coincide with the logically elementary ones, since some logically elementary propositions are semantically complex. As a consequence, the existence of a negative element needed to account for the incompatibility relations among logically elementary propositions can be located in the complex sense structure of the syntactically simple predicates in such (logically) elementary propositions.

The third way out has important advantages over the others.[55] Although all three offer the promise of an escape from the difficulties that Wittgenstein believed had brought the Fregean approach to an impasse, only the third offers an escape which, on the one hand, does

not sacrifice the full-blooded notion of necessity and the use of formal methods in the study of natural language—as Wittgenstein's later philosophy does—and, on the other hand, does not rely on what prove to be fallacious skeptical arguments against meaning—and for all that, still faces Wittgenstein's problem in a somewhat different form.[56] We shall have a good deal more to say about this in the course of the book.

12

I want to return briefly to the argument in the *Tractatus* against the possibility of inferring "the form of the thought" from "the outward form of the clothing." In the next section, I will turn to Wittgenstein's arguments concerning ellipsis, starting with those in PI sections 19 and 20. Section 13 will initiate a direct confrontation between the proto-theory and Wittgenstein's arguments in the *Philosophical Investigations.*

From the present perspective, Wittgenstein's remark that "the outward form of the clothing is not designed to reveal the form of the body" (*Tractatus*: 4.002) suggests that he thinks that the syntactic simplicity of words like "red" and "blue"—which presumably obtains for reasons of communication—is what makes it impossible to infer the complex logical anatomy responsible for their necessary incompatibility. If so, it is easy to see why he came to think that inferences to underlying sense structure are bogus. He thinks that such inferences do not give us full value for our money. We are paying for a solution to the mystery that sentences have logical powers that cannot be understood on the basis of what appears on the surface to be their grammar. We pay the price of countenancing underlying senses, and, in exchange, the mystery is supposed to be dissolved. But the deal is phoney: paying the price, as Wittgenstein had in the *Tractatus,* doesn't buy us demystification. The mystery about the source of the logical powers of sentences is simply replaced by another mystery, namely, the mystery about the nature of the underlying logical forms. The "disguise" works so effectively that we are prevented from discovering the features of the senses of elementary propositions responsible for their logical relations.

Thus, it is not the impulse to demystify itself that is bad, but indulging it under conditions where, in the end, it still goes unsatisfied. Wittgenstein's solution, as we have seen, was to introduce a new way to demystify. He radically changed his conception of what it is in virtue of which sentences have inferential powers, taking them to have such powers in virtue of their use in the language. This brings

the source of those powers into open view and, as a consequence, does not leave us with a mystery.

Seeing the way he himself had got entangled in the metaphysics of Fregean meaning became a paradigm for Wittgenstein of how philosophers get caught in metaphysical problems. Wittgenstein uses the paradigm to turn the traditional idea of the relation of philosophical theory to philosophical problems on its head. Philosophical theory is no longer the solution of philosophical problems; it is their source. Philosophers are misled by the parallel with science, which encourages them to engage in theory construction, and, when they do not find the objects they seek in what is observable, they think the objects must be unobservable. Thus, they erect theories to picture hidden meanings, but this creates only the illusion of understanding, since nothing in nature corresponds to such pictures. Philosophers take themselves to be "tracing the outline of a thing's nature . . . and [they are] merely tracing round the frame through which we look at it" (PI: 114).

My way out of the impasse in the *Tractatus* accounts for how sentences have inferential powers without abandoning a scientific approach or leaving us with the mystery. My way out rejects the assumption that semantic theorizing at its best takes place within the Fregean conception of the general form of propositions. Indeed, it denies that theorizing based on that conception is *semantic* theorizing at all. It takes the crux of the problem to be that, within the Fregean framework, the inferential powers of sentences are seen through the prism of logical structure, and hence, elementary propositions are seen as having no inferential relations to one another. Such relations, being logical, arise only from the compounding of elementary propositions by logical operators. As a consequence, there can be no inference to the "form of the body" which pictures the relations responsible for elementary propositions as excluding or entailing one another. But once we abandon Frege's assimilation of linguistic meaning to logical structure, we need no longer be stymied in our desire to understand the inferential powers of elementary sentences. We can provide a purely semantic account of their grammatical source by locating it within the sense structure of signs which are left as unanalyzed grammatical wholes within the *Tractatus* framework. We can thus explicate relations of sense opposition and sense containment on the basis of representations of decompositional structure.

On the proto-theory, the mystery about the source of inferential powers that cannot be attributed to surface grammar is solved in a way which leaves no mystery about how our knowledge of underlying senses can be legitimately inferred. Posits about the underlying

sense structure of logically elementary sentences are guided by a clear factual requirement to account for the semantic facts and the same methodological constraints which constrain theoretical inferences in science. As we saw, we stuck to semantic description as long as possible, departing from it only when continuing to stick to it would prevent us from accounting for facts about sense properties and relations. Thus we can claim that this way of taking the step from semantic description to semantic explanation, unlike the way Wittgenstein took in the *Tractatus* and like his solution in the *Philosophical Investigations*, leaves no mystery.[57]

13

We have used a form of ellipsis to justify the view that meaning is "hidden from us" because it is "something that lies *beneath* the surface . . . which we see when we look into the thing, and which analysis digs out," and this view is what Wittgenstein is perhaps at most pains to refute in the *Philosophical Investigations* (PI: 92). Wittgenstein's view that the structure and function of language is "something that already lies open to view and that becomes surveyable by a rearrangement" is central to his therapeutic conception of philosophy (PI: 92; 109). Therefore, the issue about ellipsis may well be the most important issue raised in deciding whether our line of argument can establish (I) or is blocked virtually at the outset.

The issue about ellipsis is whether it supports inferences to underlying linguistic structure. The assumption about ellipsis which supports these inferences is that the unelliptical form is semantically more fundamental than the elliptical because it spells out what is missing in the elliptical form. On this "directionality assumption," we infer that what is missing in the surface grammar of the elliptical form must be present in its underlying grammar since the elliptical and the unelliptical forms have the same meaning. This is the pattern of my inference to underlying semantic structure. I argued that what is missing in a syntactic form like "sister," which has the same meaning as the more fundamental, unelliptical "female sibling," must be present in the underlying semantics of the word. Wittgenstein wants to show that such inferences go wrong in assuming that the unelliptical form is more fundamental.

Wittgenstein's interlocutor, assuming that elliptical forms omit information that is present in their unelliptical counterparts, feels there is a problem about the status of "Slab!" in PI section 2. The interlocutor believes that understanding this "shortened form" requires us to recognize its sense as the sense of the full sentence "Bring me a

slab." But the language in section 2 contains no such sentence to which "Slab!" can be related as its elliptical form and from which it can, in virtue of the relation, obtain complete sense as a builder's order to bring a slab. So the interlocutor thinks there is a problem about how "Slab!" can mean what it does mean in the imagined language of section 2. In contrast, Wittgenstein thinks that the interlocutor's inability to see how "Slab!" could be appropriately understood without the senses of the missing words "bring", "me", and "a" is due to the interlocutor's being in the grip of the picture of compositional meaning on which the meaning of the sentence must be put together from the meanings of its component words. Since "Slab!" is supposed to mean "Bring me a slab", the components of its meaning for which words are missing must somehow be supplied on the basis of its relation to the complete sentence.[58] Wittgenstein's aim is to loosen the grip of this picture by showing that the directionality assumption on which such an understanding of "Slab!" rests is problematic. To show this, he employs a symmetry argument: "But why should I not on the contrary have called the sentence 'Bring me a slab' a *lengthening* of the sentence 'Slab!'?"(PI: 19) By pressing this argument, he intends to show that no deep truths about language are to be discovered from ellipsis because elliptical expressions and their unelliptical counterparts are simply expressions with similar uses, one of which is shorter than the other (PI: 20).

Let us begin our examination of Wittgenstein's argument by setting out some standard cases of ellipsis. Webster's example of ellipsis is "virtues I admire" instead of "virtues which I admire". Other examples are "Helen eats at home and in fancy restaurants" instead of "Helen eats at home and Helen eats in fancy restaurants", and "Natasha plays chess better than Boris" instead of "Natasha plays chess better than Boris plays chess". Comparing such cases of ellipsis with the cases in Wittgenstein's discussion produces the surprising conclusion that Wittgenstein's example of "Slab!" and "Bring me a slab" is not a case of ellipsis at all. In genuine ellipsis, the elliptical form is synonymous with the unelliptical one. Indeed, without the synonymy of the two forms, it makes little sense to try to use ellipsis to ground inferences to underlying sense structure, since the inferences would depend on interpreting the longer form as explicitly presenting the sense that the two forms have in common. But "Slab!" is not synonymous with "Bring me a slab". No doubt, the former sentence can be used to make the same request (to bring a slab) as the latter, but the meaning of "Slab!" is less specific; so it can with equal naturalness be used to make requests that "Bring me a slab!" cannot make. For example, "Slab!" can be used to warn or alert. "Slab!" is as

close in meaning to "Watch out, a slab!" or "Lo, a slab" as it is to "Bring me a slab", although "Bring me a slab" is quite different in meaning from "Watch out, a slab" or "Lo, a slab". This contrasts dramatically with the example from Webster and the other examples of ellipsis.

What encourages the reader to take "Slab!" to be the elliptical form of "Bring me a slab!" is the focus in Wittgenstein's discussion on its use in the context of the building activities in PI section 2. Within this context, semantic equivalence between *sentences* is not distinguished from pragmatic equivalence between their *utterances*. The illocutionary equivalence of the utterances "Slab!" and "Bring me a slab!" in this context, together with the similarity in meaning of the sentences, makes the semantic relation between the sentences—if we think at all about the contrast between the sentences and their utterances—seem stronger than it is. Note that, as this diagnosis predicts, if we change the context, the illusion of sentential synonymy disappears. For example, in a context in which A and B are ducking falling stones, "Slab!" would more naturally be matched up with something like "Watch out, a slab!", or perhaps, "Watch out for the falling slab!" In a context where A and B are building a tall building with a notoriously clumsy co-worker, utterances of "Slab!" would be equivocal.

It is instructive to compare Wittgenstein's case with the imperative cases presented earlier. There is an obvious reason why "Slab!" exhibits the semantic slack that we just noted, but the imperatives "Dress!", "Salute!", and "Attack!" do not. The words "dress", "salute", and "attack" are verbs as well as nouns, and can, as a consequence, give rise to imperatives, but the word "slab" is just a noun and, hence, cannot give rise to an imperative.[59] Further, since "slab" is a noun, the word type has a semantics which leaves open what activity it is that is going on in connection with the slabs to which the tokens refer. The activity may be bringing them to the speaker, watching out for them, noticing them, etc. Insofar as the semantics of the type specifies nothing in this connection, the speech context carries the full burden of supplying the information that specifies the activity in question. This is why, as we just saw, the activity changes with changes in the context. In contrast, insofar as the word "dress" is a verb in the imperative form "Dress!" the activity in question is specified by the semantics of the word as that of putting on clothes. In standard uses of "Dress!" addressees do not have to figure out from the context what activity the speaker has requested of them. In such uses, the context does not carry the burden of supplying information that will specify the desired activity, but may carry an oppo-

site burden. The burden may be to supply information that cancels the activity specified in the meaning of the type, e.g., in a context where soldiers know to stay put when their captain shouts "Attack!" so as to make the enemy reveal their position.

Given these considerations, Wittgenstein's symmetry argument is seen to be based on an ill-chosen example. Even without further examination, it is clear that any arguments based on the example of "Slab!" and "Bring me a slab" can be dismissed as raising no serious objection to the use of genuine cases of ellipsis as a basis for inferring underlying grammatical structure.

But perhaps Wittgenstein's example is dispensable. To determine whether his arguments will work without the example, we should examine them on the basis of genuine short imperatives in place of "Slab!" We want to know whether there are reasons to think that the directionality assumption is true, or whether the assumption is arbitrary, as Wittgenstein claims. Are there solid reasons for saying that imperatives are reductions of longer forms, or can one say just as well that the longer forms are expansions of the shorter? (PI: 19)

As we saw above, there are reasons for taking short imperatives like "Clean yourself!" and "Dress!" to be reduced forms of an underlying sentential structure that contains a second-person subject. For example, unless we take such imperatives in this way, we cannot account for a wide range of syntactic facts about agreement, such as that "You dress!" and "Dress yourself (yourselves)!" are well-formed sentences, whereas "It (he, she) dress!" and "Dress itself (himself, herself, themselves)!" are not. If we suppose that the imperatives have an underlying syntactic structure something like

$$((\text{you})_{NP}\ ((\text{dress})_{V}\ (\text{you} + \text{self})_{NP})_{VP})_{S}$$

these facts about agreement follow immediately from the rule that a reflexive direct object agrees with the subject of its verb in number, gender, and case. The rule is independently required to distinguish syntactically well-formed sentences like "She dresses herself" and "She dresses herself all by herself" from syntactically ill-formed strings like "She dresses itself" and "She dresses herself all by itself". Further, the posit of an underlying structure with a second-person subject accounts for the existence of imperative forms like "You dress!" and their synonymy with forms like "Dress!". Still further, the posit accounts for the synonymy of sentences like "Dress, you naughty child!", "You dress, you naughty child!", and "You dress, you naughty child, you!", and also for the ill-formedness of corresponding cases where agreement is absent. Thus, besides accounting

for these particular facts, the posited underlying structure for short imperatives makes possible a full statement of the rule for English pronominal agreement.

Wittgenstein's symmetry argument is misleadingly formulated in another respect: it makes it seem as if the issue were adequately stated in terms of a single case like "Slab!". In fact, an adequate formulation requires that the issue be stated in terms of an infinite or open class of cases. If there were just a single item, or even a (small enough) closed class, it would be plausible to suppose that our use of it is simply a matter of the sort of training that Wittgenstein has in mind, say, as we may presume our use of the greeting "Hi!" is. My criticism is not that "slab" is syntactically simple. Certain syntactically complex signs, viz., idioms, might be understood on the basis of training which connects them directly with appropriate uses. My criticism is rather that genuine ellipsis occurs productively within an infinite or open class of cases. Instances of a particular case of ellipsis are found in the members of such a class of sentences. For example, our earlier example "Natasha plays chess better than Boris" and "Natasha plays chess better than Boris plays chess" is only one among an infinite or open class of pairs of sentences of the form 'NP_1 VP Aer than NP_2' and 'NP_1 VP Aer than NP_2 VP'. The problem is to account for the relation between the members of the pairs over the entire class. Thus, the problem is structural and, hence, sufficiently abstract to make the Wittgensteinian formulation misleading. An account of the speaker's mastery of the syntax and semantics of the pairs in such a class is an account of a mastery which permits the speaker to recognize the synonymy of any pair in the class, in particular, pairs he or she has never encountered before. Wittgenstein's formulation leaves this problem out of the picture.

There is a sense in which Wittgenstein is right to say there is no more reason to think that the short form is a shortening of the long than to say the long form is a lengthening of the short. Formal rules for ellipsis could be written relating short and long forms either by deletion operations that shorten long forms or by addition operations that lengthen short ones. But these formal options do not settle the substantive issue about directionality. There are two issues concerning directionality which are conflated in Wittgenstein's symmetry argument. One, which we have conceded, is the question of the direction in which the syntactic rules work, and the other, which is independent, is the question of the direction in which the semantic analysis goes. Although there may be symmetry as far as how the rules are written, we still can, and indeed must, say that certain of

the syntactic and semantic features of the short form can be analyzed as being those of the long. That is, the short form must have an underlying structure in which the syntactic and semantic features are part of its grammar. Since they are not part of its surface structure, if we don't say this, there will be nothing in the grammatical analysis of the short form to account for syntactic facts like agreement and semantic facts like synonymy. If, for example, there were no second-person subject in the grammar of "Dress!", it would be a mystery why the reflexive direct object is "yourself" or "yourselves" rather than "itself", "myself", or "themselves". Similarly, it would be a mystery why "Dress!" is synonymous with "You dress!" or why "Natasha plays chess better than Boris" is synonymous with "Natasha plays chess better than Boris plays chess" rather than, say, "Natasha plays chess better than Boris sings folk songs". The issue of whether the long form explicitly marks the semantically significant structure of both forms does not depend on whether surface elliptical expressions are thought of as the beginning of a process of lengthening or the end of a process of shortening.

14

Given that Wittgenstein's interlocutor is saddled with a spurious example of ellipsis and a spurious commitment to defending the wrong directionality claim, it is no wonder the poor soul is driven to psychology. Once it appears clear that no case for process directionality can be made on the basis of similarity of sense and difference of length, psychology comes to seem the only recourse. When Wittgenstein presses his symmetry argument, the interlocutor replies, "Because if you shout 'Slab!' you really mean: 'Bring me a slab'". At this point, the interlocutor is in real trouble. Wittgenstein easily shows that this appeal to psychology cannot justify the directionality claim either because the appeal presupposes the intended directionality or else because it raises considerations that are merely epiphenomenal. Wittgenstein asks:

> But how do you do this: how do you *mean that* while you *say* "Slab!" Do you say the unshortened sentence to yourself? And why should I translate the call "Slab!" into a different expression in order to say what someone means by it? And if they mean the same thing—why should I not say: "When he says 'Slab!', he means 'Slab!'"? (PI: 19)

Since one does not introspect a saying of the longer sentence as part of the mental preparation for uttering the shorter sentence, either no

such internal saying occurs or it occurs unconsciously. But neither of these alternatives can justify the claim that the speaker means the longer sentence in uttering the shorter one. The interlocutor's claim thus comes down to nothing more than that we use the longer form to say what someone means by the shorter. Wittgenstein delivers the devastating response: ". . . if they mean the same thing—why should I not say: "When he says 'Slab!', he means 'Slab!'?" (PI: 19) Hence, the appeal to psychology has come full circle, and the interlocutor is back at the original point where justification was called for. But, not having learned the lesson that the mental does not provide the needed justification, the interlocutor continues with more psychology: ". . . when I call 'Slab!', then what I want is, *that he should bring me a slab!*" (PI: 19). This, of course, fares no better than previous appeals to psychology. Wittgenstein replies: "Certainly, but does 'wanting this' consist in thinking in some form or other a different sentence from the one you utter?" (PI: 19)

Having shown that the proto-theory can rest on facts about ellipsis without being vulnerable to Wittgenstein's arguments here, we do not at this point need to take the plunge into psychologism along with the interlocutor. I will continue to defend the proto-theory without appealing to the mental. I agree with Wittgenstein that turning to the subjective to try to answer objective grammatical questions is hopeless because mental phenomena (e.g., images) are conceptually distinct from grammatical phenomena; hence, once there is a shift to the mental, accounts of the grammatical are no longer about the grammatical. In this respect, both our positions echo Frege's anti-psychologism in logic, though, of course, they diverge on the question of what ought to replace appeals to the mental.

Siding with Wittgenstein against psychologism has the same advantage for my line of argument as siding with him against programs to perfect natural languages, namely, it guides the proto-theory safely around some of the most forceful arguments in his critique of theories of meaning and, hence, takes my line of argument in this chapter a step closer to showing that there is a theory of meaning that escapes all Wittgenstein's criticisms. Accordingly, I add (4) as a further thesis of the proto-theory:

> (4) Questions about a language are about the grammatical structure of sentences, nothing more. Grammatical structure is neither constructed out of nor dependent upon mental states or mental events, conscious or unconscious, actual or idealized. Grammar is autonomous: grammars are not about speakers; they are simply about grammar.

Thesis 4 doesn't say what languages and sentences are. In later chapters, I will develop a realist position on which a language is a collection of sentences and sentences are abstract objects.[60] But I want to make clear at this point that neither (4) nor any of my replies to Wittgenstein's criticisms of theories of meaning depends on linguistic realism. The overall argument of this book proceeds the other way around. It tries to vindicate a theory of meaning without prejudging its ontological interpretation and then tries to support linguistic realism as the best interpretation for the theory. Therefore, it is necessary for there to be no assertion of linguistic realism until the arguments to vindicate the proto-theory are complete. And for Wittgenstein the parallel obligation is clear: to keep his linguistic naturalism out of the picture until the arguments for his account of meaning are complete. For one of his prime objectives in criticizing theories of meaning is to motivate a conception of meaning that will serve as a basis for attacking realism in the philosophy of logic and mathematics.[61]

15

At the beginning of PI section 20, Wittgenstein raises the possibility that someone might use "Bring me a slab" as a one-word command. He proposes that we mean it as a four-word sentence when we contrast it with other sentences like "*Hand* me a slab", "Bring *him* a slab", and "Bring *two* slabs". Having taken the plunge into psychologism, the interlocutor is likely to explain what it is to use a sentence in contrast with others by saying that "the others . . . hover before one's mind." Continuing his criticism of the interlocutor's psychologism, Wittgenstein challenges this explanation, rejecting the idea that such introspectable objects are present and making the comparison between our understanding of "Bring me a slab" and a foreigner's to show that its status as a four-word sentence depends on the fact that "*our language* contains the possibility of those other sentences." We can agree: it is linguistic possibility rather than psychological possibility that counts.

On our "top-down" approach, such contrastive use is use of tokens of sentences in accord with the grammatical structure of types in the language. The speaker's understanding of the meaning of sentence types is based on a knowledge of the meanings of their component words and of how those meanings combine with one another in relation to the syntax of the expressions. On the "top-down" approach, then, contrasts like those in the examples come from the potential for variation in the compositional process, that is, its potential to pro-

duce, with the change of a word, the different meanings of "Hand me a slab", "Bring him a slab", "Bring two slabs", and "Bring me a slab". Indeed, the fact that the differences in meaning among the members of such sets of sentences are solely a function of the differences in the meaning of the contrastive words is typical of the evidence adduced for the claim that the meaning of a sentence is a compositional function of the meanings of its syntactic parts.

Two theses about compositionality can be distinguished. One is a psychological thesis about the understanding of sentences, and the other is a nonpsychological thesis about sentences themselves. The former says, in effect, that the subjective processes whereby the mind calculates, or in some fashion determines, an inner representation of the meaning of a sentence are processes that work compositionally on inner representations of the meanings of its constituents. The latter, in contrast, says that the meaning of a sentence is a function of the meaning of its constituents and their syntactic relations. The former is about people—in particular, the psychological conditions for their understanding utterances or inscriptions in a language—whereas the latter is about languages—in particular, the grammatical structure of their sentence types. Conflation of these theses can make it seem as if some of Wittgenstein's arguments tell against compositionality *per se*, when, in fact, they tell only against a use of the understandability thesis.

Wittgenstein is surely right to deny that a *sentence* is elliptical "because it leaves out something that we think when we utter it" (PI: 20). Again, I side with Wittgenstein against psychologism. On the proto-theory, a sentence is elliptical in virtue of its grammatical structure, and this structure is a matter of both syntactic form and compositional meaning.

Wittgenstein anticipates the objection that it will be granted that elliptical and unelliptical forms have the same sense. If this were granted, it would then be granted that the former "leaves out" something that is verbally expressed in the latter. But Wittgenstein does not grant that the two forms are the same in sense. He reminds us that sameness of sense consists in sameness of use, leaving it for the reader to see that elliptical and unelliptical forms do not have the same use. Whatever one thinks of this reply with respect to the position Wittgenstein takes himself to be rebutting, it does not rebut the position on sense expressed in the proto-theory, because nothing up to this juncture in the *Philosophical Investigations* provides an argument against (2) and (2′) and for Wittgenstein's position that sameness of sense consists in sameness of use.

16

This section digresses from the examination of Wittgenstein's critique of theories of meaning to defend the distinction between questions of grammar and questions of understanding against Michael Dummett's highly influential criticisms. These criticisms need to be addressed because, as the result of them, there is a tendency to think that it is pointless to distinguish the two types of questions because no theory of meaning that is not at the same time a theory understanding can be acceptable. Dummett writes:

> . . . we may substitute for an enquiry into the nature of meaning one into the nature of significance (meaningfulness) or of synonymy (sameness of meaning). Neither type of enquiry is, however, likely to lead to a satisfactory account of meaning as we intuitively apprehend this notion. Rather, the complex phrase on which attention needs to be concentrated is 'knowing the meaning of . . .': a theory of meaning is a theory of *understanding*.[62]

Before looking at Dummett's development of this line of thinking, it is important to reveal the straw-man character of the position Dummett sets up as the rival position. It is set up by the use of two tactics. The first is what might be called a "divide and conquer" tactic. Dummett divides inquiry into the nature of meaning into an inquiry into meaningfulness on the one hand and, on the other, an inquiry into sameness of meaning, proceeding then to judge them independently. To appreciate the peculiarity of the division, we have only to contemplate essentially the same division in other areas, for example, dividing inquiry into the nature of logical implication into an inquiry into logical significance (having logical consequences) and an inquiry into logical equivalence (sameness of logical consequences), or dividing inquiry into the nature of pronunciation into an inquiry into pronounceability and an inquiry into sameness of pronunciation. It clearly makes no sense to separate the natural parts of logical and phonological inquiry and judge the success of the artificially separated parts independently. Why then think that it makes sense to separate the natural parts of semantic inquiry and judge them separately?

The tactic of separating inquiry into 'having a meaning' and 'having the same meaning' works in tandem with another less explicit tactic for promoting the view that semantic inquiry unbolstered by being made part of an inquiry into understanding does not shed much light on our intuitive notion of meaning. The second tactic is to focus on 'having a meaning' and 'having the same meaning' to the exclusion

of all other aspects of the notion of meaning, such as 'having multiple meanings', 'having redundant meaning', 'having opposed meanings', 'having superordinate meaning', 'having analytic meaning', and so on. This exclusion makes the inquiry Dummett is criticizing appear far too narrow and inconsequential ever to give a satisfactory account of our intuitive notion of meaning. But what inquiry wouldn't look unsatisfactory after having been fragmented and narrowed in such a way?

It is interesting to note that the approach this chapter takes to developing a theory of meaning is the very reverse of Dummett's two tactics. The chapter tries to collect all the aspects of the notion of meaning together in order to obtain a comprehensive picture of the aims of inquiry into an autonomous notion of meaning. The result is the notion of meaning in (1)–(4). An inquiry with the aims specified in (1)–(4) is clearly not so narrow and inconsequential that it can be dismissed out of hand as not "likely to lead to a satisfactory account of meaning as we intuitively apprehend this notion." Only by formulating the aims of inquiry into an autonomous notion of meaning in a way that incompletely comprehends those aims is Dummett able to make the inquiry seem unlikely to provide "a satisfactory account of the notion of meaning that we intuitively apprehend."

Since it no longer appears obvious that such an inquiry cannot explicate our intuitive notion of meaning, Dummett owes us a reason for thinking that an account of grammatical meaning independent of an account of the knowledge required for understanding meaning is unacceptable. In a more recent publication, he tries to provide such a reason:

> . . . if it were possible to give an account of, for example, when two expressions have the same meaning, which did not overtly rely on an account of what it was to know the meaning of an expression, then it would not be possible to derive an account of knowledge of meaning from it. There is, indeed, good reason to suppose it impossible to give an account of synonymy save via an account of understanding, since it is a requirement on the former that whoever knows the meanings of two synonymous expressions must also know that they are synonymous: but I am saying merely that, if such an account of synonymy were possible, there would be no route from it to an account of understanding.[63]

This is hardly better than no reason at all. The first sentence is virtually a tautology. Further, the "good reason" with which we are presented is irrelevant to the issue of whether an account of synonymy

can be given save via an account of understanding. The requirement is, and is explicitly presented as, a requirement on a theory of sentence understanding. No reason is given to think that a requirement on a theory of sentence understanding is or implies a requirement on a theory of sentence meaning. Hence, to claim, as Dummett does, that the requirement is a requirement on an account of synonymy is merely to reassert, this time in the idiom of requirements, the original claim that a theory of meaning is a theory of understanding.

It is, of course, quite true, as Dummett says, that, if an account of synonymy were to be formulated apart from an account of understanding, "there would be no route from it to an account of understanding." But so what? This is exactly what we should expect on the view that grammar is autonomous. After all, there is no route from an account of syntax to an account of the understanding of syntax, or from an account of the calculus to an account of the understanding of the calculus. True enough, we are also curious about what our understanding of meaning consists in. But Dummett gives no reason to think that the route to satisfying that curiosity is what he thinks it is instead of proceeding on the basis of an already developed independent account of autonomous meaning. Many approaches to an account of understanding syntactic structure proceed on the basis of an already developed independent account of autonomous syntax.[64]

Once we entertain the possibility of a "top-down" approach, we can conceive of an order of things in which we first develop a theory of the syntactic or semantic structure of sentence types and then develop a theory of the production and understanding of their tokens on the basis of the first theory. At this point, it is clear that an argument against autonomous theories of meaning cannot succeed if it fails to consider the possibility of a "top-down" approach. It is even plausible that this is the natural order of things, since it is plausible to think that we have to discover what is understood before we can discover how it is understood.

17

At the beginning of PI section 21, Wittgenstein raises the question "Now what is the difference between the report or statement 'Five slabs' and the order 'Five slabs!'?" In raising this question, he sets out to criticize positions on sentence meaning which explain the differences between such sentences in terms of contrasting assertive, requestive, etc. elements in the underlying semantic content of the sentences. The immediate target of this criticism seems to be the position Frege expresses in this passage:

> An interrogative sentence and an indicative one contain the same thought; but the indicative contains something else as well, namely, the assertion. The interrogative sentence contains something more, too, namely, a request. Therefore, two things must be distinguished in an indicative sentence, the content, which it has in common with the corresponding sentence-question, and the assertion.[65]

The opposition is between Frege's claim that the difference between such sentences has to do with components of their senses and Wittgenstein's claim that the difference is a matter of "the part which uttering these words plays in the language-game" (PI: 21). In section 21 and subsequent sections, Wittgenstein develops a criticism of Frege's position on sentence meaning which parallels his criticism of Augustine's position on word meaning. Just as Augustine is criticized for ignoring differences in kinds of words, so Frege is criticized for ignoring differences among "countless" kinds of sentences. Wittgenstein thinks that the Fregean position cannot, in principle, do justice to the limitless variety among the different things speakers use language to do (PI: 23). This is an important criticism in the *Philosophical Investigations*. It continues the attack on hidden sense, questions the calculus model of language, and constitutes a major step toward developing an alternative to Frege's conception of sentence meaning.

Although the notion of sense in the proto-theory differs considerably from Frege's, the proto-theory also claims that sentence meaning contains an illocutionary component. Indeed, the theory is committed to such a claim. As indicated, the proto-theory has to acknowledge sense components whenever they are required for an account of sense properties and relations. Given the differences in sense among sentences like "Enough wine will be bought for the party", "Will enough wine be bought for the party?", and "Buy enough wine for the party!", the proto-theory is committed to their senses' containing the appropriately different illocutionary sense components required to account for their nonsynonymy. Therefore, we are obliged to show that Wittgenstein's criticisms do not work against the proto-theory's conception of sentence meaning.

Wittgenstein first observes that intonational and similar features do not distinguish reports and statements from orders and commands. He then points out that we use "Isn't the weather glorious today?" with interrogative intonation to make a statement about how glorious the weather is (PI: 21). This is supposed to show that differences in application correlate with differences in meaning and, hence, that application of signs, rather than alleged senses, is what counts seman-

tically. Now this sort of argument may have force against Frege's position on sentence meaning, as formulated within his overall semantics, but it doesn't work against the proto-theory. To appreciate the reason, it is important to see that issues between one "top-down" approach and another "top-down" approach can sometimes be as significant for philosophical questions as those between such approaches and "bottom-up" approaches. Before evaluating the arguments in PI section 21, I want to look at some of the differences between Frege's approach and the approach I have taken.

In ordinary parlance, we talk about senses of types and about senses of tokens—though we may not talk about them in just those terms. For example, we refer to a sense of a type when we explain what such-and-such an English sentence means, and we refer to a sense of a token when we explain what so-and-so's remark means. The question thus arises whether we are referring to different things which both happen to go under the name "sense" or to the same thing which happens to be associated with different linguistic objects. The unattractiveness of the former dualism makes it attractive to say that senses are just one kind of thing—associated in the one case with types and in the other with tokens. So, suppose we choose this monism. The next thing that has to be decided is which kind of thing senses are, something abstract like types or something concrete like tokens, that is, which association of senses with objects is basic and which derivative. The options are a "bottom-up" approach, which takes the assignment to go from senses of tokens to senses of types, and a "top-down" approach, which takes it the other way around, that is, from senses of types to senses of tokens.

Empiricists prefer the "bottom-up" approach, rationalists the "top-down" approach (see chapter 8). Because rationalists see no way of understanding senses and sentence types as arising from the context of linguistic tokens, they understand senses and sentence types to be *sui generis* and understand the use of sentence tokens to derive from the speaker's knowledge of sentence structure. Frege's semantics and ours, being rationalist, thus have this much in common, but they begin to diverge once their rationalism no longer dictates their position on semantic issues. The first question within a "top-down" approach is how to explain the way linguistic tokens come to have the senses of linguistic types. Frege's answer is that sense determines reference: information in the sense of an expression identifies its referent(s).[66] If we couple this view with Frege's view that the elements of assertion and request are part of the sense of sentences, then he seems committed to claiming not only that "wine" refers to wine and "the party" refers to the party, but also that "Enough wine will be bought for

the party" makes a statement and "Will enough wine be bought for the party?" makes a request. But, then, Wittgenstein's example of the sentence "Isn't the weather glorious today?"—which can be used and, in fact, standardly is used, to make a statement—is a counter-example to Frege's semantics.

But this sound criticism of Fregean intensionalism does not apply to all intensionalist theories taking a "top-down" approach. This is because the Fregean answer to the question of how linguistic tokens come to have the senses of linguistic types is not the only answer available within a "top-down" approach. "Top-down" implies that tokens obtain their syntactic character from syntactic types and their semantic character from senses of syntactic types; it does not imply that the relation under which they do so has to be as strong as determination. Intensionalists can formulate their "top-down" approach in terms of a weaker relation between the sense of types and the sense and reference of their tokens. Once this fact is recognized, it is clear that the difficulty that Wittgenstein's criticism raises is not a difficulty for the view that the sense of a sentence contains an illocutionary component, but is a difficulty only for "top-down" approaches that adopt too strong a relation between the sense and reference of tokens and the sense of types.

A number of philosophers mistakenly equated intensionalism with Fregean intensionalism, and, as a consequence, we have seen many "refutations" of intensionalism based on arguments like Wittgenstein's. I will examine some of them in chapter 6. Here I want to probe further by asking why the equation has seemed so straightforward, why the possibility of relations weaker than determination is never considered. I believe it is because Frege's notion of sense, which entails determination, is seen as the only notion that intensionalists have available to them.

Frege defined the sense of an expression as that which contains the mode of determination of its reference.[67] Senses thus provide identifying information necessary to fix their extension. This is not the only definition of sense open to intensionalists. There is at least the alternative definition on which the proto-theory is based, namely that sense is that aspect of the grammatical structure of an expression in virtue of which it has properties and relations like synonymy, antonymy, ambiguity, meaningfulness, meaninglessness, and redundancy. The critical difference between these definitions is that Frege's specifies sense in terms of reference, thereby making sense a derivative notion whose entire *raison d'être* is that it is the source of reference-fixing information. In contrast, our definition specifies sense in terms of an aspect of the grammatical structure of sentences,

thereby making sense independent of reference and purely internal to the language. Therefore, on our definition, it is possible to have a weaker relation between sense and reference than Frege's without undercutting the *raison d'être* for the notion of sense.[68]

I will sketch a weaker relation than Frege's determination, which I will call "mediation."[69] Then I will explain how a "top-down" approach based on the idea that sense mediates reference can maintain that the meaning of sentences contains an illocutionary component and yet not be subject to criticisms like Wittgenstein's criticism in PI section 21.

The effect of abandoning the strong relation of determination, while retaining the monism that holds that senses of utterances are not some new things over and above the senses of sentences, is simply to rule out the invariable identification of the meaning of a linguistic token with the meaning of the linguistic type of which it is a token. It allows for cases in which the meaning of an utterance departs, even perhaps radically, from the meaning of its type. But abandoning determination does not abandon the "top-down" approach, because the meaning of an utterance in such cases can be identified with the meaning of a linguistic type other than that of which the utterance is a token. Of course, in such cases, the identification cannot be based solely on the information in the sense structure of the linguistic type—but making room for extragrammatical information is one of the aims of abandoning determination. Thus it is open to us to give an explanation of why the meaning of an utterance of the sentence "Everybody is coming to our party" is the meaning of a sentence type like "Everybody in our circle of friends is coming to our party", which is different from the explanation we give of why the meaning of an utterance of "Two plus two equals four" is just the meaning of the sentence type of which it is an utterance.

The move from determination to mediation gives us the option of saying that the sense of an utterance or inscription is the sense of some sentence other than that of which it is a token, providing we change the explanation from a purely grammatical one to one that involves extragrammatical information. To put the point another way, the *grammatical principles* that correlate senses with sentence types in the language do not also correlate senses with sentence tokens in language use; therefore, there seems to be another set of principles that correlate utterances and inscriptions with senses. For obvious reasons, I will call these *pragmatic principles*. The "top-down" approach is, then, a conception of pragmatic principles which assumes that grammatical principles play a mediating role in correlating senses

with utterances and inscriptions. The proto-theory and the "top-down" approach thus belong to different domains.

Some philosophers have argued that the linguist's notion of sense cannot be identified with the divergent contextual senses associated with uses of indexical words such as "today" and "yesterday". If this were so, we could not construct a theory of meaning within linguistics with substantial philosophical implications for the issues raised in the *Philosophical Investigations*. Tyler Burge, for example, sees an incommensurability between the linguist's meanings, which are "each governed by a single linguistic rule and have a single context-free dictionary entry," and Frege's idea that the "sense expressed in an indexical utterance *can* be the same as that expressed in another utterance with a different meaning. Thus, 'yesterday' and 'today', used in appropriately different contexts, can be employed to express the same sense. Here sense remains constant while meaning shifts."[70] Given a non-Fregean "top-down" approach, it is clear that such shifts can be accommodated as well by assigning meanings of sentence types to sentence tokens on the basis of pragmatic principles as by separating linguistic meaning from utterance meaning. Surely "John got toys today" said on Christmas Day and "John got toys yesterday" said the day after can both have the sense of the sentence "John got toys on Christmas Day". Burge's argument for the incommensurability between linguistic meaning and utterance meaning overlooks the conceptions of grammar and pragmatics which a non-Fregean "top-down" approach makes available.

One final point. In addition to explaining the basis on which meanings of linguistic types are assigned to linguistic tokens in contexts, pragmatic principles must specify the basis on which reference is assigned to utterances in contexts. They must account for how, beyond grammar, the reference of utterances depends on extralinguistic factors, such as the beliefs of speakers, information from the context, etc. Such factors are responsible for the departure of the sense and reference of tokens from the sense and reference of types; hence, they are what prevent sense from determining reference. Our "top-down" approach claims that *sense mediates reference*, meaning by this that the senses of expression types are necessary, in a way to be explained, to determine the senses and reference of their tokens.[71]

Let us return to Wittgenstein's example "Isn't the weather glorious today?". We have to explain how, on our non-Fregean "top-down" approach, the sentence itself can be a question, while utterances of it, as Wittgenstein rightly says, can be statements. The explanation has to be sufficiently general to apply to other examples, such as

Wittgenstein's case of "You will do this" which functions sometimes as a prophecy and sometimes as a command (PI: 21).

The following six things may be distinguished:

(i) the illocutionary act of making a statement, making a request, etc.
(ii) the statement, request, etc. made in the act
(iii) the utterance, inscription, etc. used to make the statement, request, etc.
(iv) the sentence of the language of which the utterance is a token
(v) the sense of the sentence of the language
(vi) the sense of the utterance in the context.

Since from our perspective (i)–(iii) and (vi) are matters of pragmatics, whereas (iv) and (v) are matters of grammar, different sorts of considerations are involved in determining the character of the English sentence "Isn't the weather glorious today?" and in determining the character of its utterances and what they are used to do. Considerations that enter into categorizing the sentence as an interrogative or question are grammatical features such as the inversion of subject and auxiliary and the contour indicated by the question mark. Considerations that enter into categorizing utterances of it as making the statement that the weather is glorious are pragmatic features such as that, in the context, the weather is so obviously glorious that no one with normal vision could need to be told. Similarly, considerations that enter into categorizing "You will do this" as a declarative sentence expressing something about the addressee's future behavior are the absence of inversion, the presence of the future modal, and a verb phrase appropriate to indicating an action, whereas considerations that enter into categorizing utterances of it as a prophecy or command are such things as whether they come out of the mouth of a fortuneteller or a master sergeant.

Thus, from our perspective, the proper answer to Wittgenstein's question of what makes someone's *utterance* of "You will do this" a prophecy or a command is, as Wittgenstein implies, the use. But this answer is completely compatible with the claim that the sentence itself has a sense, part of which is an assertion and part of which is a content expressing what is asserted as a future act of an unspecified kind. The sense of the sentence does not have to contain a command for us to account for the fact that an utterance of it is a command. In the mouth of the master sergeant, the utterance of the assertive proposition is understood by the soldiers as conveying the message that

the prediction about their future behavior is one they had better make true. Indeed, it is the fact that the sentence is simply an assertion that helps to give this use its peculiar force of an order backed up by higher authority.

The sentence "Isn't the weather glorious today?" is an interrogative with a sense containing both a requestive element and a component that specifies what is requested as an answer to the query about the weather. It is not necessary for the sense of the interrogative to actually contain an assertive element for its utterances to make the statements it makes. The utterances can be pragmatically correlated with the sense of an assertive sentence like "The weather is certainly glorious today!". To make the correlation, all that is necessary beyond knowledge of the meaning of the sentences is knowledge of the context of the utterance of the interrogative. Presumably, the members of the audience know that the speaker who has said "Isn't the weather glorious today?" can see perfectly well that the weather is truly glorious, and can see that they see it is, and hence, they have the choice of taking him or her to be asking a pointless question or to be stating that the weather is glorious in a way that expresses evident pleasure in that fact. Because there is no reason to impose an unflattering interpretation and because they know that the speaker can reasonably be taken to have anticipated their working out his or her intention to express pleasure in the day, the members of the audience recognize the speaker's intent to use the utterance with the sense of a sentence like "The weather is certainly glorious today!".[72]

Whether or not this explanation is right (nothing hangs on it in particular being correct), the explanation has to be pragmatic, since some utterances of "Isn't the weather glorious today?" have the erotetic sense that this sentence has in the language. A blind person, after being told a lot about how glorious the weather is, then hears something suggesting the opposite, and asks "Isn't the weather glorious today?" to confirm or disconfirm what he or she has been told.

Wittgenstein is right in saying that use is what determines the sense of an utterance, but this, as we may now conclude, does not show that it is wrong to claim that the meaning of sentences contains an illocutionary element. There is no implication about how the senses of sentences should be understood, because not all "top-down" approaches restrict the meaning of an utterance to the meaning of the type of which it is a token. Those approaches based on a mediation relation allow selection from the entire range of grammatically determined sentence meanings.[73]

18

In section 22, Wittgenstein explicitly criticizes Frege's conception of the meaning of an assertive sentence as containing an assertion in addition to a content. Denying that an assertive sentence contains an assertive element and an assumption, Wittgenstein writes:

> Frege's idea . . . really rests on the possibility found in our language of writing every statement in the form: "It is asserted that such-and-such is the case."—But "that such-and-such is the case" is *not* a sentence in our language—so far it is not a *move* in the language-game. And if I write, not "It is asserted that . . .", but "It is asserted: such-and-such is the case", the words "It is asserted" simply become superfluous.
>
> We might very well also write every statement in the form of a question followed by a "Yes" . . .
>
> Of course, we have a right to use an assertion sign in contrast to a question-mark . . . It is only a mistake if one thinks that the assertion consists of two actions, entertaining and asserting . . . , and that in performing these actions we are following the propositional sign roughly as we sing from the musical score. (PI: 22)

There are three arguments here. The first attempts to show that a Fregean conception of the sense of assertive sentences is either incoherent or superfluous. If the verbal expression of the assumption is just a clause, how can it play the independent inferential role that this conception would have it play? But if it is a full sentence, doesn't the original assertive element become superfluous? Frege might deny that his conception rests on the possibility of expressing *Begriffsschrift* analyses in suitable natural-language paraphrases, arguing that the absence of an appropriate paraphrase is just the sort of imperfection that makes construction of an ideal language necessary. There is no point in taking a position here.[74] Even if the reply blocks this argument, it is unavailable to us because we have forsworn Frege's view concerning natural and ideal languages.

Our position must be that the assertive element of indicative sentences like "Snow is white" is part of their underlying grammatical structure, an element which does not appear in their surface structure in virtue of one of the two kinds of ellipsis, either the syntactic kind in which an underlying syntactic form containing a particular constituent has a surface form not containing it or the semantic kind in which a syntactically simple form masks a semantically complex one.[75] On the assumption that there is some form of ellipsis that conceals the assertive element, Wittgenstein is correct to say that spelling

out the underlying assertive element produces a sentence in which the constituent expressing the underlying assertive element is superfluous. But why should its superfluousness bother us? It can be taken as showing nothing more than that the missing constituent in some cases of ellipsis cannot itself be realized in surface structure—in the way the second-person subject of "Help them!" can be realized in "You help them!"—so that, when the content of the underlying structure is independently inserted in surface structure, there is semantic duplication.

Rather than an argument against the presence of an underlying assertive element, the superfluousness of "It is asserted that" in the rewritten form in Wittgenstein's example is evidence *for* the presence of an underlying assertive element. "Superfluousness" is just another name for redundancy, which, as we have seen, is one of the sense properties and relations that provide evidence for sense structure. Wittgenstein's case is no different from that of rewriting "John is a bachelor" in the form "John is a bachelor: he is an unmarried man", where the redundancy of the latter, spelled-out form is evidence for the existence of the concepts 'unmarried' and 'man' in the decompositional structure of the sense of "bachelor". The redundancy of the rewritten forms shows them to have the same meaning as their corresponding unrewritten forms; hence, this feature testifies to the existence of the missing element in the unrewritten forms. Since the superfluousness of sentence tokens in the rewritten sentences supports the view that there is an assertive element in the underlying sense structure of assertive sentence types, Wittgenstein's first argument backfires.[76]

The second of Wittgenstein's arguments in the above quotation is an adaptation of his earlier symmetry argument, deployed here to provide a *reductio* of the Fregean view of sentence meaning. Wittgenstein asks whether the fact that we can write the statement "It is raining" in the form "Is it raining? Yes!" shows that the statement contains a question. Our answer is No. The sentence "Natasha plays chess better than Boris" has an underlying form containing the structure "Boris plays chess" because the sentence has the same sense as "Natasha plays chess better than Boris plays chess". But the rewritten form of "Is it raining? Yes!" does not have the same sense as "It is raining". True enough, "Is it raining? Yes!" gives us the same information as "It is raining", in some sense of 'information', but the interrogative form isn't synonymous with "It is raining". The sentence "If the tree were five feet taller, it would be ten feet tall" is informationally equivalent to "The tree is five feet tall", but it is not synonymous with it. The grammatical structure of neither spelled-out

form is a basis for inferring the grammatical structure of its informationally equivalent form. "Is it raining? Yes!" is not a basis for inferring that the sentence "It is raining" contains an interrogative component expressing a question, any more than "If the tree were five feet taller, it would be ten feet tall" is a basis for inferring that "The tree is five feet tall" contains a subjunctive component expressing a counterfactual. (Note also that the properties of the two forms differ; e.g., the simple indicative sentence cannot give rise to the response that the speaker has answered his or her own question.) Since synonymy, but not informational equivalence, justifies us in saying that everything that is part of the sense of one sentence is part of the sense of the other, Wittgenstein's second argument doesn't work.

The third argument is irrelevant to the proto-theory's Fregean view of the sense structure of assertive sentences, because the proto-theory, being a theory about sentence types, concerns only (iv) and (v). It takes no stand on whether asserting consists of two actions or one, or on whether, in asserting, we follow a concept notation in the way we sing from a score. Of course, the broader framework of the "top-down" approach concerns (i)–(iii) and (vi), and must at some point address itself to the nature of illocutionary acts themselves. But it is hard to see that this approach makes any "mistake." The approach has a large range of options open to it, not all of which are modeled on singing from a musical score. Moreover, it is not completely clear what the specific mistake is. If it is one of the "mistakes" that the two previous arguments concern, they have been dealt with. If the "mistake" is something else, more needs to be said to see what it is. Perhaps it is the mistake in psychologized accounts of following a rule. If so, it will be discussed at length in the next chapter.

19

In section 23, Wittgenstein follows up with considerations which are intended to show that Frege's proposal about assertive, erotetic, and requestive elements in sentence meaning cannot be carried through in the systematic way required to do justice to the full range of facts about the use of sentences. He writes:

> But how many different kinds of sentence are there? Say assertion, question, and command?—There are *countless* kinds: countless different kinds of use of what we call "symbols", "words", "sentences". And this multiplicity is not something fixed, given once and for all; but new types of language, new language-

> games, as we may say, come into existence, and others become obsolete and get forgotten. (PI: 23)

From the standpoint of the confrontation I am orchestrating between Wittgenstein's critique of theories of meaning and the proto-theory, this argument fallaciously slides from "kinds of sentence" to "kinds of use." If it were being used as an argument against a notion of kinds of sentence based on a "bottom-up" approach or, what amounts to the same thing, if Wittgenstein had already shown that there is no locus for semantic categories within the grammatical structure of sentences types, there would be nothing wrong with the slide from kinds of sentence to kinds of use. Then the variety of kinds found among sentences would be determined by the variety of uses found among utterances. But this step in the argument is not legitimate when applied to the proto-theory, in which kinds of sentence are determined autonomously, and the "top-down" approach, which, as we have seen, maps sentence kinds one-many onto kinds of use.

We may concede Wittgenstein's claim that there is no possibility of exhaustively enumerating the "countless different kinds of use" (of "sentences" in the token sense in which Wittgenstein employs the term) without thereby causing any trouble for our claim that, in principle, an exhaustive enumeration of the kinds of sentence (in the type sense of the term) can be given. From the perspective of our "top-down" approach, what holds for classifying utterances, which are, in part, the product of pragmatic factors that go far beyond the structure of sentences, does not hold in general for classifying sentences of a language. Thus, the "countless different kinds of use" to which Wittgenstein refers arise from extragrammatical features of contexts, such as the aims, purposes, and intentions of speaker and audience. These introduce a taxonomy for use whose categories go well beyond those found in the grammatical taxonomy for sentences of the language.

Furthermore, I do not dispute the claim that "the *speaking* of a language is part of an activity, or a form of life" (PI: 23). Speaking surely is an activity, and it can reasonably be said to take place within a form of life, but the speaking is not the language spoken. My approach distinguishes sharply between the speaking of a language and the language that is spoken, e.g., speaking English vs. English. It even goes further, distinguishing, contra Chomsky, between the knowledge that speakers exercise in speaking a language and the language that the knowledge is knowledge of, e.g., English competence vs. English.[77]

I am also not disputing Wittgenstein's claim that speech is creative in a way that outstrips efforts to catalogue its "*countless* kinds" (PI: 23). Once we distinguish language from speech, we are led directly to distinguishing the creativity in language from the creativity in speech, as, respectively, a creativity that is rule-governed and a creativity that is not. Once we make this distinction, we can see that conceding Wittgenstein's claim about the open-endedness of speech does not impugn our claim about a fixed catalogue of grammatical types and subtypes in the language.

The creativity of language is said to lie in the fact that the sentences of a language are so structured that, with finite linguistic knowledge, speakers can, in principle, produce or understand infinitely many of them and, hence, can, in principle, produce and understand sentences they encounter for the first time.[78] Such creativity is rule-governed: the sentences we encounter for the first time belong to the set of sentences whose structure is specified by the grammatical rules of the language. The creativity of language allows for a fixed catalogue of kinds because sentence and constituent types are given in terms of the abstract categories that appear in the construction of the rules. These kinds limit variety among sentences to what the rules countenance. In contrast, the creativity in speech, as Wittgenstein supposes, is not rule-governed. There are no rules for generating uses of language, speech acts, and language-games, and, hence, no fixed catalogue of types that limits the variety of what we can do with utterances and inscriptions. But acknowledging this creativity in speech does not undermine the claim that the creativity in language is strictly rule-governed.

In the preceding quotation, Wittgenstein speaks of assertion, question, and command as "different kinds of sentence." In the type sense, these are not kinds of sentence. Declarative, interrogative, imperative, hortative, etc. are kinds of sentence. The sentences "I see nothing", "I hereby promise to help", "I request you let me see them", and "I thank you for it" are all declaratives. Moreover, sentences of different syntactic kinds can have senses of the same kind, as do, for example, "I request that you let me see them" and "Let me see them". Accordingly, it seems plausible to say further that Wittgenstein's open-endedness claim, in virtue of being about uses of utterances, speech acts, and the like is *twice* removed from what the Fregean proposal in question is about, namely, kinds of senses of sentence types.

In PI section 23, Wittgenstein reviews a number of different kinds of uses of "symbols," "words," and "sentences." His examples show that the distinctions he is drawing are, for the most part, independent

of a classification of kinds of sentence types. For instance, he cites describing an appearance, giving something's measurements, reporting an event, etc. These are cases of use typically involving sentences of the same propositional type which differ in content: one might talk about a silver-blue color, another about a height of six feet, and still another about an explosion. The differences we recognize in the acts performed are a function not of the semantic kind of the sentence, but of differences in the descriptive content of the sentences and differences in the circumstances in which their utterances occur, e.g., indications that the speaker intends to impress us with the new car he or she has just ordered. To the extent that Wittgenstein's distinctions here turn on such factors—and by and large they do—they are independent of specifications of syntactic or semantic categories of sentence types; hence, the plethora to which the factors give rise cannot count against the proto-theory's fixed system of categories.

Wittgenstein remarks that "new types of language, new language games . . . come into existence, and others get forgotten" (PI: 23). It is easy to see how such novelty can occur without the addition of new sentence types or new senses. The familiar case of indirect speech acts is one illustration of this. In this case, a sentence with a sense of one kind is used to perform a speech act of another, as, for example, when a speaker makes the request to close the window by saying "The window is open" in circumstances where everyone will grasp the intention on the basis of seeing the pointlessness of the utterance on its literal sense. Here the utterance of "The window is open" receives the sense of the sentence "Close the window"; and so no sentence types or senses beyond those already in the language are required. Our "top-down" approach quite naturally accommodates accounts of the pragmatic reasoning in indirect speech acts.

A new vocabulary item can make performing certain kinds of speech act more convenient, but it is not required for their performance. Suppose that by the twenty-first century manners have declined to the point that people typically express formal disapproval for harms done to them in a manner parallel to the way we now thank people for benefits to us. Let us suppose the term "chank" has come into English as a performative verb on a par with "thank". It is not necessary that "chank" be in the language in order for the new language game of chanking to take place. Just as one can thank someone without the performative verb "thank", so one can chank someone without the performative verb "chank". Suppose that someone in the twenty-first century reads in a newspaper from today about a hostess saying to a departing guest, "I disapprove of your disgusting behavior at my dinner party". It would be accurate for the newspaper

reader to comment that that guest had been soundly chanked. Indeed, such cases of performing an illocutionary act without a specialized performative verb for the act are no different from making a statement using a constructed expression to compensate for an ordinary lexical gap. As noted, English today has no word meaning 'to die from lack of water' parallel to "starve", but no increase in the lexicon is required to express the fact that someone died from lack of water. Syntactic and semantic compositionality overcome lexical gaps in the language—though, of course, they may do so in a rather unwieldy way.[79]

The vocabulary of a natural language is inevitably incomplete. Despite the fact that each year hundreds of new words enter English, there is no way for its finite lexicon to mark morphologically the infinitely many senses that syntactic and semantic compositionality produce. But the existence of a word to express a sense is only an accidental feature of a language. English does not stop being English when forms disappear or when new forms appear. What is essential is not the presence or absence of vocabulary, but the syntactic and semantic categories and the relations among them. Wittgenstein says nothing here to show that such structures come and go in the way lexical items do.

20

We now come to another example of how successfully blocking Wittgenstein's criticisms up to one point strengthens our hand against his criticisms at a later point. In PI section 24, Wittgenstein takes himself to be in a position to argue against asking questions like "What is a question?" He bases the argument on "the multiplicity of language-games" which he has just illustrated and on the foolishness of answers like "I wish you would tell me such-and-such." Both of these points can be granted, but, since he has not established his claims relating to sense and use, Wittgenstein cannot draw the conclusion that it is a mistake to ask a question like "What is a question?"

Consider the first point. We can take "What is a question?" in the way Wittgenstein is taking it, as asking for a general definition that picks out the class of utterances that count as activities of questioning. Or we can take it as asking for a general definition that picks out the erotetic senses of sentences. If we take it in the first way, "the multiplicity of language-games" gives us formidable reasons for thinking the question may be wrongheaded. But, if we take in the second way, those reasons, as we have seen, have no such relevance. Hence, as

yet, there are no reasons for saying that the question on the construal appropriate to the proto-theory is wrongheaded.

Wittgenstein's second point, too, can be granted. No doubt, construing questions on the basis of such solipsistic glosses as "I wish you would tell me such-and-such" is foolish, but, on the proto-theory, there is no necessity to so construe them and no motivation to do so either, since the proto-theory is not a psychological theory.

21

Wittgenstein's overall critique of theories of meaning is an elaborate fabric of interconnecting arguments which support one another to give great strength to the fabric as a whole. But the weave of the fabric is such that certain connecting threads, such as the claims relating sense and use, are critical. If the responses I have made to Wittgenstein's arguments are correct, those connecting threads have not been knotted properly, and, as a consequence, the threads supported by them come loose, and the entire fabric unravels.

22

In PI section 26, Wittgenstein initiates a devastating critique of the account of names and related matters in the Augustinian picture of language, Russell's early philosophy, and his own *Tractatus*. To some extent, the critique continues earlier lines of criticism, particularly of the generalization that words are names of objects, but it introduces various new criticisms of assumptions of that account. This critique need not concern us, since the proto-theory rejects the Augustinian picture of language and language learning, the account of names and naming in question, and the appeals to psychology that Wittgenstein considers. The criticisms themselves are often ones a proponent of the proto-theory would naturally make. For example, consider Wittgenstein's criticism in section 39 of the thinking behind the view that names ought to denote simples, viz., that it uses "meaning" in a way which confuses "the meaning of a name with the *bearer* of the name" (PI: 40). This criticism is one that a proponent of the proto-theory could easily use against identifying the sense of a name with its reference.[80] It is not until the critique runs its course in section 45 that we come to arguments that apply to the proto-theory. The only section among these sections that conflicts with the proto-theory is section 43, but this contains no arguments.

Wittgenstein launches his attack on analysis and logical atomism in

section 46. The target is analysis as practiced by Frege, the author of the *Tractatus*, Russell, and Moore. But Wittgenstein's opposition to analysis is a facet of his broader opposition to philosophical theories purporting to reveal hidden truths about language: analysis is the technique for revealing such truths. Therefore, Wittgenstein's criticisms can be expected to apply to the proto-theory's decompositional analysis—which is akin to Moore's form of linguistic analysis.[81]

Wittgenstein's criticisms begin with the notions of simplicity and complexity basic to analysis in any form. He observes, quite rightly, that it makes no sense to speak of something as simple or complex absolutely. He writes:

> To the *philosophical* question: "Is the visual image of this tree composite, and what are its component parts?" The correct answer is, "That depends on what you understand by 'composite'." (And that is of course not an answer but a rejection of the question.) (PI: 47)

To make sensible use of these notions, we must specify the aspect of the object with respect to which we intend to set up a division into parts. Wittgenstein is also right to observe that almost anything can be a whole or a part, depending on the aspect chosen in relativizing simplicity and complexity for the case at hand. Further, Wittgenstein is correct to claim that the words "composite" and "simple" are used "in an enormous number of different and differently related ways" (PI: 47). Different ways of using these notions typically provide different divisions into parts, each resulting from the choice of an aspect with respect to which the operation is relativized, and each recommendable as a means of achieving the purpose dictating the choice.

The proto-theory obviously assumes notions of simplicity and complexity. But the theory does not assume them in the absolute form that Wittgenstein criticizes. The proto-theory employs notions of syntactic and semantic structure which depend only on relativized notions of simplicity and complexity. To obtain the appropriate relativization, the proto-theory takes its cue from the treatment of structure in the physical and mathematical sciences. This approach is possible because the proto-theory is a theory within linguistics.

Consider the case of physics. Since Wittgenstein's reasons for thinking there are no absolute notions of simplicity and complexity are logical reasons, they apply to the physicist's use of these notions, and the physicist's statements about the structure of matter must be relativized. But not all relativizations are epistemologically equal. In physics, the notions of simplicity and complexity are relativized with

respect to the purpose of discovering the complete truth about nature, and, hence, statements in physics about the structure of matter enjoy a privileged status with respect to statements about matter that might be made on the basis of other relativizations. This is clear from the absurdity of saying, "Well, matter may be taken as composed of molecules and atoms relative to discovering the truth about nature, but it isn't composite at all relative to other aims".

Like the scientific study of matter, the scientific study of language has the purpose of discovering the complete truth about its subject. Hence, linguistics relativizes its notions of simplicity and complexity to the aim of discovering the complete truth about the structure of sentences, and, accordingly, it gains the same privileged status for its statements about sentence structure as physics gains for its statements about matter. Thus, in adopting a vericentric standpoint, linguistics, too, avoids equalitarianism among claims about sentence structure based on different relativizations. Therefore, as with the use of notions like 'simple' and 'complex' in physical analysis, we can drop explicit mention of the relativization to truth in talking about grammatical analysis. We can straightforwardly pose questions like "Do syntactically simple expressions have complex senses?", "What are their sense components?", and "How do the components form a complex sense?"

Section 60 initiates the arguments that are at the heart of Wittgenstein's criticisms of analysis. These arguments concern the goal of linguistic analysis, namely, revealing the sense structure of expressions alleged to be hidden by grammatical form and, ultimately, revealing the fundamental elements in the semantic structure of the language. Wittgenstein imagines a language game (a) in which composite things have names and another language game (b) in which only parts have names. He asks: "In what sense is an order in the second game an analyzed form of an order in the first? Does the former lie concealed in the latter, and is it now brought out by analysis?—True, the broom is taken to pieces when one separates broomstick and brush; but does it follow that the order to bring the broom also consists of corresponding parts?" (PI: 60) Wittgenstein answers these questions, respectively, "none", "no", and "no". He takes it that, having established these answers with respect to (a) and (b), he has undermined analysis.

This, however, is not true. Having established these answers with respect to (a) and (b), he has indeed undermined analysis in the case of one type of language, but not in the cases of other kinds. (a) and (b) are language games in which words are names and names are

mere labels. In a language with just two labels for a broom, one a simple label for the whole broom and the other a compound label consisting of a label for the stick and a label for the brush, there is nothing concealed. But the negative answers to the questions are correct only because, words being understood in this restricted way, analysis has to take a vulnerable form with respect to those languages, and, accordingly, Wittgenstein's criticisms apply. The criticisms are good objections to the early Wittgenstein's view and to Russell's view.

The criticisms are not good objections to Moore's view or to the proto-theory's because, on those views, analysis does not apply to words that are mere labels. On those views, a common noun like "broom" has a sense independent of its referents, and, consequently, there is something concealed for analysis to make known. So Wittgenstein's criticisms of analysis based on the language games (a) and (b) do not carry over to versions of analysis within an intensionalist conception of the semantics of words.

That Wittgenstein's criticisms do not carry over to such versions can be seen from the fact that, on an intensionalist conception of the semantics of words, all the answers to his questions are affirmative. Let us reconsider Wittgenstein's three questions, replacing (a) and (b) with language games (a') and (b') where the analysanda are common nouns with a sense. The first of these questions, "In what sense is an order in (b') an analyzed form of an order in (a')?", no longer requires the answer "none". This question can be taken as referring either to (v) or (vi) or to (i) or (ii). We can assume reference to (v) or (vi), since analysis in the sense now in question applies only to such linguistic objects. In this case, however, we can say that the order in question *is* an analysis in that the surface structure of the analysans expresses explicitly the components of the meaning of the analysandum which its surface structure conceals. Therefore, the answer to the first question is "In the sense that the analysans reveals senses hidden beneath the syntactic simplicity of the analysandum". The fact that the answer "none" was required in the case of (a) and (b) reflects nothing more than the fact that the words in those language-games, being mere labels, are not fit objects for decompositional analysis because there are no senses hidden beneath the syntactic simplicity of the analysanda.

Of course, the analysis is not very deep in the present case, but that is another matter, since the issue here is only whether analysis is revealing of anything. It is worth pointing out, however, that the proto-theory provides us with a plausible notion of the depth of an

analysis. The depth of an analysis is a function of three variables: the complexity of the sense structure of the analysandum, the degree to which this structure is hidden, and the degree to which the structure is revealed by the syntax of the analysans. The more complex, the more hidden, and the more revealed, the deeper the analysis.

"Does [an order in the second game] lie concealed in [an order in the first], and is it now brought out by analysis?" Now the answer can be "yes". We *can* say that the orders "Kiss someone unmarried" and "Kiss a man" lie concealed in the order "Kiss a bachelor". In addition, there does not seem to be more than a verbal basis for objecting to someone who says that the order issued in a standard use of "Kiss a bachelor" includes the orders to kiss someone single and to kiss someone male and that analysis brings out the inclusion.[82] But, of course, we may not wish to speak this way.

"True, the broom is taken to pieces when one separates broomstick and brush; but does it follow that the order to bring the broom also consists of corresponding parts?" It does not follow from the fact that broomsticks have a brush part and a stick part that the word "broomstick" has a sense which decomposes into a sense of "brush" and a sense of "stick". Rather, such an analysis would follow only from the fact that there are sense properties and relations of expressions containing "broomstick", whose explanation requires the hypothesis that the sense of "broomstick" contains the sense of "brush" and the sense of "stick". What encourages the conclusion in the versions of analysis that Wittgenstein had in mind is the assumption that language ought to be isomorphic with reality. But, as stated above, the proto-theory, being part of linguistics, is committed to describing natural languages as they are, and cannot prescribe how they ought to be. Our program is to construct an ideal theory of natural language, not a theory of an ideal language. Thus, we agree with Wittgenstein that "every sentence in our language 'is in order as it is'. That is to say, we are not *striving after* an ideal, as if . . . a perfect language awaited construction by us." (PI: 98) Therefore, the proto-theory would include a hypothesis expressing an isomorphism between language and reality if, and only if, facts about the meanings of words forced such a hypothesis upon us. But they don't. To account for sense properties and relations stemming from the word "trolley-car", we do not have to say that its sense has parts corresponding to the parts of trolley-cars, that is, concepts for gears, panes of glass, screws, seats, lights, wheels, bushings, handstraps, and all the other thousands of parts in a trolley-car.[83]

Finally, we agree with Wittgenstein that someone who says that the broom is in the corner does not mean to speak of the stick or brush in particular:

> Suppose that, instead of saying, "Bring me the broom", you said "Bring me the broomstick and the brush which is fitted on to it."!—Isn't the answer: "Do you want the broom? Why do you put it so oddly?"—Is he going to understand the further analyzed sentence better?—This sentence, one might say, achieves the same as the ordinary one, but in a more roundabout way. (PI: 60)

This is surely right, but it hardly counts against sense analysis. The analysans in a decompositional analysis, even in the case of Moore's paraphrastic analysans, is intended to describe sense structure, but there is no obligation to do so in a form that can be used in all the ways that the analysandum itself can be used. In this respect, sense analysis is like arithmetical analysis. $(10 \times 3) + 7$ remains an arithmetical analysis of 37 in spite of the fact that an order for "$(10 \times 3) + 7$ pencils" might so annoy a stationery store owner that the order would not be filled. Just as such differences in use do not count against $(10 \times 3) + 7$'s being an arithmetical analysis of 37, so the differences in use that Wittgenstein imagines do not count against the claim that "Bring me the broomstick and the brush that is fitted on to it" is a semantic analysis of "Bring me the broom". Wittgenstein seems to think that analysis must provide us with another tool with the same uses as the analysandum. But sense analyses are judged not by how good they are as surrogates but by how successfully they explicate sense.

In section 63, Wittgenstein argues that analysis cannot, in principle, give the full meaning of an analysandum because the analysans must miss aspects of its meaning. He writes: "To say, however, that a sentence . . . is an 'analyzed' form of [another] readily seduces us into thinking that the former is the more fundamental form; that it alone shews what is meant by the other, and so on. For example, we think: If you have only the unanalyzed form you miss the analysis; but if you know the analyzed form that gives you everything.—But can I not say that an aspect of the meaning is lost on you in the latter case as well as the former?" (PI: 63) Here the fabric of Wittgenstein's argument continues to unravel. The expected affirmative answer follows if meaning and use are related as Wittgenstein claims, but a negative answer follows if they are related as suggested in section 7 of this chapter. Since Wittgenstein hasn't established his claims about the relation between meaning and use, he is in no position to assume

that an aspect of the meaning of "Bring me the broom" is lost in "Bring me the broomstick and the brush that is fitted on to it". It can be said just as well that the only things lost are non-semantic features of syntactic form such as length. Hence, Wittgenstein's interlocutor sticks his neck out too far in saying "the analyzed form . . . gives you everything". This is too ambitious a conception of analysis, since "everything" means everything about the use of the analysandum. Wittgenstein easily refutes the conception, but the refutation doesn't carry over to the conception of analysis in Moore or in the proto-theory. Being considerably more modest, i.e., promising only the prospect of exposing everything about the sense structure of the analysandum, these conceptions are not refuted.

Although such conceptions are modest in comparison to the conception which Wittgenstein puts in the mouth of his interlocutor, it is ambitious enough when one considers what is involved in decompositional analysis. The enterprise of specifying everything that makes for sameness and difference in sense is on a par with the enterprise of specifying everything that makes for sameness and difference in syntax or inference. This may be appreciated from the proto-theory's conception of what full analyses of senses consist in when the primitive senses of a language are reached. A full analysis of a sense is one that exposes all its structure. We know that all sense structure has been exposed when the analysans marks every component sense and every relation among component senses necessary to account for the relevant sense properties and relations of the analysandum. When some sense structure is unmarked in the analysans, the analysis continues, typically by extending the apparatus of semantic representation to make finer discriminations. Such changes continue until the making of such finer discriminations reaches a terminus. This is the point at which all the semantic properties and relations of the analysandum are accounted for and further changes would only complicate the analysans. Given a full analysis of each lexical item in the language, the primitive senses of the language can presumably be factored out.[84]

23

The *leitmotiv* of Wittgenstein's early thought is that philosophical sentences, unlike the sentences of natural science, do not represent reality, that philosophical sentences are meaningless because they transcend the limits of language, and that the proper task for philosophy is, therefore, not to provide us with new truths but to provide clarification, in particular, by showing what cannot be said. These

ideas, as I see it, took Frege's thinking on propositions in a novel direction. Frege's idea of a sense as a mode of presentation of a referent is transformed in the *Tractatus* into the idea of a proposition as a representation of reality (TLP: 4.01), and then used, together with the general theory of propositions deriving from Frege's and Russell's work in logic and the philosophy of logic, to show that logical words and philosophical sentences are those which have no representative semantic function (TLP: 4.0312).

The *leitmotiv* of Wittgenstein's early philosophy continues as the *leitmotiv* of his late philosophy. The late philosophy results from a shift in assumptions about language and meaning and an accompanying inversion of the *Tractatus*'s traditional conception of the relation between theory and problem, making theory the source of philosophical problems rather than their solution. Thus, Wittgenstein's denial that there is a "*general form of propositions* and of language" (PI: 65) has the special status in the late philosophy of rejecting the very theory on which the whole of the early philosophy rests (PI: 116). This special status explains why Wittgenstein refers to the question of what is common to all linguistic phenomena in virtue of which they are linguistic as "the great question which lies behind all these considerations" (PI: 65).[85]

The answer to "the great question" of the *Philosophical Investigations* is parallel in importance to the "fundamental idea" of the *Tractatus* that logical words have no representative semantic function (TLP: 4.0312). And Wittgenstein's answer that the things to which we apply a word have nothing in common in virtue of which it applies to them all is, in effect, the same deflationary doctrine as the early deflationary doctrine deriving from this "fundamental idea": philosophical sentences, which purport to reveal the concepts underlying the application of philosophical words, have no sense.

To underscore the importance of the question and to emphasize how radical a break with traditional philosophy is in the works, Wittgenstein has his interlocutor at first fail to see that what is at stake is the very presupposition of the "great question" and, hence, the presupposition of virtually all traditional Western philosophy. So the interlocutor complains that Wittgenstein is ducking the really hard question of what the essence of language is. Wittgenstein concedes that he has not provided "something common to all that we call language," but *that* is the point: "these phenomena have no one thing in common which makes us use the same word for all" (PI: 65). Wittgenstein's intentions are far more radical than the reader might at first think: he is not out to reform traditional philosophy, so that it may return to business as usual, but to sweep it away.

Wittgenstein thus rejects "the great question." This move is like the earlier rejection of the question "Is the visual image of this tree composite, and what are its component parts?" (PI: 47). In both cases, the question falsely presupposes that it makes sense to speak in absolute terms. The question of the general form of propositions and of language falsely presupposes that it makes sense to speak in absolute terms about the use of words. It does not make sense because words have no inherent semantic essence. As a consequence, to speak sensibly, we have to speak of the use of words relative to our linguistic training, the linguistic practices within a form of life, and the peculiar features of the situations where we use them.

In this connection, it is interesting to recall Frege's view that

> for all the multiplicity of languages, mankind has a common stock of thoughts. If all transformation of the expression were forbidden on the plea that this would alter the content as well, logic would simply be crippled; for the task of logic can hardly be performed without trying to recognize the thought in its manifold guises. Moreover, all definition would then have to be rejected as false.[86]

Wittgenstein agrees with Frege's reasoning, but welcomes the conclusion that Frege raises as a specter for logic. Wittgenstein's argument that analysis can offer nothing more fundamental than the analysandum itself and that the analysans always loses some aspect of the matter, was designed precisely to show that there is no notion of content invariant over the transformation of expressions. Logic in Frege's sense *is* "crippled," and, as a consequence, all definition in Frege's sense *has* to be rejected as false. But, for Wittgenstein, these conclusions are not the end of "all that is great and important" (PI: 118), but the beginning of proper philosophy (PI: 126–133).

Wittgenstein thinks he has already said enough to discredit essentialist doctrines concerning propositions and language like Frege's. Thus, he sees his task in section 66 and those immediately following as to explain how we do apply words, including the word "language" itself, without relying on traditional definitions. He wants to answer the question "How do we use a word to group together things that are alike, without a definition to tell us what their common feature is?" He tries to answer it by showing us what is really the case in the application of words and by formulating an alternative to the definitional view which is truer to the facts of how words are applied. His strategy is to "focus on the details of what goes on; . . . look at them *from close to*" (PI: 51).

The famous discussion of the use of the word "game" is an instance of this strategy. The discussion is intended to show, contrary to the definitional view, that there is nothing common to everything we call "games", but only "a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail" (PI: 66). Thus, the discussion of "game" explains why Wittgenstein rejects the question about the essence of language: the question presupposes that there is something common to the things grouped together in the applications of a word, when, in fact, there is only a "family resemblance" among them. (The discussion serves as a paradigm of the kind of descriptive examination that Wittgenstein thinks ought to replace analysis.)

Now, it seems safe to say that this discussion is widely taken to present a powerful (albeit controversial) argument that the semantics of general terms is based on family resemblance rather than on definition in any of its essentialist forms. However, I think there is no such argument here. I do not doubt the correctness of Wittgenstein's finding that there is nothing more than family resemblance in cases like the application of "game", but this finding is far from a general argument against essentialist definition. The supposition that the finding provides such an argument rests on the notion that a definitional account of the semantics of general terms is incompatible with family resemblance in the application of words like "game." But, in the case of at least one definitional account—the proto-theory and the "top-down" approach—family resemblance is exactly what is predicted!

It is plausible to think that a definitional account implies the opposite of family resemblance if what one has in mind is the traditional Fregean account on which we proceed from an ideal language to the referents of expression tokens via the Fregean relation of determination. The Fregean essentialist is stuck with the prediction that there is more than a family resemblance among the things to which "game" applies. But essentialists do not have to adopt the Fregean account, and essentialists who instead adopt the proto-theory and the "top-down" approach are not stuck with the Fregean prediction. The critical differences are, first, that the "top-down" approach proceeds from a natural language, not an ideal language, and, second, that it proceeds to the reference of tokens via the relation of mediation rather than the stronger relation of determination. The result is that we can expect exactly the family resemblance among the things to which "game" applies which Wittgenstein finds.

Let me explain why. On the "top-down" approach, a speaker starts with knowledge of the grammatical structure of *expression types*, that

is, syntactic structure in some appropriate sense and semantic structure in the sense of the proto-theory. Wittgenstein's finding that there is only a family resemblance among the things to which we apply "game" concerns *expression tokens*. Now, the expression types of a natural language, as opposed to a Fregean ideal language, exhibit ambiguity, homonymy, etc. Moreover, the mediation relation allows the influence of extralinguistic factors in the process of assigning senses of linguistic types to linguistic tokens and in fixing the reference of linguistic tokens. These two factors are more than enough to show that we should expect the proto-theory and the "top-down" approach to present a picture of overlappings and criss-crossings of similarities at the utterance level.

To make this clear, consider the application of the English word "game" on the proto-theory and the "top-down" approach. As a convenience, I will ignore much of the ambiguity and homonymity of the word. This is legitimate because the effect of including the full ambiguity and homonymity would be only to strengthen my point by increasing the pragmatic scatter. Thus, I will suppose that the initial point in the "top-down" process is knowledge of just two of the senses that *Webster's* gives for the word "game", namely:

(A) a contest conducted according to rules governing the play of its participant(s),
(B) an amusement.[87]

(A) is the sense of "game" in "I'd rather win at games than at raffles or auctions". (B) is the sense on which "game" is antonymous with "serious", as, for instance, in "It is serious to you, but it's just a game to her" or in "Spying was a game for Mata Hari, but not for Sorge".[88]

The terminal point of the "top-down" process is the set of activities to which reference is made when English speakers use their knowledge of (A) and (B) in the use of "game". Supposing that, over a wide range of cases, speakers apply "game" to whatever they recognize as falling under one or the other of those senses, we will find the word applied not only to baseball, chess, bridge, solitaire, tick-tack-toe, tennis, go-fish, go, jacks, etc. but also to activities like ring-a-ring-a-roses and throwing a ball against a wall. Thus, we find exactly the family resemblance among the activities to which "game" is applied that Wittgenstein himself found. Features which, in the language, are kept separate by the boundaries of a sense are, in the domain of the language, collected together in the extension of "game". Hence, baseball, chess, etc. are members of this extension on a par with ring-a-ring-a-roses and tossing a ball against a wall; accordingly, the feature of contest, i.e., winning and losing, which is present in many mem-

bers, is absent in others. These diverse activities are on all fours extensionally because they are simply activities to which "game" refers.

Of course, these activities are collected together as members of the extension of the *word*, not as members of the extension of a *sense of a word* or as members of the extension of a *word on a sense*. But, whatever the usefulness of the latter two notions, they are not involved in Wittgenstein's examination of the application of "game", and, as far as the point here is concerned, nothing would change if the notions were introduced, since introducing them would allow us to identify something common with respect to the divisions imposed by them within the extension of the word.[89]

PI section 67 considers the attempt, by brute disjunction, to frame a single concept of game out of the various features in the family resemblance. Wittgenstein rightly criticizes this move as "only playing with words," saying, "One might as well say: 'Something runs through the whole thread—namely, the continuous overlapping of fibers'" (PI: 67). His point is that a disjunction of family features is not a common property, not literally a property that runs through the whole class of cases. The move based upon a disjunction of family features does not use the notions 'common' and 'runs through' in their ordinary sense. To see this, contrast the manufactured sense of "runs through" with the sense in which a disjunctive property really does run through a class of cases *in the ordinary sense*, e.g., in the case of the class of *a priori* outcomes in tosses of a coin. Thus, although it is true on the manufactured senses that a disjunctive property "runs through" such a class, this is consistent with, and hence irrelevant to, Wittgenstein's claim that there is no common property in the ordinary sense.

Given that this is Wittgenstein's argument in section 67, the argument has no bearing on our explanation, since we agree with Wittgenstein that there is no common property for the class of things we call "games" except perhaps the trivial property of being an activity. On our explanation, it makes no sense to speak of common properties with respect to English and other languages where specific properties and relations are grammatically correlated with specific syntactic forms. As indicated, common properties can be found in the extensional melting pot, once the extension of a word is filtered to obtain the members that belong to the extension of the word on a particular sense, but this is not something that any of Wittgenstein's arguments at this point deal with. If he has a relevant argument, it will have to be his argument about following rules, which I consider in the next chapter.

Sections 68, 69, and 77 criticize the claim that a word like "game" has an exact extensional boundary. But this claim, too, is no part of our explanation. As we have already made clear in the discussion of rule-governed creativity of language and non-rule-governed creativity of language use, we agree with Wittgenstein that the boundaries of the class of things we call "games" have not been drawn. As he says, the use of "game" is "not everywhere circumscribed by rules" (PI: 68). This is also the consequence of the fact that, on our "top-down" approach, extralinguistic factors influence the extension of a word. Even in connection with the uses of a word on a particular fixed sense, extension may not be sharply circumscribed, because, for example, of the various extralinguistic beliefs on which the uses are based. Thus speakers may use a word with a particular sense, yet their utterances may not refer to anything in the extension of the word, as with Cotton Mather's use of "witch".

There is considerable flexibility in the way that the "top-down" approach handles the different sorts of cases Wittgenstein brings up. The way in which we handled the fact that competition is absent in some activities to which "game" applies is by no means a general paradigm. We do not handle all the "disappearing features" Wittgenstein mentions in section 66 in that way. He says that the feature of "play on a board" drops out when we pass from games like chess to games like bridge and that the feature of skill is different in chess and tennis, and nonexistent in ring-a-ring-a-roses. In such cases we can argue that absence of the feature in question is really a matter of its presence not being semantically mandated by sense. (A) and (B) leave open the question of the surface on which play takes place—allowing mental chess—and the question of skill.

The fact that the appearance in games of such features results not from anything in the meaning of "game" but from the absence of something in the meaning of "game" is straightforwardly explained on the proto-theory. "Game" is a superordinate of subordinate expressions such as "board game" and "card game". As will be explained more fully below, a subordinate like "bachelor" contains the sense of the superordinate "man" but also contains the sense of "unmarried", which qualifies the superordinate sense component to make the sense of the subordinate "bachelor" more precise than that of the superordinate "man". Hence, because "game" is a superordinate of "board game", "card game", etc., the former is not synonymous with any of the latter, but their senses include its sense. Thus, the sense of the superordinate "game" is sufficiently more abstract for its extension to encompass the extensions of "board game", "card game", etc., and not to be encompassed by their extensions.

Because the sense of "game" imposes no constraint concerning kind of skill or even the presence of skill, games of chess and tennis are equally games despite the difference in kind of skill involved, and ring-a-ring-a-roses is a game even though no skill at all is required to play it. Skill makes for more enjoyable or interesting games, but even people who have yet to develop any skill at chess or tennis may still manage to play. Skill is a matter of how well a game is played. Chess does, of course, belong to the category 'game of skill', contrasting with a game like roulette which belongs to the category of 'game of luck'. These, however, are further divisions of games in the sense (A), along with division in terms of what they are played on or what they are played with. In the sense (B), games do not divide into games of skill and games of chance because that sense does not contain the concept of a contest which is the superordinate of 'game of skill' and 'game of luck'.

Just before he explicitly poses the "great question," Wittgenstein claims that "one may say of certain objects that they have this or that purpose. The essential thing is that this is a *lamp*, that it serves to give light;—that it is an ornament to the room, fills an empty space, etc. is not essential. But there is not always a sharp distinction between essential and inessential." (PI: 62) There is no reason to argue about this claim so long as it is understood to be about the objects themselves, i.e., your Tiffany lamp or the ugly monstrosity Uncle Harry gave me. In this case, your lamp may serve the purpose of ornamentation and mine the purpose of keeping peace in the family, even though neither is good at giving light. Here it is true to say that what is essential shifts with the interests that determine the purpose to which we put the object, and hence, no general distinction between the essential and the inessential seems possible. But none of this counts against there being a distinction between the essential and the inessential when we move from the objects to the language. None of these considerations about interest prevent us from saying that, from the standpoint of literal English, for something to be what is called a "lamp", it is essential that it be an artifact whose function is to give artificial light. Whether the concept 'artifact whose function is to give artifical light' is part to the sense of the word "lamp" in English depends on the nature of the sense properties and relations of sentences containing the word "lamp".

This brings us to Wittgenstein's famous example of the disappearing chair. About such an object, he asks, rhetorically: "Have you rules ready for such cases—rules saying whether one may use the word 'chair' to include this kind of thing?" (PI: 80) Wittgenstein takes a negative answer for granted. But the answer can be affirmative. We

obtain the rule covering the sense of a word by working out the simplest statement of its decompositional structure which accounts for the sense properties and relations of sentences in which the word occurs. Let us suppose that the statement we have worked out for the sense of "chair" is 'physical object which is a piece of furniture having a back and a seat, having the function of being a seat for one'. (The component sense 'having a back', for example, explains why "chair" is antonymous with "stool", and the component sense 'being a seat for one' explains why it is antonymous with "couch".) On this semantic rule, one may use the word "chair" to include disappearing chairs. Chairs have to be physical objects, but nothing in the rule requires them to be constantly appearing physical objects. The meaning of "chair" leaves open the possibility that chairs might have the physical property of being here one minute and gone the next—just as (A) leaves open the possibility that games involve intellectual skill or are played with marked cards. Whether chairs or any other physical objects can disappear and reappear is a question for physics.[90] There is nothing linguistically deviant in the supposition that at some future time we may have disappearing chairs designed specially for playing musical chairs.

The upshot of these reflections is that two forms of definition are compatible with what Wittgenstein says about family resemblance in the sections up through 67. One of them is explicative paraphrase, the form that Moore employed, and the other is decompositional and compositional semantic representation, the form the proto-theory employs. I think enough has been said to show that both are compatible with the kind of extensional facts that Wittgenstein calls to our attention in his answer to "the great question."

24

Section 68 of *Philosophical Investigations* initiates a set of arguments against Frege's position on exact concepts. Given Frege's conception of sense as mode of referential determination and given the desirability of an ideal language for purposes of rational inquiry, it is easy to see why Frege thought it an imperfection of natural languages that an expression's sense frequently does not determine which, if any, objects belong to its extension. Thinking that such features of natural languages make it a poor instrument for reasoning, Frege thought that an ideal language should be constructed to compensate for inexactnesses and other imperfections of natural language. He saw the situation as directly parallel to the construction of special optical instruments to compensate for the limitations of the human eye.[91]

Wittgenstein thought this view involves a fundamental misunderstanding:

> . . . logic does not treat of language . . . in the sense in which a natural science treats of a natural phenomenon, and the most that can be said is that we *construct* ideal languages. But here the word "ideal" is liable to mislead, for it sounds as if these languages were better, more perfect, than our everyday language. (PI: 81)

Expanding on this point, he says:

> "Inexact" is really a reproach, and "exact" is praise. And that is to say that what is inexact attains its goal less perfectly than what is more exact. Thus the point here is what we call "the goal". (PI: 88)

The goal, as Wittgenstein sees it, is given in the use we make of signs, by the interests and the purposes being served (PI: 88). Again, misunderstanding arises from using words, in this case "exact" and "inexact", as absolute terms. Suitably relativized to a goal, those terms would not encourage philosophers to reproach natural language for having inexact expressions and would lead them to recognize that inexactness is "often exactly what we need" (PI: 71). In an attempt to inject a sense of reality into the discussion, Wittgenstein writes, "But is it senseless to say: 'Stand roughly there'?" (PI: 70).

My anti-prescriptivist position, which has been made amply clear, is in full agreement with Wittgenstein's claims that "every sentence in our language 'is in order as it is'" and that the proper task is to understand our language, not to perfect it. Wittgenstein's position and mine both treat a sentence as meaningful just in case it has a sense. Accordingly, an inexact sentence like "Stand roughly here," being fully meaningful, unlike a sentence such as "The square root of 25 likes vanilla ice cream", has a sense every bit as much as an exact sentence like "The square root of 25 is 5". Further, without taking a stand on the question of his treatment of Frege, I can also agree with Wittgenstein's claim that the degree of exactness required of speakers is relative to their goals in the circumstances, to the constraints of the conversation. Thus, the proto-theory has no arguments to answer in connection with Wittgenstein's criticisms of Frege's views concerning exact concepts and ideal languages.

The differences between Wittgenstein's position and mine concern what meaningfulness and senselessness consist in. The proto-theory's conception of a meaningful sentence is that of a sentence in which the senses of its constituents compositionally combine as they

must for the sentence as a whole to have a sense. Its conception of a senseless sentence is of a sentence in which some of the combinations of senses necessary to form a compositional meaning cannot take place because one or another sense does not meet a restriction governing a necessary combination. The difference between "Stand roughly here" and "The square root of 25 likes vanilla ice cream" is that, although all the necessary sense combinations can take place in the former, there is at least one in the latter that cannot take place.

Senselessness, as I am using the term, is a property of an expression or sentence type. It is the property of not having a sense in the language. Thus, one cannot infer just from the senselessness of an expression or sentence that some arbitary constituent of the expression or sentence is senseless, nor can one infer that a token of the expression or sentence is senseless. Moreover, senselessness is the limiting case of a process of blocking combinations of senses which, at various stages short of the limiting case, restrict the number of senses of expressions and sentences and hence, their degree of ambiguity. For example, in the sentence "Squares like TV quiz programs" a potential sense combination is blocked because the sense of a predicate expressing an attitude cannot apply to a subject that expresses a geometrical form, but the other sense of "square" can combine with such predicates; hence, the sentence is not senseless but only unambiguous. An unambiguous sentence can be thought of as a one-way ambiguous sentence, and a senseless sentence as a zero-ways ambiguous sentence.

In some respects, the proto-theory's position on exactness and inexactness complements Wittgenstein's. Many of Wittgenstein's remarks make the point that an inexact term often serves the speaker's interests better than an exact one (PI: 71). Such remarks seem to me to presuppose that words of the language are themselves inherently more or less exact relative to one another. How else would speakers have a choice of an inexact term to use in better serving their interests? The proto-theory enables us to characterize such inherent, or grammatical, differences in the exactness of words.[92]

Consider Wittgenstein's example "The ground is quite covered with plants" (PI: 70). Sentences employing expressions more exact than "plants" provide greater relative precision, for example, "The ground is covered with bushes", "The ground is covered with rose bushes", "The ground is covered with climbing tea-rose bushes", "The ground is covered with climbing tea-rose bushes in full bloom", and so on. With each successive sentence, more information is provided about the ground cover. To take another example, which stresses the decompositional route to a more specific sense, consider

the transition "Pile some objects against the door", "Pile some furniture against the door", "Pile some chairs against the door", "Pile some rockers against the door." In both examples, the greater exactness of one sentence relative to another can be thought of as a matter of the meaning of the more exact expression closing options which the meaning of the less exact expression leaves open. As the examples show, the options can be closed either by the addition of modifiers like "rose" to a noun like "bushes" or by exploiting decompositional structure, e.g., replacing a noun like "furniture" with a noun like "chairs".

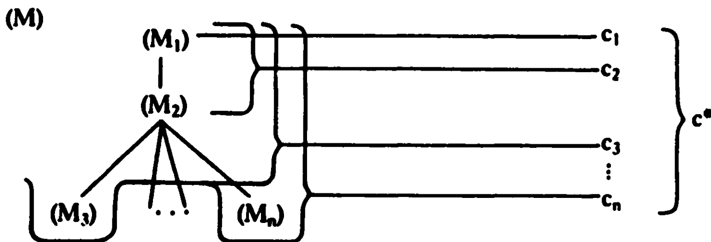
On the proto-theory, greater precision is achieved in virtue of the grammatical fact that, in the more exact of a pair of senses, one component sense qualifies another component sense to make the entire sense more specific (along some dimension). The relation between the sense qualified and the sense resulting from the qualification is the superordinate/subordinate relation referred to above. For example, the sense of "dwelling" is superordinate to the senses of "house", "barracks", and "prison". These subordinate senses are formed from the superordinate sense by means of qualifications concerning who dwells there and for what purpose. In the case of "house" the dwellers may be anyone, but the dwelling is their residence; in the case of "barracks" the dwellers are primarily soldiers, and the dwelling is a place for rest, recreation, and sleep; in the case of "prison" the dwellers are those convicted of crimes, and the purpose of the dwelling is incarceration.

To give an account of relative precision or specificity, we shall have to say more about the superordination/subordination relation, particularly, its role in word meaning. Thus far, we have spoken about the decompositional structure of word meaning principally in terms of factoring the sense of a word into its component senses. We mentioned that the component senses have to be related to one another to form the sense of a word, but said next to nothing about what those relations might be. Now, as the examples we have just given make clear, one such relation is superordination. Hence, the very notion of word meaning itself requires an account of superordination.

I now want to give a brief account of how degree of specificity can be given in a decompositional formalization of word meaning. Recall that, whereas the numeral notation discussed above uses a single semantic symbol to represent the sense of a syntactic simple, the proto-theory uses a number of semantic symbols to represent the component senses in the senses of a syntactic simple. These semantic symbols are connected by formal relations that represent qualifications of superordinate concepts which turn them into subordinate

concepts. For example, we might represent the component senses of the sense of "chair", i.e., 'being an object', 'being physical', 'being an artifact', 'being furniture', 'having a back', etc., with, respectively, the symbols (M_1), (M_2), . . . , (M_n). We can represent the qualification of one such component sense by another in terms of a branch connecting the symbol representing the former to that of the latter. We can represent the entire sense as a tree structure with nodes labeled with such symbols and with branches connecting nodes representing qualifications of concepts by other concepts, the concepts resulting from qualification, and their relations to other concepts resulting from qualification. Such trees can be described schematically as in the figure below. This whole marker represents the complex sense c^* as being built up out of the component concepts c_1, c_2, . . . , c_n. Given our interpretations of the symbols c_1, c_2, . . . , c_n labeling nodes, this marker represents the complex sense of "chair". c_1 represents the component sense 'being an object', the branch connecting (M_1) to (M_2) represents qualification with the component sense 'being physical', and so on. The superordinate/subordinate relations would be that c_1 is superordinate to c_2, c_2 superordinate to c_3, and so on. In general, superordinate/subordinate relations can be defined in terms of the condition that the marker of the subordinate be a same-rooted subtree of the marker for the superordinate.

The synonymy of a syntactically complex expression like "a physical object which is a piece of furniture with a back and seat, serving as a seat for one" and a syntactically simple expression like "chair" shows that the sense relations involved in compositional meanings are the same as those within decompositional structure. The results of sense combinations in the compositional process simply recapitulate and extend the superordination structures in the senses of syntactic simples. This makes it possible to develop the proto-theory as a recursive procedure for sense combination. The principles specifying how senses of modifiers combine with senses of their heads can be formulated in terms of rules which form a new branch in the tree



representing the head, off of which the tree representing the modifier is hung, thereby producing a new semantic representation which still has the form (M).[93]

I said above that meaningless sentences like "The square root of 25 likes vanilla ice cream" are the result of the fact that every set of sense combinations that could provide a meaning for the sentence is blocked at some point in the compositional process because the restriction at that point is not met. I can now explain what such restrictions are and what blocking consists in. We have seen that compositional senses have the same superordinate/subordinate structure as decompositional senses. Hence, to form a compositional sense from the sense of a modifier and the sense of its head, the sense of the modifier must be a subordinate of some concept in the sense of the head. The restriction on such combinations is, then, that the sense of the modifier must belong to the highest semantic category to which some concept in the sense of the head belongs. If the sense of the modifier belongs to no highest category of any concept in the sense of the head, there is no way to form a derived sense for the whole modifier-head construction. "The square root of 25 likes vanilla ice cream" is meaningless because the sense of "likes vanilla ice cream" cannot become a subordinate of the concept of a square root, whose semantic category is Abstract.[94]

To sum up: Frege's doctrines about exactness derived from his conception of sense as a self-sufficient mode of referential determination. Since senses are to provide all the information needed to fix reference, inexactness on the side of sense translates immediately into problems of determination on the side of reference, and such problems, in turn, are problems for relating sentences in natural language to propositions in logic. Hence, Frege is led to the construction of a logically perfect language with exact senses. Wittgenstein criticizes Frege's doctrines about exactness on the grounds that imprecise sentences, e.g. "Stand roughly here" or "The ground is covered with plants", do not ordinarily cause referential problems. We agree with the substance of Wittgenstein's observations. Indeed, our account of decompositional and compositional sense structure complements his observations by explaining the source of the essentially unlimited range of expressions of varying degrees of precision on which speakers can draw.

Since on the proto-theory and the "top-down" approach sense is only one ingredient in the recipe for language use, inexactness of sense does not automatically lead to problems of referential determination. Hence, there is none of the pressure for us to have a language with exact expressions that there is for Frege. For us, the language

makes available an essentially unlimited range of expressions of varying degrees of exactness, and its speakers make a selection on the basis of pragmatic factors which often allow them to use relatively inexact expressions in context. Thus, on my view as much as on Wittgenstein's, it is the user of the language who bears the responsibility for problems that result from choosing an expression that is less precise (or more precise) than required in the circumstances.

It should be noted that the proto-theory's formal representations serve only to describe explicitly the sense structure of the language. Formal precision here does not have the purpose of producing an ideal language, but aims only to produce a more explicit theory of the sense structure of natural languages. Explicitness is desirable since it makes it easier to see what the claims of the theory are, how to verify or refute them, and whether they can be developed and broadened consistently.

There is nothing in Wittgenstein's criticisms of Frege's doctrines about exactness that threatens the development of the proto-theory—rather, there is much in the development of the proto-theory which complements Wittgenstein's observations about exactness in language and use. Furthermore, there are no other arguments in the sections from 68 through 80 that might pose a threat. Consider, for example, Wittgenstein's claims in section 73 about our knowledge of "what a game is"—that is, of our "concept of a game." On the proto-theory and the "top-down" approach, there are two types of concept. In an earlier work, I have referred to concepts of one type as *narrow concepts* and concepts of the other type as *broad concepts*.[95] Narrow concepts are senses of words in the language, and broad concepts are conceptions of what a word's referent is. I will have more to say about these notions in chapter 7. Here it suffices to say that we can easily agree with Wittgenstein's claims, since they explicitly concern broad concepts, and the proto-theory concerns only narrow concepts.

To take one more example, consider Wittgenstein's arguments in section 79. Insofar as they are intended to show that the use of a name does not depend on its having a "*fixed* meaning" that equips speakers "with rules for every possible application of it" (PI: 79, 80), the arguments do not apply to the proto-theory and the "top-down" approach, which are not committed to such rules. Insofar as the arguments are intended to show that names have no "*fixed* meaning" of any sort, we could accept them if we subscribed to J. S. Mill's version of the theory. Strictly speaking, the proto-theory does not even claim that names have meaning; it claims only that, *if* the words belonging to some class exhibit properties and relations like meaningfulness, ambiguity, synonymy, redundancy, antonymy, etc., *then*

they have meaning. Thus, only the proto-theory together with observations about the sense properties and relations of sentences could entail that a proper noun or any other kind of word has a meaning. Wittgenstein's arguments, in themselves, cannot refute intensionalism, though they might restrict its scope to common nouns and other parts of speech.[96]

25

We come now to section 81, where Wittgenstein raises the topic of normativity. This topic is important for the question of whether the proto-theory escapes Wittgenstein's critique of theories of meaning. My procedure will again be to find areas of agreement where I can, and where I cannot, try to show that Wittgenstein's arguments are ineffective against the proto-theory.

Wittgenstein says that F. P. Ramsey's remark about logic's being a normative science suggested to him that there is something gamelike about the use of language. Wittgenstein is anxious that this insight not be misunderstood through thinking of logic in terms of a Fregean ideal language. The misunderstanding that concerns Wittgenstein is that we might think of our language on the model of idealization in physical science, taking our use of language to involve "operating a calculus" and the idealization to express the laws of its operation in abstraction from empirical conditions (PI: 81).

I agree that logic and language involve a normative element which expresses, in some sense, what ought to be rather than what is. I also agree that the model of an idealization in physical science cannot deliver this normative element, and in chapter 7 I will have something of my own to say about why this is so. Further, I think that Wittgenstein's warning is at least as timely now as it was when the *Philosophical Investigations* was written. For the use of this model has become even more influential in Anglo-American philosophy since then, as the result of Chomsky's approach to language, in which the very definition of linguistics is based on the model. Recall that Chomsky takes the object of linguistic study to be the competence of an ideal speaker-hearer, presenting this view as an explicit analogue to idealizations in physics.[97] Hence, for Chomsky, the study of language is the study of an empirically presented natural phenomenon, namely, the linguistic knowledge of speakers and the language-learning capacities of children, both under suitable idealization. Thus, the questions about "the rule by which he proceeds" which Wittgenstein raises in section 82 apply directly to Chomsky's notion of competence as internalized linguistic rules.

If, as Chomsky thinks, the study of language is properly conducted as an idealization of an empirical phenomenon within a natural science like psychology or biology, then a normative element could no more come into the linguistic behavior of speakers than a normative element could come into the mechanical behavior of billard balls. We couldn't talk, as we do, about how English ought to be, rather than is, used—about grammatical correctness and mistakes—any more than we can talk about how billiard balls ought to, rather than do, move. If language were merely a natural phenomenon in the sense of the idealization model, what would be the normative force of saying that "She overestimates itself" is incorrect English or that it is a grammatical mistake to say that "pocket battleship"means 'battleship of a size to fit into the pocket'. For it is nonsense to say that a ball rolling on a plane is in error, or making a physical mistake, when its behavior diverges significantly from that of an ideal ball rolling on a frictionless, perfectly smooth plane.

The problem with the model of idealization in linguistics (or in logic) is that it conflates *conflict with a norm* with *divergence from an ideal*. The essential point is that an ideal is not a norm. As will be explained more fully in chapter 7, an ideal is a construct expressing a kind's perfection. Chomsky's ideal speaker is the perfection of the kind 'human speaker of a natural language'; that is, it is the construct of a human speaker without the performance limitations of actual speakers. The construct of an ideal speaker (or an ideal reasoner) is only the notion of an actual speaker (or reasoner) expressed in a form unadulterated by memory limitations, mortality, etc. Thus, the divergence of actual speakers from the ideal speaker is a case of greater or lesser degree of adulteration, not a case of something's failing to be what it ought to be. The ideal involves no notion of what ought to be, but only of what something perfect of its kind is.

In framing an idealization like Chomsky's, we start with the empirical phenomena of behavior in which there is nothing normative. We proceed to a speaker (or reasoner) whose behavior perfectly exemplifies certain psychological laws via a process of abstracting away from factors that complicate the statement of such laws. There is no point in the process where norms enter the picture, and, hence, utterances (or inferences) can be described as diverging from the behavior of the ideal speaker (or ideal reasoner), but not as "errors", "incorrect", "mistakes", "not as they ought to be"—as conflicting with a norm.

For such reasons, which I will amplify in chapter 7, I agree with Wittgenstein that the normative in language cannot be captured on the model of an empirical idealization. My disagreement with him is

over how it can be captured. Wittgenstein thinks that he has to deny that the investigation of language and meaning can be scientific in order to capture linguistic normativity. He thought this because he believed that it is a mistake to think that "logic . . . treat[s] of language—or of thought—in the sense in which a natural science treats of a natural phenomenon" (PI: 81). He also wrote: "Philosophers very often talk about investigating, analyzing, the meaning of words. But let's not forget that a word hasn't got a meaning given to it, as it were, by a power independent of us, so that there could be a kind of scientific investigation into what the word *really* means." (BB: 27) But Wittgenstein's claim that the investigation of language and meaning cannot be scientific is an unwarranted conclusion from the premise that their investigation cannot be a matter of natural science. He mistakenly equates the sense in which science treats phenomena with the sense in which natural science treats phenomena, thus overlooking the possibility that mathematical sciences treat them in a way that is relevantly different from how the empirical sciences treat them. In virtue of this possibility, the analogy between language and mathematics provides an alternative to Wittgenstein's analogy between language and games as a way of accounting for the normative in language (PI: 83).

I think linguistic normativity can be captured within a scientific investigation of language and meaning which is like the mathematical sciences rather than the natural sciences. Construing the investigation as an *a priori* investigation along the lines of the realist conception of mathematical investigation, we can try to explain the normative element in linguistics on the model of that conception's understanding of the normative element in mathematical investigation. Such an explanation equates evaluations in mathematics like "this is correct calculation" or "this is the conclusion that ought to be drawn" with evaluations in linguistics like "this is correct English" or "this is English as it ought to be spoken". The force behind such normative mathematical evaluations is the assertion that the case in question conforms to the mathematical or logical facts. Since such facts are necessary, no other alternatives in those cases are possible. Taking a similar model of the normative in language enables us to entertain a similar account of the force behind linguistic evaluations.[98]

Looking at the normative element in language in this way is essentially looking at it the way Frege looked at the normative element in logic. This connects with my earlier suggestion that the sentences of a natural language can be looked at as abstract objects in the mathematical realist's sense. On this viewpoint, the grammatical types of

the language constitute the norms for the linguistic correctness of utterances or inscriptions of its speakers. Frege, of course, did not extend his realism to language, but viewed language conceptualistically.[99] However, nothing prevents us from extending realism to language, since Frege's reasons for thinking of natural languages conceptualistically were tied up with his doctrine about their imperfections, which we have already rejected.

I wish neither to suggest that Frege's realism can be transferred without significant modifications nor to give the impression that it is an easy matter to work out a realistic view of language.[100] I am now only trying to indicate an alternative to Wittgenstein's way of saving the normative element. My aim in doing this is to meet the argument that, since considerations of the kind raised in section 81 show that scientific approaches to language and meaning cannot save linguistic normativity, the proto-theory, as a scientific approach, can be ruled out on the same basis as approaches like Chomsky's.

With this understanding, let me here set out the following points about a realistic view of natural languages. Sentences of natural languages are conceived of as abstract objects, as in the mathematical realist's conception of numbers. Such sentences and languages are independent of us: facts about them are *discovered*, not created. The syntactic and semantic structure described in truths about sentences are *in* those objective, non-natural objects. Such structured grammatical objects provide the linguistic norms. Just as it is in virtue of the structure of numbers that there is only one even prime and, hence, that it is a mistake to assert that there is more than one, so it is in virtue of the structure of English sentences that there is more than one kind of English interrogative sentence, and, hence, that it is a mistake to assert that there is only one kind. None of this implies that linguistics is like any particular branch of mathematics.

Our linguistic realism provides an alternative to Wittgenstein's view on either the "conventionalistic" interpretation or the "individualistic" interpretation of that view. The former is championed by philosophers like Winch and Kripke, and the latter by philosophers like Stroud and McGinn.[101] The issue, in a nutshell, is whether Wittgenstein thinks that linguistic norms have their locus in the community, so that correctness is a matter of conformity to the linguistic practices of the community, or in the linguistic dispositions of individuals—arising from the action of linguistic experience on human nature—so that correctness can, in principle, be assessed independently, apart from a community. We have no need to take a stand on the exegetical issue, since both interpretations portray Wittgenstein's

late philosophy as grounding linguistic normativity in facts about the natural world, in particular, facts about human behavior. Our linguistic realism presents an alternative to the late philosophy on either the conventionalistic or the individualistic interpretion. On this realism, neither the philosopher nor the linguist is describing natural facts in describing the criteria for correctness in the use of a natural language.

26

We are now in a position to look at Wittgenstein's claim that the use of a word "is not everywhere circumscribed by rules" (PI: 68). The notion that it denies—that rules provide an *a priori* specification of the full application of words which takes all choice out of the hands of the speaker—is especially important in Wittgenstein's discussion of the paradox about rule following, to which we turn in the next chapter. That notion is one of the assumptions that give rise to the paradox.

It should be clear at this point that I agree with Wittgenstein's claim that rules do not completely determine application. The rejection of Frege's conception of the relation between sense and reference is the cornerstone of the intensionalism I have developed, and I have acknowledged the creativity in speech which prevents it from being rule-governed. The "top-down" approach sketched in this chapter does not attempt to strait-jacket the speaker's use of language in the manner of the theories Wittgenstein was criticizing. What I have said about the extensions of expressions is fully in accord with Wittgenstein's claim that we can use a word "so that the extension of the concept is *not* closed by a frontier" (PI: 68). But, as has been shown, the absence of a rule-determined boundary on the extensional side is quite compatible with a rule-determined boundary on the intensional side. We have shown how the *senses* of expression and sentence types can have fixed boundaries, can be circumscribed by rules everywhere in the language, without their tokens' having fixed boundaries or being circumscribed by rules everywhere in the domain of the language. For example, we showed how it can be open what activities count as a game in the sense of either concept (A) or (B), without its being open what the boundaries of those concepts are in English.

The possibility of divorcing meaning and use in this way did not occur to Wittgenstein. If he was ever in the grip of a picture, it was the picture of meaning and use wedded for life. During the entire time that Wittgenstein entertained the idea of a grammatical notion

of meaning (see *Tractatus*: 4.002), it was inextricably bound up in his thinking with usage. Thus, in the Cambridge lectures of 1931–32, the last point at which he took seriously the idea that meaning has its locus in the underlying grammar of words, he says:

> The grammatical rules applying to it determine the meaning of a word. Its meaning is not something else, some object to which it corresponds or does not correspond. The word carries its meaning with it; it has a grammatical body behind it, so to speak. Its meaning cannot be something which may not be known. It does not carry its grammatical rules with it. *They describe its usage subsequently.*[102]

It is clear here that the meaning of a word is something descriptive of its future use. This is brought out even more clearly in his Cambridge lectures of 1932–35 where he finally sees the idea of a grammatical notion of meaning as a fundamental error. In rejecting the notion, he says:

> . . . we are tempted to think we can deduce the rules for the use of a word from its meaning, which we supposedly grasp as a whole when we pronounce the word. This is the error I would eradicate. The difficulty is that inasmuch as we grasp the meaning without grasping all the rules, it seems as if the rules *could* be *developed* from the meaning.[103]

Of course, I would also eradicate the error of thinking that the meaning of a word contains full instructions for its use. But, on my diagnosis, the source of the error is not the one Wittgenstein identifies: conceiving of meaning grammatically. It is, rather, conceiving of grammatical meaning as something which gives full instructions for the use of a word.

Not being able to think about meaning apart from use, Wittgenstein could eradicate the error only by rejecting the notion of grammatical meaning. Thus, he was obliged to develop a non-grammatical conception of meaning. The development of such a conception in the *Philosophical Investigations* constitutes what I described in section 11 of this chapter as Wittgenstein's way out of the impasse to which the *Tractatus*'s treatment of the logical powers of atomic sentences had led. The problem about such sentences is a special case of the more general problem about grammatical meaning discussed in the 1932–35 Cambridge lectures. The proto-theory's separation of grammatical meaning from reference and use constitutes the alternative way out that I recommended in section 11.

27

The arguments in PI sections 79, 80, and 82–87 have inspired some of the most influential anti-intensionalist arguments in the philosophy of language over the last two decades. Section 79 is particularly important in this connection. This short passage of approximately one page criticizing the view that proper nouns have a sense that functions as a reference-fixing description contains the germ of Kripke's criticisms of the description theory.[104] Furthermore, the more general criticism of intensionalism developed by Donnellan, Putnam, and Kripke can be seen as an implementation of Wittgenstein's suggestion in section 87 that his line of argument in connection with proper nouns can be extended to common nouns.[105]

In chapter 6 I will examine these extensions of Wittgenstein's thinking in sections 79, 80, and 82–87. Here I can only promise that I will show there that the arguments of Donnellan, Putnam, and Kripke do not succeed against my version of intensionalism built upon the proto-theory. My point will be that such arguments fail to be general arguments against intensionalism because, like many of Wittgenstein's own arguments, they conflate intensionalism with Frege's version of it. Although these arguments refute certain of Frege's assumptions about sense and reference, they do not thereby refute intensionalism, since the existence of the proto-theory's version of intensionalism leaves intensionalists free to abandon those assumptions.

In sections 89–133 Wittgenstein is principally concerned with describing philosophical investigation as he thinks it should be and comparing this with philosophical investigation as it is traditionally. For expository reasons, I presented my account of this material at the beginning of this book and at various later points. In any case, this material does not contain arguments to which we are required to respond.

Finally, the sections following 133 set the stage for and lead into Wittgenstein's paradox about following a rule, which is explicitly stated in section 201. That paradox is definitely something to which we have to respond, but, owing to its special character, the response requires a chapter to itself. Those sections are treated in the next chapter as part of my response to the paradox.

28

We can now claim that the line of argument we have been pursuing in this chapter establishes (I), viz., that Wittgenstein's critique of the-

ories of meaning in the sections of the *Philosophical Investigations* leading up to the paradox does not eliminate all such theories. Our argument is a sort of existence proof. It exhibits a theory, the proto-theory, which survives every criticism of theories of meaning in those sections. This is, for the most part, because Wittgenstein's criticisms, although incisive, were designed to apply to significantly different theories of meaning. He conceived too narrowly the range of theories against which he had to argue, and, as a consequence, the difficulties that his arguments bring to light, typically quite genuine difficulties with the theories he targeted, can be overcome not by abandoning the enterprise of theorizing about meaning, but by abandoning theories of meaning with those difficulties.

Many of Wittgenstein's criticisms concern difficulties with referential theories of meaning. These criticisms support sense theories against referential theories. Where Wittgenstein's criticisms concern difficulties in sense theories, the difficulties are almost invariably idiosyncratic to Frege's theory, Wittgenstein's own theory in the *Tractatus*, or certain psychologized versions of these. The proto-theory differs from such sense theories in three fundamental ways. These differences deflect Wittgenstein's criticisms.

First, the proto-theory does not define sense derivatively in terms of reference or think of sense as containing rules of use. As a consequence, the theory does not lead to a "top-down" approach on which sense determines reference or make sense responsible for rules that specify use in advance. As we have seen, and will see again in chapter 6, Frege's definition of sense was a fatal blurring of what started out to be a sharp sense/reference distinction. As we shall see in chapter 3, thinking of meaning as something in which "all the steps are already taken" is one of the things that makes an intensionalism vulnerable to Wittgenstein's paradox about following rules.

Second, the proto-theory is not introduced as an ideal language intended to improve upon natural languages. Rather, it was introduced as a scientific theory of natural languages with only the standard scientific aim of discovering the truth. Thus it escapes the charge of pursuing the chimera of an ideal language more perfect than our natural languages (PI: 81). In introducing the proto-theory as scientific theory, I do not wish to suggest that Wittgenstein thinks that natural languages cannot be studied scientifically, but only to deny his claim that such a study can make no substantive contact with philosophy. I go along with Wittgenstein in thinking that there is a line between scientific linguistics and philosophy, but, as will be made clear in chapter 8, this is only the thin line dividing a science proper from its foundations. The proto-theory is a piece of science, but one

which, if my argument in this book is right, makes substantive contact with philosophy, with important consequences for the direction of twentieth-century philosophical thinking.

Third, the scientific character of the proto-theory was construed along the lines of mathematical sciences understood Platonistically. Wittgenstein had argued that a philosophically acceptable approach to language could not be scientific because a scientific study of language, as he understood it, is an empirical study. But, again, the scope of his argument was too narrow. As a consequence, his criticisms of theories of meaning that are scientific fail against theories that are scientific but not in the empirical sense. Since the proto-theory does not concern unconscious knowledge, computational states of language users, the subjective experiences of speakers, or any other empirical phenomena, but, instead concerns the structure of sentences construed as abstract objects, it escapes Wittgenstein's criticisms of psychologically oriented theories of meaning, particularly, those criticisms which apply because the theories fail to account for the normative criteria in languages.

Because of these differences, much of the time, our development of a theory of meaning and Wittgenstein's critique of theories of meaning pass each other like ships in the night. But not always. In virtue of the features that the proto-theory shares with its intensionalist predecessors, some of Wittgenstein's arguments do apply to it, most importantly, his arguments against the use of ellipsis to motivate the postulation of underlying linguistic structure and against the possibility of analysis. But the applicable arguments have been shown, in all cases, to be inadequate against a decompositional theory. Showing those arguments to be mistaken was the crux of my case for a theoretical conception of meaning.

At one point, Wittgenstein characterizes the traditional conception of meaning as follows: "You say: the point isn't the word, but its meaning, and you think of the meaning as a thing of the same kind as the word, though also different from the word. Here the word, there the meaning." (PI: 120) As far as it goes, this characterization captures the proto-theory's conception of meaning. On this theory, the meaning of a word is similar to the word in being, like its morphological structure, part of its grammatical structure, but it is different in being sense structure rather than syntactic structure. Being part of sense structure, meaning will, of course, not be public features of sentences in the way the words in their surface syntax are. Rather, syntactically simple words, even in the deep syntactic structure of sentences, conceal complex meanings. Thus, we have been able to appeal to grammatical ellipsis for evidence to support the

proto-theory's postulation of underlying decompositionally complex senses.

To meet Wittgenstein's criticisms of appeals to ellipsis, we argued that the criticisms involve a mistaken conception of the phenomenon. We showed that, on an adequate conception, the proto-theory's postulation of underlying sense structure can be justified on the grounds that such structure is the only aspect of grammatical structure that can account for pre-theoretically recognizable sense properties and relations of sentences, such as meaningfulness, ambiguity, synonymy, antonymy, redundancy, etc. The justification claims that the proto-theory accounts for sense properties and relations in exactly the same way that other theories of underlying grammatical structure account for their properties and relations, and further, that this way fits the standard pattern of scientific theory construction in which, to give a complete account of pre-theoretically recognized properties and relations of the objects in the domain of study, it is necessary to acknowledge structure with no surface realization.

It is important to stress that this postulate of underlying sense structure successfully accounts for the pre-theoretically recognizable semantic properties and relations. The proto-theory's postulation does not put us in the position that the postulation of grammatical meanings in the *Tractatus* put Wittgenstein in, namely, the position of resorting to underlying structure without thereby clearing up the mystery about the inferential powers of sentences. Since it was construed as logical form in the sense of Frege's *Begriffsschrift* and Whitehead and Russell's *Principia Mathematica,* Wittgenstein's underlying sense structure left him with a mystery, namely, the mystery of how atomic sentences like "The spot is red" and "The spot is blue" can be contradictory and how such sentences can imply sentences like "The spot is colored". But our postulate of underlying sense structure does not leave us with such unanswerable questions, because the proto-theory's underlying sense structures are construed not logically but linguistically, in particular, decompositionally.

On the proto-theory, those sentences, which are atomic from the viewpoint of logical form, are not atomic from the viewpoint of semantic form. Accordingly, although purely logical theories are unable to account for the inferential relations in question because the terms and predicates in these atomic sentences are syntactic simples—the semantics of such theories at best being something like the numeral notation considered earlier—the proto-theory can account for such relations, because the terms and predicates are not simples. The terms and predicates contain the structure necessary to ground the relations in question.

The proto-theory represents two kinds of sense structure below the level of syntactic simples. One is a superordination structure which interconnects the component senses in the sense of a word in a conceptual hierarchy. The other is an antonymy structure of opposed concepts subordinate to a common superordinate. For example, the senses 'red', 'green', 'blue', etc. are opposed subordinates of the concept 'color', and the senses 'husband' and 'wife' are opposed subordinates of the concept 'spouse'. Like superordination, antonymy can be formally represented as an aspect of the decompositional sense structure. With reference to these relations, the proto-theory can explain why "John is a husband" entails "John is a spouse" and why "This spot is blue" contradicts "This spot is red."[106]

29

The proto-theory and the approach of the *Philosophical Investigations* both offer a solution to the mystery of why sentences whose syntax classifies them as atomic nonetheless have inferential powers. Both solutions represent a significant advance over the logical framework of the *Tractatus*. But they are very different sorts of advances over it, with very different consequences. The proto-theory abandons Frege's notion of sense, too, but not the intensionalism underlying it, replacing Frege's referentially defined notion of sense with a notion defined solely in terms of sense properties and relations internal to the grammar of the language, a notion which carries Frege's original distinction between sense and reference through to its natural conclusion, namely, the full separation of sense structure and logical structure. Wittgenstein's approach abandons not only the Fregean notion of sense but every intensionalist notion on which a sense is "a thing of the same kind as the word, though also different," developing an entirely different conception of sense and leading to a unification of sense structure and logical structure.

With respect to resolving the mystery, both approaches work: each gets us out of the quandary. (This is also true of the Quinean resolution, which seeks to debunk the mystery on the grounds that the meanings necessary for logically atomic sentences to have genuine inferential powers do not exist.) But these resolutions are not equal in other respects. Wittgenstein's rejects "the great question"; my own resolution (and Quine's) do not. Wittgenstein's (and Quine's) reject traditional metaphysical philosophy; mine does not. Wittgenstein's (and Quine's) reject necessary truth; mine does not. Wittgenstein's (and Quine's) take a naturalistic standpoint; mine does not.

Nonetheless, the very fact that the proto-theory and the approach of the *Philosophical Investigations* both work proves the point I set out to make in the present chapter, namely, that the arguments that Wittgenstein deploys against intensionalist notions of meaning—prior to the argument based on his paradox about rule following—do not succeed in refuting all of them and in thus establishing his rival notion based on use. Whatever powerful criticism of intensionalist theories of meaning may be found in the discussion of rule following, there is no good criticism of these theories in the arguments leading up to that discussion.