Chapter 1

Introduction:
Context as an Explanatory Concept in Semantic Theory

The notion of context unavoidably plays a role in theories of meaning. In the "folk linguistics" that we all learn along with the difference between adverbs and adjectives, prefixes and suffixes, it is a commonplace, for example, that context can influence the meanings of pronouns. In the sentence 'John just sold his car' the context lets us know that it is John's car that was sold—that the pronoun 'his' means the same as 'John's'. Similarly, context explains the difference in meaning between separate occurrences of lexically ambiguous words like 'bank'. 'Mary had a picnic on the bank and then went back to work at the bank' is understandable because the context tells us which of its two meanings 'bank' has in each occurrence. Even when the ambiguities are not lexical or conventional, as with the use of novel metaphors, it is context, we readily acknowledge, which provides the additional information the audience needs to determine the speaker's meaning. 'Clinton is having trouble getting his herd into the corral' could convey a very definite meaning in a suitable context, e.g., one that made it clear that what Clinton was trying to do was to get the Democrats in Congress to support a particular piece of legislation.

Of course, things are not always as simple as these examples might suggest. In the sentence 'Tom was angry because John just sold his car,' 'his' could refer to either Tom or John, and a larger context would have to be consulted to determine what was meant—just how much larger is not clear. If context lets us know that Mary, the one who was sitting on the bank, was King Kong's bigger sister, and that she was taking a lunch break from destroying the buildings along the river, the meanings of the two occurrences of 'bank' could have to be reversed. A similar uncertainty is apparent with Clinton and his "herd"; what constitutes a "suitable" context for a clear understanding of the metaphor? To answer that question we would need to know not just that context influences what the sentence means; we would also need to know how it does it. The same applies to the other examples. Thus the "folk semantics" of context is just a starting point for a detailed investigation of what turns out to be a complex aspect of linguistic meaning.

Philosophical accounts of meaning develop out of and extend (and in turn, influence) commonsense views of meaning; but they find the notion of context equally indispensable. John Stuart Mill's work provides a telling example. His classic analysis of the name relation in his System of Logic1 begins by dividing referring terms into a series of exhaustive

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1 Book I, ch. ii.
categories. The "first grand divisions of names" is into individual or singular names and
general names. In paradigm cases this distinction is clear. A common noun like 'king' can be
truly predicated of many objects, a proper name like 'Socrates' can be truly predicated (let
us suppose) of only one. But Mill recognizes that most proper names, like 'John,' are truly
predicated of many, and a general designator like 'Caesar's army' which on its face is true of
many aggregations of Roman soldiers, can, on occasion, be used to name a particular
aggregation which fought in a particular battle. Mill goes on to examine other examples of
such apparent violations of his distinction. There is nothing in the conceptual meanings of
'the sun' or 'the king' that would restrict their range of true predication to a single object,
since we know there have been many kings and we can imagine without contradiction many
suns; and yet 'the sun' is almost always used to communicate information about one
particular object. Similarly, in most circumstances 'the king' is used to name a particular
object (i.e., person), as in 'Today is the king's birthday.' On the other hand, in 'The king is
the head of the British state' it is used as a general name. No formal or grammatical criterion
seems capable of making the singular/general distinction Mill has in mind, and the
distinction is supposed to lie at the very base of the logical structure he proposes to
construct. The general solution he provides to this problem is that context decides, in a
given case, whether the words are being used as singular or general names. He explains that
in many definite descriptions such as 'the first emperor of Rome' the word 'the' conveys the
implication of singularity, but "what is done here by the word 'the' is done in other cases
[e.g., 'Caesar's Army'] by the context."2 In fact, we must take context to be relevant to an
expression's logical categorization even in cases of apparent definite descriptions (noun
phrases having the form 'the x'), since 'the king' turns out on occasion (i.e., in certain
contexts) to be a general term.

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2 Ibid., sec. 5.
The Philosophical Question of Context

Mill's appeal to context displays a pattern we will see repeated in other central figures in contemporary philosophy of language; this pattern grows naturally out of its characteristic logical methodology. Philosophical logic must concern itself with both the *form* and the *content* of statements. In giving an account of the meaningful contents of language it will inevitably encounter the context-sensitivity of many expressions of everyday language. One may choose, as many philosophers have done, to avoid dealing with the difficulties raised by context-sensitivity; for example, one may focus on mathematical and certain scientific uses of language where context seems irrelevant. The usual tactic has been to construct artificial languages in which context-relative ambiguities are systematically eliminated. But if philosophical logic is to fulfill its most general role, bringing clarity to the full range of human discourse, it must eventually deal with the difficult complexities of the natural languages in which the bulk of that discourse is carried out. One of the lessons of attempts to disambiguate—to "regiment"—natural language for specialized purposes is the ubiquity of context-sensitivity. Whenever this feature of natural language is eventually confronted, as has happened repeatedly in the work of the philosophers we will be considering, it is always appropriate to ask "What is meant here by 'context'?

Mill's explanation of the context-relativity of singular and general terms is satisfying to us, not because we have a clear *theoretical* notion of what context is, but because we know *intuitively* how it works; at least on a practical level we know how to use context to make the kinds of meaning determinations Mill describes. It seems that, although context turns up as an important explanatory notion at crucial points in linguistic theories of all kinds, it is an intuitive or commonsense understanding of how context operates, rather than explicit descriptions of context, that give it its explanatory power. As we shall see, this implicit appeal is very common in most recent contextualized philosophical theories of meaning, not to mention contextual theories of knowledge and ethics. In fact, context turns up as a vaguely specified explanatory concept in all sorts of fields, as the following examples from psychology illustrate.

The psychologist Jerome Bruner links the broad psychological notion of meaning with context in describing what he takes to be the overarching aim of cognitive science. He says cognitive science should be a "cultural psychology [which] seeks out the rules that human beings bring to bear in creating meanings in cultural contexts. These contexts are always *contexts of practice*: it is always necessary to ask what people are doing or trying to do in

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that context." He gives detailed research results on how young children become integrated into these contexts, particularly during the process of their acquisition of language. He argues that acquisition of language depends, in part, on a child having a particular "sensitivity to context" which seems to interact with the syntactic "readiness for language" which Noam Chomsky has emphasized.\(^4\) Bruner's research results will prove very helpful in developing the account of context which is the aim of this dissertation; Bruner himself, however, does not provide such an account. In particular, he does not attempt to explain how context influences the meanings of linguistic expressions. Others have, however, done so.

Donald Schön, an investigator of the social psychology of communication, has, for example, written insightfully about the communicative relation between students and teachers in face-to-face interaction.\(^6\) A detailed examination of actual conversations in pedagogical situations reveals a pattern of misunderstanding which (in cases of successful teaching) gradually gives way to understanding; in fact the kind of teaching Schön examines consists largely in building up the background necessary for successful communication. The student must, he says, "conduct an active search for the essential meanings of [the teacher's] instructions and demonstrations, even when these conflict with [the student's] prior understandings."\(^7\) One case study, for example, looks at an exchange between an architect and an architecture student; in the course of a critique session the student is criticized for "inadequate drawing." Analysis of subsequent statements by the two reveals that what the student *understood* by the word 'drawing' and what the architect *meant* by it were miles apart.\(^8\) What is revealed is "a process of systematic miscommunication. Not only do the two parties fail to achieve convergence of meaning, each fails almost completely to understand what the other is talking about."\(^9\) By 'drawing' the architect meant a particular process of working out three-dimensional ideas on a two-dimensional surface. Until the student understands this process, she will not be able to understand the teacher's pedagogical use of the word; once she does understand this process, there will no longer be any basis for the teacher's criticism—her drawing will no longer be inadequate. The entire pedagogical relationship can be looked at as building up the background that will allow the student and teacher to understand one another when they use certain key terms. Schön

\(^4\) Ibid., p 118.  
\(^5\) Ibid., pp. 72-3.  
\(^7\) Ibid., p. 120.  
\(^8\) Ibid., p. 130.  
\(^9\) Ibid., p. 126.
calls this background "context". What he describes sounds very much like Bruner's "contexts of doing and trying to do."

Similar pivotal uses of 'context' crop up in theoretical works concerned with every aspect of human activity. Schön's work, though, goes beyond merely invoking context as a vague influence causing difficulties in understanding conversational uses of language; he attempts, in fact, to describe some of the contextual features that come into play in the cases he studies. This at least gives an indication of what context must be in order to fulfill the communicative, meaning-fixing role attributed to it, both in common sense explanations and in more theoretical discourse. Schön calls context a "behavioral world" which "shapes [the communicators'] views of their own and others actions,"\(^\text{10}\) a world which they "perceive as reality."\(^\text{11}\) Since lack of shared context can block communication, understanding can occur only if each communicator is able to "enter the other's world so as to understand vicariously how a statement previously opaque could seem [meaningful]."\(^\text{12}\) Schön goes on to give detailed examples of features of this behavioral world and to pinpoint the features that come into play in fixing the meanings of specific words in pedagogical use.

A philosophical investigation of context thus grows naturally out of traditional philosophical concerns and runs parallel to them; it thus may learn from and contribute to ongoing work in other disciplines. It remains a distinctly philosophical enterprise to the extent that it keeps in mind the task of characterizing the meaningful contents of knowledge and thought. At the same time, such an investigation can draw on the work of other disciplines for data and for strategic and conceptual orientation. Attention to contemporary work in linguistic theory and psychology in particular is indispensable.

**Strategies and Difficulties in Investigating Context**

Not only does Schön's work provide a rich stock of examples of context-dependent meanings, it also suggests what might plausibly be taken as some of the very general features of context as it operates to fix those meanings. These suggestions provide a good starting point for thinking about how a general investigation of context might be conducted. For one thing, in the cases Schön studied, contextual features show up most clearly, not when communication goes smoothly, but rather when misunderstandings occur. Under normal circumstances context is transparent, even invisible; it is precisely what is "taken for granted." The lesson here: look for context in the places where language stumbles—in the use of expressions which are chronically ambiguous.

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\(^{10}\) Ibid., p. 127.
\(^{11}\) Ibid., p. 135.
\(^{12}\) Ibid., p. 136.
Secondly, context seems to be more than just an objective, physical environment for the use of language—more than just a speaker and an audience situated at a time and place among a collection of physical objects. What is significant in the context is not (the literally infinite mass of) what is out there to be perceived, but rather (the comparatively small collection of) what actually gets perceived, and, most importantly, how that material is perceived. What counts about context is its impact on the thinking and understanding of the language-users who inhabit it. Context apparently explains the meanings of words because it is already, itself, full of meaning. Context seems to have a structure and subjective qualities that would not show up in a catalogue of the merely physical objects surrounding a linguistic occurrence.

The contrast between the objectively described physical environment and what context would need to be to explain certain kinds of linguistic meaning comes out clearly when we consider how the demonstrative pronouns 'this' and 'that' are used. Imagine a doctor who is having trouble with an x-ray machine. She calls in a technician to examine an example of an unevenly exposed image, points to the x-ray film hanging on the office wall, and says, "That's a bad one." In that context, the word 'that' would obviously refer to the x-ray film. Now suppose that the image on that particular film was of a complex fracture in a child's leg. The same doctor, speaking to a fellow physician, might point to the same film in the same physical surroundings and say, "That's a bad one," but this time succeed in referring not to the piece of film but to the fractured leg, an object not even present in the immediate physical environment. Here we have a case of the same words, used in the same physical surroundings, having different meanings. If we want to say that the meaning of 'that' is determined by context, this example makes vivid the question of how a single set of physical circumstances can contextually determine two different meanings. But it might be objected that the physical surroundings are not really the same on both occasions. After all, the person spoken to is different in the two situations imagined. Surely that is the difference between the two contexts which explains the two meanings. To neutralize this concern, consider what would happen if the x-ray technician and the fellow physician were both in the room at the same time, and the doctor, not wasting time or words, said "That's a bad one," to communicate simultaneously two distinct messages to the two members of her audience. Here the word 'that' refers simultaneously to the film and to the fracture. The contextual explanation of the two meaning of 'this' in the latter case should also apply smoothly to those meanings as they occur in the earlier, separate cases. Thus, to explain these two meanings contextually it will be necessary to distinguish, in some sense, two

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13 This kind of reference to a non-present object is what Quine calls "deferred ostension."
contexts in a single physical environment; but that means that context cannot be identical with physical environment.

Examples like this one, together with the examples found in work like Bruner's and Schön's, suggest that specifying context requires considering such things as point of view, expectations, specialized perceptual training, and practical motivation. A theory of context will need to uncover general patterns that reveal how these factors combine to influence linguistic understanding.

A third lesson to be learned from Schön's examples is that the movement from misunderstanding to understanding seems to depend on changes in context, changes in which certain features are added to a context or take on new meanings, while other features drop out. Context appears to be essentially dynamic. There appears to be a back and forth movement between what has already been understood linguistically or pragmatically in a particular conversation, based on a given contextual structure, and the adjusting and revising of that context to aid understanding of new linguistic input. In fact the process of understanding language seems, at times, to be as much about using linguistic meaning to arrive at the right context as about using context to arrive at the right linguistic meaning. 14

These suggestions are encouraging insofar as they indicate a general line of investigation that could be applied to the complexities of context. These strategic lessons can be summarized as follows: 1) Focus on the most context-sensitive expressions, where potential for meaning shifts will be most obvious. 2) Try to isolate aspects of the surrounding environment which are influencing the mental or psychological processes of the language-users. 3) Pay attention to the the dynamic processes that can account for changes in context in the course of an ongoing language exchange.

But this encouragement is tempered by difficulties that these examples also bring to light. In the picture Schön paints, context is, as we have noted, neither a simple nor a static affair, and its very complexity threatens to undermine its usefulness as an explanatory notion. Unless we can substantially narrow what can count as context for a given case, the door is open for a flood of "hidden variables." If, for example, the moral to be taken from the x-ray example is that the complete life histories of radiology technician and physicians need to be included in the explanation of the meanings of utterances of demonstrative pronouns, then the project is clearly hopeless.

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14 The process of using knowledge of sentence meaning to learn about context is what John Perry and Jon Barwise have called "inverse interpretation." The back-and-forth dialectic between sentence meaning and context is a familiar feature of hermeneutic theories of interpretation. We will see how this contributes to the operation of context in Chapter 9.
We might attempt to avoid having to deal with the complexities of individual subjective histories by staying focused on the physical objects in question. One might say, for example, that 'that' means different things to the technician and the physician because the *piece of film which is being pointed at* means different things to them; on such a view, a single physical object can carry a variety of pieces of information, and can thus have multiple meanings. But this strategy just pushes the problem back a step. In effect difference in linguistic meaning is being explained in terms of the non-linguistic meanings of parts of the context. But what explains why the two hearers extract different meanings from the same piece of film? Again context could be appealed to, but without a clear account of what context amounts to in each case it is not clear what explanatory progress has been made.

As with Mill, the plausibility of explanations like Schön's of how we use context to overcome misunderstanding stems not from any explicit theory of context but rather from the fact that we often know intuitively how to use context in similar ways ourselves. In everyday situations we generally have an intuitive understanding of what's gone wrong when people fail to grasp the meaning of each other's words.

In *Fiddler on the Roof* there is an amusing scene that illustrates this nicely. Tevye, the dairy farmer with five daughters, and Lazar Wolf, the widower butcher, meet to have a drink in a bar. Unbeknownst to Tevye, Lazar is planning to ask him for the hand of his eldest daughter. In trying to figure out why he has been summoned to this meeting, Tevye has concluded that Lazar is interested in buying one of his cows. The stage is set for comic misunderstanding.

After they have shared a drink, Tevye says to Lazar, "I know what you want and you can't have her." Lazar frowns; the audience laughs. The scene continues, piling up one misinterpretation on another until Tevye asks, "What are we talking about?" and they discover that one was talking about the cow, the other about the daughter.

Our laughter indicates that, intuitively, we know something has gone wrong, and our reaction to the rest of the scene shows that we know what needs to be done to fix it. On our grammar-school account of meaning, we want to say that the context was supposed to make clear what the pronoun 'her' meant, and that it somehow failed to do so. Given Schön's way of looking at things we can describe in more detail what has happened. The meaning of 'her' in a particular use can be fully understood only by knowing certain things about the context of its use; specifically, something like which female entity in the context is the most relevant as a possible object of someone's wanting and having. This much seems

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15 Such a strategy might, for example, be based on Fred Dretske's information-theoretic account of meaning.
clear. As Schön puts it, until the two communicators share the same context they won't be able to understand each other. In Lazar Wolf's "behavioral world," focused as he is on the project of getting a wife, the most relevant female who could be the subject of conversation with Tevye is the daughter. In this context, Tevye's words "you can't have her" have a very clear meaning; it's just not the one they have at that moment in Tevye's context. In Tevye's context the most relevant female entity is the cow. At the same time, we the audience operate from a different context (one which, in a way, encompasses the other two)—a context within which we can distinguish the double meanings of the character's words. We also know exactly what information is required for the two characters to move out of their respective contexts and to join us in the more inclusive one. We further know what will happen when these contextual changes occur; first mutual recognition of the misunderstanding and then the possibility of accurate communication and mutual understanding.

This kind of analysis shows how having at least a rudimentary account of context help us articulate our intuitions about what seems to be a widespread and philosophically interesting aspect of language use. Still it is largely based on our pre-theoretical understanding of what goes on in casual conversational situations.

The question remains, is there a way to develop this intuitive, practical understanding of what context is and how it works into an explicit and detailed theory of context which abstracts from the bewildering complexity opened up by actual examples? What are we to make of Schön's metaphorical talk of a "behavioral world"? Is it something purely subjective, which is peculiar in all its details to each individual, and which changes from day to day, even from moment to moment? Or must it also contain components which, though partially private, are also partially shared—somehow bridging the subjective and the objective? The latter would seem to be the case, since contexts are supposed to change through observable social interaction involving observable public objects and with observable results—namely that misunderstanding can give way to understanding. But so far there is just too much material being drawn into the account without enough structure to make it very helpful. An enlightening theory of context will be one that finds dependable patterns which hold within and between these "worlds"; patterns which clarify their structure, their systematic development, and their interaction.

**Toward a Theory of Context**

There are, in fact, a variety of approaches to giving a theoretical account of context adumbrated in the philosophy of language, not to mention in the works of ethical contextualists and of psychologists such as Bruner and Schön. We might do well to begin
by eliminating from consideration strategies which at first appear attractive but turn out on closer inspection to be inadequate to the observed phenomena.

As the examples we have just been considering suggest, one difficulty that any theory of context must face is the problem of data overload. The naive conjecture that the context of an utterance just includes everything which surrounds it leads quickly to the realization that human language use cannot depend on understanding and reacting to all, or even a small part, of such a staggering collection of things, events, properties, relations, etc. Any strategy which limits the number and kinds of things which can figure in semantic context is worth examining. One such approach begins from the distinction between verbal and nonverbal context.

The verbal context is taken to be the collection of linguistic expressions which accompany the expression whose meaning is to be determined or explained. It may be thought that this "con-text" is really the genuinely relevant context anyway. The nonverbal context would then encompass everything else that surrounds the utterance in question. This distinction could then be used to justify handling the two kinds of context as separate issues—the strategy is "divide and conquer." Applying this strategy might involve letting the theory of meaning, strictly taken (e.g., under the title 'semantics') deal with the verbal context—describing the meaning-influences that words in a given piece of discourse have on each other—and letting some other specialty (e.g., pragmatics, or sociolinguistics) deal with the rest.16

The attraction of such an approach is that it narrows the problem of semantic context by narrowing the focus of investigation to the relations among the explicit verbal features of communication. By restricting the data for which a "strictly semantic" theory must account we can escape from the dizzying onslaught of environmental, social, emotional, and behavioral factors making claims for inclusion. It is, however, far from obvious how to make the distinction upon which this approach is based. First there is the problem of how big the verbal context must be to do the required job. The examples of John and 'his car,' and of Mary 'sitting on the bank,' show that what seems an unambiguous assignment of meaning given a small amount of accompanying text becomes questionable, or even just plain wrong when more of the surrounding verbiage is considered. Words used on Tuesday may depend for their meaning on words used on Monday. On Monday I could say "My dog will have her puppies any day now," and then on Tuesday say, "She had twelve puppies last night," using 'she' "in context" to refer to my dog. In a case like this, what

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16 There are a number of problems with the now traditional distinction between semantics and pragmatics. A good account of these problems is to be found in François Recanati's Direct Reference; some of them will be discussed below in Chapters 7, 8, and 9.
does the verbal context need to contain? All the words I have used in between? Once it is established that 'she' has as its semantic antecedent 'my dog' it will be obvious that all the intervening talk was irrelevant to that determination, but if context was one of the factors involved in making that determination, none of the intervening talk can be eliminated as irrelevant before that determination is made. Taking a slightly different tack, we might be tempted to restrict the "verbal context" in this case to just sentences containing reference to canines, since my Tuesday sentence contains the hint that I am talking about something having puppies. But what if I had just said "She had twelve last night," and still succeeded in communicating a clear meaning. Would we then have to include in the context all sentences containing forms of 'to have' or referring to entities which could have something? And since the words of one speaker can provide context for other speakers, we cannot restrict our attention to just the words of the speaker of the expression at issue.

Metaphoric and ironic uses of language pose additional problems in this regard. At this point the advantages of economy of data and focus that recommended this approach begin to melt away.

There is, on top of these problems, a striking interaction between verbal and nonverbal parts of context that makes the situation for the proposed strategy even worse. When we encounter misunderstandings caused by lack of context (i.e., situations in which everyone knows how to use all the words involved, but part of the meaning is still not getting across), we typically provide the confused party with verbal information about the context to make the meaning clear. In other words, we take parts of the nonverbal context and turn them into verbal context. The audience in the *Fiddler on the Roof* example, seeing Tevye’s confusion, may experience the urge to call out, "He’s thinking about your daughter! He wants to marry your daughter!" There is no obvious restriction on what parts of the nonverbal context might need to be articulated in order to achieve understanding. Often what needs to be verbalized and what can remain unarticulated in clarifying meaning is just an accident of what the people involved have seen, heard, or otherwise come to know about their respective and common situations. The job done by bits of verbal context in one situation seems to be done by nonverbal context in others. So why should a similar semantic explanation not apply to both cases?

Certainly the problem of data overload must be solved by any theory of context; the theory must identify a criterion of *selection* which will explain how a cognitively manageable amount of the surrounding environment comes to count as context in any given
utterance situation. But that criterion, apparently, cannot be just whether or not the environmental feature in question is a word.\textsuperscript{17}

Not only is the distinction between verbal and nonverbal context hard to make, making it doesn't really get us anywhere—it simply postpones the difficult but interesting problems. Normal language competence seems to entail being able to make nonverbal context into verbal context upon demand. We can't deal with one without dealing with the other.

**Atomism, Holism, and Contextualism**

Our failure to divide off verbal context for separate treatment leaves us back with the problem of dealing with unmanageably large contexts. When we turn to the description of non-verbal context, we seem to encounter a slippery slope that threatens either the accuracy or the achievability of any theory of meaning for natural language. If the theory acknowledges the influence of context on the meaning of individual occurrences of expressions (as it surely must to be an accurate description of natural language) then it seems to open the floodgates for a very great deal of context indeed—the whole phenomenal world wants to come rushing in. The worry here can, I think, be traced back to an apparent paradox, a clash between two common and persuasive intuitions about the meaning of instances of natural language use:

A) When we encounter examples of language—words, sentences, questions, commands, etc.—we very often have an immediate, clear, and definite understanding of their meaning.

and

B) The very same words, phrases or sentences can have very different meanings on different occasions of use.

Focusing on A) recommends a kind of atomism about meaning. Discounting strange dialects and secret codes, we know exactly what 'lime-green', 'elephant', 'Two plus five equals seven' and 'Clinton is the forty-second President of the United States' mean, independent of anything that may be going on around their use; there is something that each of these expressions, in itself, means. And this kind of clear, independent meaning is a

\textsuperscript{17} An attractive escape from this problem (and other related problems) is the idea that one needs merely to take into account the parts of the nonverbal context which are relevant to the linguistic activity in question. An appeal to relevance does indeed seem to point the way out. But the notion of relevance is not, itself, a simple one. In Ch. 9 I will in fact argue that context, in the required sense, need not include all of the world, or of experience, or of a language, or culture, but only those aspects which are salient or relevant (in very specific senses) for the utterance in question. Thus it appears that saying what aspects of the environment are relevant and saying what context is amounts to the same thing.
plausible standard for successful functioning of language, and so a paradigm of how language is supposed to operate.

Focusing on B), on the other hand, recommends a kind of holism. Although isolated examples, like those given in the last paragraph, do show a kind of independence of meaning, superficially similar expressions like 'red', 'cat', 'one of these and one of those equals twelve' and 'John is the best man' do not. Any consideration of how natural language actually functions in day-to-day communication suggests that examples of truly context-independent meaning are comparatively rare, and that even in apparent cases the independence and simplicity of meaning may be illusory. One thinks of Wittgenstein's remark: "Everyday language is a part of the human organism and is no less complicated than it."\textsuperscript{18} From this point of view, any account that sees language as built up brick-wise from unambiguous and independently meaningful linguistic units can only be seen as an oversimplification of the real nature of language.

The difference between these two positions can be expressed in terms of how they deal with or make use of the notion of context. A thoroughgoing atomism will see context-sensitivity as a marginal phenomenon, with context as a source of descriptive information, expressible in the (more basic) non-context-sensitive vocabulary; this source is drawn on by language-users to supplement the stable meanings of the other words contained in, or immediately surrounding, a sentence which contains a context-sensitive expression. On such a view, there is nothing contained in the meaning of a context-sensitive expression on a particular occasion of use that is not already contained, either explicitly or implicitly, in the stable linguistic meanings directly available in the context of that use. But as we shall see, there are strong reasons to doubt whether any such reduction of context-sensitive meaning to stable meaning can really be achieved.

An extreme holism, on the other hand, may take the whole of a culture, or of a "conceptual scheme," as the context that comes into play in individual uses of expressions. On such a view, little pieces of language depend for their meaning on the meanings of bigger pieces of language which are themselves embedded in an expanding network of ways of dealing with and conceptualizing the world. One is led to a troubling skepticism about whether any two language users ever really mean the same thing when they use the same expressions.

Although each of these radical alternatives grows out of plausible pre-theoretic intuitions, being forced to settle for a choice of one or the other should make us uncomfortable. There are, of course moderated versions of both semantic atomism and

\textsuperscript{18} Tractatus, 4.002
semantic holism, but this moderation is purchased at the price of backing away from the initial intuitions. I wish to suggest that looking carefully at what context is and how it operates can help explain (rather than explain away) those intuitions, while avoiding the extremes of atomism or holism.

In the way I have presented the dilemma, it is the slippery slope of ever larger contexts that leads to holism. Holism, I have been suggesting, begins with the unwillingness to attribute independent meaning to a certain isolated piece of language, for example a pronoun; in explaining the meaning of this ambiguous expression, a piece of context is appealed to. But when other such expressions are considered, new pieces of context are found to be needed. By parity of reasoning, what counts as context in one situation is taken to count as context in all situations. As the variety of expressions considered grows, so does context, until the holist is reluctant to ascribe any definite meanings (in some "primary sense") except relative to very large chunks of human culture or experience.

We can, in fact, see a process like this at work in the development of the philosophy of language. Consider Frege's worries about the ambiguity of certain words that could perform significantly different signifying functions in different sentential contexts. He resolves to "never ask the meaning of a word except in the context of a sentence." 19 But this sentence-holism is fairly innocuous. In fact it is simultaneously a kind of sentence-atomism, since it assumes that although isolated words may not always have clear meanings isolated sentences do. Though it seems harmless enough, it provides a starting point for the slippery slope, since some of the same considerations which can be used to argue that the meanings of words depend on the sentences within which they occur can also be used to argue that the meanings of sentences depend on the whole body of discourse within which they occur. With Quine this leads to the unwillingness to ask for the meaning of sentences except in the context of a "whole conceptual scheme." Davidson, of course, criticizes Quine's notion of a conceptual scheme, but feels compelled to endorse a holism of his own.

This drift toward holism has provoked strong criticism and has led to the development (really the revival) of forms of meaning-atomism which claim to be the only alternative. 20 But are atomism and full-blown holism the only viable alternatives?

The Tevye example shows that, in the case of certain kinds of everyday expressions, context changes perceptibly during the process of communication in ways that are not easily characterized as "changes of conceptual scheme" or anything of the sort. A very small increase in the context available to someone is often enough to supplement the meaning of an individual expression in a way that provides complete understanding. When

19 "Introduction" to his Grundlagen der Arithmetik, p. x.
20 Cf., e.g., Jerry Fodor and Ernie Lapore, Holism, A Shopper's Guide.
we look at communication as making use of expressions inside contexts built up in this way—added to incrementally until they are just large enough to serve immediate communicative needs—we see the possibility of a unit of meaning which is neither as big and unmanageable as a conceptual scheme or whole culture, nor so small and self-contained as to be implausibly atomistic. The suggestion here is that by paying attention to the dynamics of context in communication situations we may be able to isolate the basic structural features that are present in all context by noticing how they occur in simple, manageable cases. This is roughly the strategy used in Chapter 9.

The strategic decision to investigate the nature of context by focusing on small, simple contexts does not, of course, deny that in some cases the context needed to fix the meaning of a sentence or word may be very large and complex. Having described the dynamic processes by which contexts are formed and grow, there need be no upper limit on their size and complexity. Consider, for example, the claim that theoretical terms, such as 'atom' and 'quark', only have definite meanings within a scientific theory. Modern physical science certainly aspires to be a seamless field of discourse covering everything from galaxies to quarks, and when words like 'something', 'nothing', and 'everything' occur in scientific discourse, the relevant notion of thing needs to be understood in the context of this whole broad field. It is relative to such mega-contexts that it makes sense to talk of conceptual schemes. When a physicist says "Everything is made of quarks," both the domain of quantification of 'everything' and the meaning of 'quark' are clear relative to a certain body of scientific theory.

But as the Tevye example also suggests, we know how to move from one context to another when necessary to overcome misunderstanding. The same physicist, leaving on vacation, could say "I have everything packed in the station wagon" without being misunderstood as making an absurd claim. 'Everything' has a new meaning, relative to a new context. On this view, distinct contexts can coexist side by side and language-users can have access to many different ones. If we are able to see the conceptual scheme of physics, for example, as a kind of expanded (and continually expanding) context, coexisting with other accessible everyday contexts, there should be no particular reason to think of ourselves as being trapped within it. We can see the transition between thinking scientifically and thinking nonscientifically on the model of Tevye shifting from a context in which 'she' means Tevye's cow to one in which 'she' means Tevye's daughter.

Deciding whether a contextualized general theory of meaning can provide a way out from the atomism/holism dilemma is, of course, premature before having such a theory in hand. But assuming such a theory of context can be worked out, let me suggest how the resolution of the dilemma might go. Perhaps both strict atomistic and holistic theories are
correct in their fundamental criticism of each other. As the holist says, a single word or sentence is just too small a unit to have a clear meaning in isolation. As the atomist says, the whole of a language, culture, or conceptual scheme is just too large a unit to require before ascribing clear meaning. Where they may both be wrong is where they seem to agree—with each other—in thinking that those two are the only possible alternatives. What I wish to suggest is that the proper size unit within which to ascribe linguistic meaning is something of medium size—usually much smaller than a conceptual scheme but larger than an isolated linguistic expression. My aim is to be able to say, with a respectable level of precision, that the basic unit of meaning is an expression embedded in a context, where a context is understood to contain language-users and potential objects of reference, as well as certain social, cultural, and conceptual elements, but, in typical cases, only small numbers of each. Expressions embedded in very small contexts will approach having atomistic meanings; expressions in very large contexts will approach having holistic meanings. One might call this third way between atomism and holism "contextualism."^{21}

Some familiar positions in the philosophy of language display features of this kind of contextualism. In fact, on one reading, Wittgenstein's notion of a language game, developed as it was in reaction against various forms of semantic atomism, seems to fill many of the requirements of a context in the required sense.^{22} In the present study I will not evaluate the merits of a completely worked out contextualism, or even to develop such a position sufficiently for its merits to be accurately judged. I believe, however, that investigating the nature of context is a necessary step toward stating such an account in a form that will allow its merits to be accurately judged.

My intention with the preceding discussion of the contrast between holism and atomism, and of a possible third position between them, has been to motivate an investigation of the notion of context by illustrating how that notion connects with very basic issues in the philosophy of language. To the extent that one worries about philosophical semantics being caught in a vacillation between the two poles of atomism and holism, it is a worthwhile long-range goal to develop a third option which might settle some

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^{21} 'Contextualism' will, of course, mean different things, depending on what is meant by 'context'. The semantic externalisms of Dretske and Putnam have, for example, been called contextualisms. Such views seem to me unsatisfactory to explain indexicality because they assume extensionalist models of context which I characterize in Chapter 7 as inadequate. François Recanati, on the other hand, describes his work as a kind of contextualism—one which seems to me to be compatible with the theory of context presented below in Chapter 9.

^{22} One such position is clearly apparent in John Perry's "Wittgenstein's Builders," APA Presidential Address. Perry uses Wittgenstein's anti-atomistic ideas about linguistic meaning as arguments against Davidsonian holism, but the examples he uses show it is not a position which is compatible with a strong (Fodorian) atomism either.
disputed questions while preserving the legitimate insights of those two positions. But in sketching this third alternative, I have been using the so-far highly problematic term 'context'. To the extent that working toward a third position is desirable, and to the extent that contextualism seems a plausible candidate for that position, developing a theory of context will be seen as a worthwhile project.

But is it a do-able project? Besides a goal, such a project requires a workable strategy—a path across the slippery slope. It seeks a way to explain the clear meanings we find in our actual everyday uses of language. Typically we do not find ourselves sliding off into meaninglessness while grasping at larger and larger chunks of context. As indicated above, the goal is to specify a middle-sized piece of the world that has all the right properties to fill the contextual jobs required in a theory of meaning (something we will then be able to call 'context' in a precise theoretical sense). An obvious way to begin this job is to take a careful look at what these contextualizing jobs are, as a way of identifying the properties a suitable context must have. And as has already been suggested above by our consideration of how the notion of context is used by psychologists and others, focusing on clear, simple examples of various kinds of context-sensitive meaning is indispensable. We should begin by examining simple cases of highly context-sensitive expressions. Fortunately there is a body of literature dealing specifically with the semantics of highly context-sensitive expressions and I will explore important parts of this literature in the early chapters of this work.

**Terminology and Methodology**

Context-sensitivity has been noted and commented upon by a variety of philosophers, active in different traditions, and often, apparently, unaware of each other's work. As a result a somewhat confusing range of terminology has developed around the topic—particularly for designating what I have been calling "highly context-sensitive expressions." They have been called 'demonstratives', 'diectic expressions', 'egocentric particulars', 'emphatic particulars', 'indicator words', 'token-reflexive expressions', 'shifters', and 'indexicals'. I discuss the histories of some of these terms in treating the various theories in which they figure, but for now I shall adopt the term 'indexicals' without justification other than brevity. As a working definition let us say that indexicals are *expressions which change their meanings systematically according to the context in which*
they are used. A more detailed definition can be formulated once we have examined some examples of these expressions.

To avoid begging important questions, it is necessary to be careful about the use of terms like 'context-sensitive expressions' and 'indexicals' when they are introduced to cover a specific set of examples from a particular language. It is important to leave open the question of how much of human language displays context-sensitivity. We must distinguish between, on the one hand, membership in a set of words which clearly display specific types of context-sensitivity, and which will provide clear test cases for developing specific parts of the theory of context, and on the other hand, the general property of context-sensitivity which this set of words may or may not share with other expressions.

Accordingly, one element of the strategy of this investigation is as follows: begin with an examination of indexicals, to see how they get their meanings relative to specific contexts, and thereby get clear about the jobs context performs in these simple cases and what properties it must have to do this job. The hope is that we will have the best chance of developing a model of context if we begin with the simplest and clearest examples; later we can ask whether it is possible to extend that model to cover other parts of language.24 These core examples will include utterances of such expressions as 'This is Red', 'She is Mary' and 'That is the Morning Star', as well as already mentioned examples like 'That's a bad one'.

Having made the decision to begin with indexicals, there are still a variety of strategies available for consideration. One plausible strategy for a study of indexicality is to base it upon a previously completed (or substantially worked-out and well-founded) account of non-context-sensitive uses of language. The idea would be that a theory of linguistic meaning that works well for a fragment of natural language consisting of expressions with stable meanings could be supplemented with additional mechanisms to account for contextual influences. This approach would seem especially attractive because there are, in fact, some well-worked-out programs of linguistic analysis which have taken as their starting point the analysis of mathematical statements—the very epitome of stable meaning. Model-theoretic semantics, for example, as worked out by Tarski and extended by Montague and others, adapts the mathematical notion of a model and applies it to the

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24 It is worth mentioning that quite apart from dealing with technical problems raised by indexicals for semantic theory there are other good reasons for philosophers to be interested in indexicals. A sufficient reason for studying them is that they seem to be a universal and ineliminable part of natural human languages. To the extent that philosophy is interested in what it is to be human and that language is a distinctively human trait, the discovery and elucidation of universal components of human language becomes a potential source of philosophical insight. The course which that general elucidation takes and the insights it provides will of course be influenced by other narrower philosophical projects such as philosophical semantics.
analysis of a wide range of kinds of statements in natural language. Frege took as his starting point the analysis of mathematical proofs, and it was meditations on the verbal ambiguities that could threaten the validity of such proofs that led him to develop notions that have in turn given rise to an ongoing tradition in semantic theory. Russell gives many examples of how to explain the meanings of ordinary English sentences in terms of the precise language of the *Principia Mathematica*. Why not take one of these theories as a starting point for the study of context-sensitivity?

There are, however, a couple of things that could go wrong with this kind of approach. On the one hand, it could turn out that the application of the mathematically based theory to natural language was, itself, formulated in terms of context-sensitive expressions. For example, in Chapter 3 we will see that when Russell tries to extend the logical system of *Principia* beyond strictly mathematical content to cover the (relatively context-neutral) uses of natural language in scientific discourse—to explain how the formulas of logic can be given empirical content—he identifies elementary propositions with simple statements containing "logically proper names," which turn out to be indexicals. In such a case, it would appear that an investigation of context-sensitivity could not presuppose the results of such an extended mathematical theory on pain of obvious circularity.

On the other hand, it could turn out that, although it was possible to supplement a mathematically based theory so that it could be extended from mathematical discourse to cover other non-context-sensitive uses of language without relying on unexplained indexicals, the further extension to indexical expression revealed inconsistencies in the underlying theory. In Chapter 4, I argue, following John Perry, that this is the fate of Frege's general approach.

These two kinds of problems show the difficulties that can arise from an uncritical application of a theory developed for a specific fragment of language to another part of language, or to the full field of natural language in general. Nonetheless, important things can be learned from examining what existing theories have to say about context-sensitivity, and from the problems they run into along the way. Accordingly, Chapters 2-8 consist largely of examination of the linguistic theories of important philosophers of the 19th and 20th centuries, with an eye to the role context sensitivity plays in their works and what their conclusions can tell us about that phenomenon. This examination will highlight some underlying inadequacies in traditional approaches to this problem, as well as making clear connections between the notion of context and other long-standing issues in the philosophy of language.

Even if an existing theory of stable meaning could be found that did not suffer from one of the defects just mentioned, there is another problem with adopting such a theory as the
starting point for the kind of investigation I have in mind. Taking stable meaning as a
paradigm makes it easy to slip into ignoring some of the peculiarities of contextualized
meaning—what might start out as an attempt to extend and modify a theory to account for
new kinds of phenomena may end up as an attempt to reduce the new phenomena to the
old. Contextual meaning may come to be viewed as just another kind of stable meaning. As
we will see, this sort of thing has also happened, for example in some extensions of model-
theoretic semantics to include contextual factors.

There is also a sense in which choosing such a starting point is fundamentally
incompatible with one of the underlying motivations of the project. A theory of stable
meaning is bound to be fundamentally atomistic. Words or sentences which have the same
meaning no matter when or where they are used—that is, independent of context—are just
the ones that are obvious candidates for being the semantic atoms from which to build more
complex pieces of language with correspondingly complex meanings. But it is questionable
whether a theory that started out so congenial to atomism could be expected to eventually
develop into a distinct theoretical alternative to it.

Admittedly, avoiding commitments to the most widely held theories of natural language
as starting points makes the study of context-sensitivity more difficult, since it deprives it
of some of the most readily available theoretical tools. On the other hand, if these widely
held theories really are incapable of providing a basis for a satisfactory theory of indexical
meaning, that in itself is enough reason to look for a different approach. Seen in this light,
the study of contextualized meaning is no longer just a case of extending an otherwise
acceptable account of language to cover context-sensitive meaning for the sake of
completeness. It could turn out that understanding context-sensitivity may be a
prerequisite for understanding linguistic meaning in general, including non-context-sensitive
meaning. As we shall see, some philosophers have thought this is in fact the case. And in
spite of steering clear of many currently accepted theories, such a study is not left
completely without resources. Recent developments in linguistics and cognitive science, as
well as long standing, but less well known strands in the philosophy of language, provide a
ready stock of conceptual tools and starting points. In fact, the very problems that
indexicals pose for standard philosophical theories provide important and suggestive clues
about how to approach that study, and following these clues, while incorporating insights
from these other sources, would seem to provide the best hope of arriving at an account
which could be more or less smoothly integrated into our accustomed ways of thinking
about non-indexical uses of language. This, in any case, is the strategy of the present
study.
The overall structure of this work is as follows: Chapters 2 through 8 consist of a roughly chronological survey of the views of well-known figures in the philosophy of language since Mill. This survey focuses on the role indexicals play in those theories from two points of view: first, the way they use indexicals in stating their most fundamental notions about linguistic meaning; second, how they explain the meanings of indexicals in relation to the meanings of other expressions and to the contexts in which they occur. This survey brings to light the theoretical role which a detailed account of context must play in an improved theory. The final chapter then sketches a theory of context which I hope can fill that theoretical role.

Indexicals as Objects of Inquiry

So far I have been speaking of indexicals as if there were no doubt that there are such things—as if it were obvious that there is a distinct category of linguistic expressions with the identifiable property of being "highly context-sensitive." But since the whole strategy of this investigation hinges on the behavior of these words, it makes sense to offer some justification for this belief in indexicals.

A good place to begin is with a collection of examples drawn from the literature on these expressions. Typical examples in English are: the demonstrative pronouns 'this' and 'that'; the words 'here', 'there', 'now', 'then', 'yesterday', 'today' and 'tomorrow', which occur both as nouns and adverbs; the personal pronouns 'I' and 'you'; possessive pronouns, like 'your', 'my' and 'our'; and adjectives such as 'recent', 'current' and 'up-to date'. Tensed verbs display a kind of context-sensitivity of meaning closely related to the temporal indexicals, and so they also can be viewed as members of this category of expressions.25

To get a rough idea of what might justify our grouping these words together, consider for a moment the word 'today'. When I say "Today is Monday," while writing this, what does 'today' contribute to the meaning of my sentence? One way to answer this question is to think about how my use of that word influences the truth conditions of my use of the whole sentence.26 It seems pretty clear that if what I said was true, then a particular day—Sept. 16, 1996—is a Monday. In fact, the sentence, as I used it, has exactly the same truth conditions as the sentence 'Sept. 16, 1996 is a Monday.' The meaning of the word 'today' when I uttered that word in my sentence seems to be the same as the meaning of the date 'Sept. 16, 1996'. But to see that the meanings of the two sentences are not really the

26 Whether truth conditions, thought of extensionally, can tell the whole story of what indexicals mean will be the subject of an extensive discussion in Ch. 7; for now it is enough if considering such truth conditions can lead us to one plausible way of distinguishing indexicals from other kinds of expressions.
same in every respect, consider what happens if I speak the same two sentences tomorrow. What will be the meaning of the word 'today' then? By parallel reasoning it will have the same meaning as a different date: 'Sept. 17, 1996'. It will have a meaning of a similar kind to the earlier one—i.e., it will refer to a particular day—but it will not refer to the same day to which it referred before. One aspect of its meaning, the kind of thing referred to, stays the same, but something else crucial in its meaning, the identity of that referent, has changed.

A similar thing happens with the word 'I'. When I say it, it usually refers to the same thing that *my* name refers to. When you say it, it refers to the same thing that *your* name refers to. There are similarities between these two meanings—they both refer to particular persons—but they obviously have different meanings, since the persons referred to are different.

Now, is there a general way we can describe this systematic change of meaning that will provide a way of classifying these examples into a clearly defined category? Before attempting to answer this question, let us think a bit about a more familiar way of classifying expressions, namely into grammatical categories.

**Syntactic (Grammatical) vs. Semantic Classifications**

One way to begin a scientific study of any natural phenomenon is by describing, as carefully as possible, its observable properties. In the case of natural language, the study of grammar has traditionally provided such a description. Grammar has often gone beyond pure description, and become a normative discipline, recommending “proper” or standardized usage, but this aspect of grammatical discourse is obviously not part of the empirical study of language. In addition, 'grammar' has, since Chomsky, come to be used in scientific linguistics to designate abstract structures—not directly observable—which lie behind observable human language. But for now I want to focus on traditional grammatical classification based only on the most obvious surface features of familiar natural languages. Many of these features are, indeed, well described in traditional grammatical studies of language.

Traditional grammatical descriptions are based on categorization or classification of linguistic expressions according to their structure or the ways they can occur in larger structures. So for example, we have *sentences*, which are composed of *dependent* and *independent clauses*, which in turn contain *noun phrases*, *verb phrases* and *prepositional phrases*. Exceptions occur in fictional, ironic, metaphorical, and dramatic contexts, which we will consider in Ch. 9. But again, these details should not prevent us from forming an intuitively plausible notion of the class of indexical words.
phrases, and these phrases, in their turn, are composed of words. The words of a language are, finally, divided into categories—nouns, pronouns, transitive and intransitive verbs, adjectives, prepositions etc. according to the places they can stand in larger structures such as the various kinds of phrases and sentences. All this is so familiar that it will seem trivially obvious.

In contrast to this familiar kind of grammatical classification, the category of indexicals may seem rather strange, since it contains, as noted above, a seeming grab-bag selection from these categories. Is it possible to have a well defined category of expressions which is not a grammatical category? Let us consider that possibility for a moment.

The collection words we are calling indexicals doesn’t fit into the familiar grammatical categories for an interesting reason. As just mentioned, the traditional categorization of words is syntactic, based on the places those words can occur in larger linguistic structures which native speakers will recognize as well-formed. For a word to be a noun means that it can occur, e.g., as the subject of a sentence. So 'house' and 'horse' are nouns because they can both fit into structures like 'the ----- is big' and produce something which a competent speaker of English finds grammatical. According to this procedure, 'without' would not qualify as a noun, since putting it in the blank produces a collection of words: 'the without is big,' which is not English.

According to this kind of replacement test, indexicals do not fall into any syntactic, i.e. grammatical category; they do, however, display an interesting indirect relation to those categories. We have noted that the truth conditions for sentences containing indexicals are the same as corresponding sentences where the indexicals were replaced by certain kinds of non-indexical words: 'I' with proper names, 'today' with dates, etc. In each case, the replacing word or phrase must belong to a particular grammatical category. But that is not all. The replacing expression must belong to a clearly identifiable subset of that category. Proper names are grammatically nouns, but they can be sorted out from all other nouns by a slightly different substitution test. Suppose we take the sentence 'Bill Clinton is president' and replace the proper name with a singular noun phrase like 'the window.' A competent speaker of English can tell that something is wrong with the sentence 'The window is president' but it is not the same thing that is wrong when 'Bill Clinton' is replaced by something that is not a noun, e.g., in 'Without is president.' In the latter case, what's wrong is that the sentence is ungrammatical, in the former, it is grammatical but meaningless nonsense. Judgements about grammaticality across substitutions give us syntactic classifications, judgements about meaningfulness across substitutions give us a different kind of classification—semantic classifications. Proper names and dates are semantically classified categories within the syntactic category '(singular) noun phrases.'
Such semantic categories have begun to play significant roles in various parts of the study of human language—e.g., in theories of language learning, in regard to thematic roles in grammatical transformations, and in the study of certain kinds of aphasia. This suggests that the kind of categorization that gives us these semantic subsets has the possibility to reveal interesting features of natural language. For now, it is enough to show that these subsets are as much legitimate expression types as the syntactic classes they are parts of.

The move from these semantic subsets to indexicals requires one further step. This step involves yet a third kind of substitution test. Remember we saw that, under certain circumstances, sentences containing indexicals could be substituted for sentences containing specific members of the appropriate semantic subset without changing the truth conditions. In fact, associated with various semantic subsets there are specific indexical-containing sentence which will usually be accepted, under predictable circumstances, as a substitute for an otherwise similar sentences in which the indexical is replaced by any member of that subset. For example, 'today' is linked in this way with the set of dates. For any given date 'X/X/X', there are predictable circumstances (the speaker knows how to use a calendar, believes it to be that date, etc.) under which a sentence 'X/X/X is Monday' will be accepted as true by a competent speaker of English who accepts 'Today is Monday.' Parallel relations of substitutivity hold for all other indexicals, e.g., between indexical pronouns like 'I', 'he', and 'she', and proper names.

Although spelling out the details of this relation between indexicals and specific semantic subsets is a job that remains to be done, just observing that such a relation exists should make us confident that indexicals do form a legitimate classification of expressions. In the forgoing description of the relationship, the phrases specific circumstances and predictable circumstances occur where one could just as easily say specific contexts or predictable contexts. This gives a little more detail about what it means that indexicals are context-sensitive, and it is in spelling out just what those specific circumstances are, and the source of the predictability of the relationship between them and judgements of substitutability, that we will be fulfilling our goal of giving a theory of context.

As a point of departure, it is enough to see the parallels between the way familiar grammatical categories are identified and the way the category of indexicals can be characterized. To summarize, each indexical is linked to a specific semantic category of expressions in three ways: predictable substitutions of the indexical for members of that category can be made which preserve judgements of 1) grammaticallity, 2) meaningfulness, and 3) truth conditions. As the work progresses we will meet with further evidence that indexicals, such as those listed above, belong together as a single object of study. One striking feature of indexicals, which supports the claim that they form a definite
category—a feature noted by several of the philosophers we will study—is that, although none of them are adequately definable in non-indexical terms, they often seem to be fully definable in terms of each other. Thus 'I' might be explicated as 'the person now making this utterance'; 'this' as 'the object to which I am now attending,' etc. Because this apparent interdefinability is mutual and circular, it does not provide much headway in explaining the meaning of any of these terms individually, but it does suggest that their meanings will be explained as a group if at all.

Finally, it might be thought that since syntactic classification of expressions of language provides an exhaustive classification of linguistic expressions, an additional scheme of classification which yields non-syntactic categories such as indexicals would be superfluous. But such cross-classifications are found in many fields of investigation. On the contrary, having several orthogonal systems of classification may be very helpful for studying complex phenomena.

Biologists, for example have a system for classifying organisms based on their phylogenetic relationships—grouping them into genus and species, etc. But when they study ecological systems, biologists also use a system which classifies organisms according to their relations to other parts of their environment. Thus the Orca whale is classified genetically with cows as a vertebrate and mammal, but is classified ecologically with sharks as a marine carnivore. It would be silly to argue about which was the “right” classification, since they are being made for different purposes. It might, however, be confusing to someone just learning about biology who thought he had just gotten hold of an important truth, that whales are more like cows than they are like fish, and now finds that some of them are more like sharks than they are like cows.

A similar thing can happen in thinking about indexicals. I am suggesting that expressions of language can be classified in different ways, and that these classifications cut across each other and are useful for different purposes. A syntactic classification gives us, e.g. grammatical categories of words, and shows us how they fit together to make a potentially infinite number of complex sentences. This is interesting and important, but it does not reveal all there is to know about language. Expressions of language can also be grouped according to how they get their meanings—according to their semantic properties. If we classify words this way, proper names get classified with some adjectives, because their meanings remain constant over a wide range of circumstances, while demonstrative pronouns are classified with certain adverbial time expressions, because specific aspects of their meanings always vary, depending on where and when they are used. This latter group of words, the ones which depend for their meaning on their context of use, are the indexical expressions. As it happens, that category of expressions contains words from a number of
grammatical categories. Different ways of describing language are useful for different purposes—for studying different features of language. No single way can give a complete description of language. Problems can arise from ignoring one in favor of another; for example, indexicality is invisible to syntactic description, and thus, not surprisingly, difficult to explain for theories that are founded on syntactic description.

The Program for the Dissertation

To summarize, the goal of this work is to articulate a theory of context which will contribute to our understanding of the phenomenon of linguistic meaning. The strategy for pursuing this aim is to examine indexicals with an eye to uncovering the contextual features that are involved in their peculiar ways of having meanings. The hope is that, because indexicals display clear and relatively simple forms of context sensitivity, an examination of what goes into their way of meaning will provide the basis for an account of context which can then be extended or supplemented if necessary to account for other, more complex forms of context sensitivity.

In Chapter 2, an exposition of John Stuart Mill's theory of singular reference focuses on the important role played by indexicals in his account of proper names. His appeal to context to fix the reference of definite descriptions is extended to cover the reference of indexicals. In this way, a broadly Millian account is developed in which proper names are explained in terms of indexicals, and indexicals are explained in terms of context. Mill gives no explicit account of context, but two different contextual structures (one private, the other public) are identified—structures which suit the need of two different ways of understanding the contextual component of singular reference. Of special importance is Mill's insistence on the objectivity of meaning presupposed in ordinary uses of language. What I call his "principle of semantic objectivity" becomes an influential constraint on theories of meaning, including theories of indexicality and context.

Chapter 3 examines Bertrand Russell's views on indexicality. By combining his "theory of descriptions" with his accounts of "logically proper names" and of acquaintance, we can identify a view of singular reference similar to Mill's, though more explicit than Mill's in its reduction of singular reference to indexical reference. In this "indexical phenomenalism" Russell clearly adopts one of the two Millian models of context (the private one) and develops it to a point where it can be seen to be a dead-end. Along the way, however, Russell adds new guiding principles to the one we got from Mill.

In Chapter 4 we turn to Gottlob Frege's theory of meaning. Following John Perry's critique of Frege's treatment of indexicals, I argue that any similar "descriptivist" theory will be inadequate to account for context-sensitivities observed in natural language. On the
other hand, Frege's notion of a publicly accessible "mode of presentation" suggests a way
to develop Mill's public model of context so as to avoid the problems Russell's view faces.

Russell's and Frege's remarks on indexicals are incidental to their other concerns, but in
Chapter 5 we encounter a carefully worked out, fully integrated account of indexicality in
the work of C. S. Peirce. Peirce's theory provides a starting point for developing an
intersubjective model of context, one which builds on Mill's basic insights and addresses
concerns raised by Russell and Frege, while avoiding problems endemic to their views.

Chapter 6 focuses on the work of Edmund Husserl. As in Peirce, we find an explicit and
detailed theory of indexicality; also, as in Peirce, it favors an intersubjective model of
context. In his *Logical Investigations*, Husserl confronts, and claims to solve, apparent
contradictions between Millian and Fregean demands for objectivity and Russellian and
Peircian subjective limitations on our access to objects of reference. Husserl's later
realization of flaws in this account lead him to develop a more adequate notion of objective
meaning, one with striking similarities to Peirce's. In addition, he articulates a view of the
commonsense human social world (the "life-world") which contains many of the features
required in indexical context.

Chapters 2 through 6 highlight a set of traditional concern in the philosophy of language,
shared by all these philosophers, which are crucially related to indexicality and context.
These issues include: assessing and explaining the similarities and differences between
mathematical, scientific and colloquial uses of language; worries about how to explain the
experiential content and cognitive significance of statements without compromising their
objectivity—how, that is, to avoid the fallacy of psychologism; describing the relation
between the meanings of concrete instances of language use and word meanings and
sentence meanings thought of as abstract concepts and propositions. We take from these
chapters the lesson that a theory of meaning for natural language must do justice both to
the *objective goal* of our language use, and to the *subjective means* at our disposal for
achieving that goal.

In Chapter 7 we consider how recent theories of meaning measure up to these two
desiderata. In the work of Carnap, Quine, Tarski, and Montague, we find a developing
program which does a good job of characterizing the objective goal of referential uses of
language, including indexicals, through an evolving use of formal models. At the same time,
there are clear indications that this program is inadequate to the job of explaining cognitive
significance and intentional content. In particular, the extensionalism presupposed in the
model-theoretical formulation of the program limits its ability to do justice to the
indispensable notion of an "intention to refer." This inadequacy shows up vividly in the
models of indexical context proposed by practitioners of this program.
Chapter 8 examines the work of David Kaplan, work which grows out of the Carnap-Tarski tradition but which increasingly recognizes features of language use and intentionality more characteristic of the theories of Peirce and Husserl. Particularly important are Kaplan’s evolving thought about the contextual factors involved in the demonstrations required by the semantic conventions governing the use of certain indexicals.

In Chapter 9 propose an account of context intended as the basis for a more adequate account of indexical meaning, and eventually, of context-sensitive features of linguistic meaning in general. It begins with a descriptive catalogue of the components of context, along with reasons for believing that language-users actually make use of these components in language acquisition and in mature linguistic activities. It also addresses the dynamic features of contexts: how they are formed, how they relate to other contexts, and how they change in the ongoing process of language learning and language use.
Fossils

Beyond this strategic problem there is an principled objection that would seem to eliminate this kind of approach from serious consideration: to the extent that a theory of linguistic meaning limits itself to the consideration of the verbal context of utterances, to that extent it leaves unexplained the acquisition of natural human language. Let us suppose that the expressions of language can be divided into those whose meaning, on any occasion, is dependent on context and those that are not (for the purposes of this argument either of these divisions may be empty). Now if we try to explain the meaning of an expression of the first type, call them "context sensitive", simply in terms of the verbal context, we must assume that when a child first learns to use (i.e. to understand the meaning of) that expression she does so on the strength of prior understanding of the terms that make up that verbal context. But now we may well ask how the child learned the meanings of those other words. If the context contains only other context sensitive expressions, we eventually run out of verbal context as we trace back, one by one, the acquisition of those expressions. If the context contains non-context sensitive expressions (or if we meet with such expressions anywhere along the explanatory line), then we still need to give an explanation of how those expressions were acquired. But now think about what must go into an explanation of the acquisition of the earliest bits of human language, whether “context sensitive” or not. Surely that explanation must look at the whole range of circumstances that surround the child, and specifically those aspects of the child's environment which the child is actually experiencing. Insofar as examples of language in the child's environment are part of the explanation of the earliest stages of language learning (as they of course must be) they enter the explanation at this earliest stage just as they are experienced by the child: not as linguistically meaningful expressions but as perceptual phenomena on a par with other sounds, shapes and movements. This environment that surrounds the child and inevitably enters into the explanation of its early acquisition of language is nothing but the non-verbal context that we had sought to
eliminate from consideration. But if we need to take account of non-verbal context to account for the acquisition of non-context sensitive expression, it makes no sense to avoid reference to it when discussing context-sensitive ones. In fact, if the acquisition of context sensitive expressions is explained in terms of the meaning of non-context sensitive ones, and the acquisition these in turn are explained in terms of non-verbal context, then non-verbal context has already been covertly included in the explanation of context sensitive expressions.28