CHAPTER 1

Four requirements on theories of meaning

1. The notion of a theory of meaning for a language.

An important feature of Wittgenstein's approach to the philosophy of language in the *Philosophical Investigations* is that Wittgenstein does not want to develop his ideas into a systematic *theory* of meaning. The present study, on the contrary, agrees with the view described by Dummett in the following passage:

> according to one well known view, the best method of formulating the philosophical problems surrounding the concept of meaning and related notions is by asking what form that should be taken by what is called ‘a theory of meaning’ for any one entire language; that is a detailed specification of the meanings of all the words and sentence-forming operations of the language, yielding a specification of the meaning of every expression and sentence of the language.

*A theory of meaning for a language* $L$ should specify in a metalanguage the meaning of every word of $L$ so as to yield a specification of the meaning of every expression of $L$. The construction of such a theory – Dummett adds – is not viewed as a practical project. The philosopher's task is rather to expound the general principles according to which such a construction could *in principle* be carried out, i.e. the *general form* of a theory of meaning in this sense. One of the advantages of this approach is that it makes philosophical discussion on meaning and language much more rigorous and precise. Inchoate and indetermined ideas are developed in detail and their consequences, their merits and demerits become clear, so that the ideas in question can be better evaluated and criticized, if they are wrong. It seems to me that, if philosophy has to be critical, this is our duty.

Dummett has formulated four requirements on theories of meaning. In this chapter, I shall expound and defend Dummett's four requirements. But my formulation of the requirements (in particular as far as the requirement of

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1 Cf. Wittgenstein (1953) I. 109: "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".

2 Dummett (1975) p. 97.

3 Cf. also "No-one is actually going to construct a theory of meaning for a natural language; the questions we must ask, as philosophers of language, concern *how* such a theory is to be constructed", Dummett (1987) p. 254.
manifestability is concerned) partly differs from some of the various formulations which occur in Dummett's writings.

2. First requirement: the connection between meaning and understanding.

A theory of meaning should be a theory of understanding. The meaning of an expression (word or sentence) or of an utterance is what a speaker-hearer must know (at least implicitly) about that expression, or that utterance, in order to understand it.

The first requirement states the fundamental aim of a theory of meaning. Words would be mere sound waves or ink spots, if we couldn't understand them. A language wouldn't be a language, if it weren't understandable. Therefore the main task for the philosophy of language is to explain what it is to understand a language. Understanding a language can be considered a very particular kind of knowledge, knowledge of a language.

The most crucial philosophical problem is not what it is to understand a language by means of another language which is already understood. The capacity to learn a language on the basis of another language obviously presupposes an understanding of some first language. Thus the primary problem is what it is to understand a first language, independently of other languages. If the understanding of a first language is considered a particular kind of knowledge, such a knowledge must be finite, because language users are finite beings. Moreover it cannot be completely explicit. Explicit knowledge involves 1) the capability to give some linguistic formulation of what is known and 2) an understanding of this formulation. Such an understanding must be independent of the possession of the piece of explicit knowledge in question, otherwise explicit knowledge could never be acquired. The reason is that in order to acquire explicit knowledge one should understand its linguistic formulation and in order to understand the latter – if such an understanding weren't independent – one should already possess the piece of explicit knowledge linguistically formulated. If the whole understanding of a first language L on the part of a speaker consisted in the completely explicit knowledge of a finite set K of linguistic formulations, it would presuppose an independent understanding of such formulations. Thus, at least some more basic linguistic formulations in K must belong to some other language which is independently understood. But this contradicts the assumption that L is a first language (for the language user we are considering). Therefore a

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knowledge of a first language L cannot be completely explicit; it must be at least in part implicit.

To the latter general argument, which excludes the possibility of a completely explicit knowledge of a first language, we can add the empirical (or quasi-empirical) observation that, as a matter of fact, a speaker's knowledge of his first language is mostly implicit. A speaker understands utterances in the language but usually is not capable of stating explicitly what piece of knowledge constitutes such an understanding.

According to the first requirement, an explanation of the nature of the speaker's implicit knowledge must be given by a theory of meaning. The meaning of an utterance is what a speaker has to know in order to understand that utterance. A theory of meaning should make meaning explicit. A theory of meaning for a particular language L should give a systematic representation of the mostly implicit knowledge which constitutes an understanding of that language; it must answer the questions: what must a speaker know in order to understand a sentence of L? what is to be counted as an understanding of such a sentence? The theory of meaning for L is formulated in a metalanguage which may also contain L as a sublanguage. Obviously, the theory is not viewed as something by means of which a being without language could get to know what a language is or could gain an understanding of the particular language L. Rather, a theory of meaning for L is a set of metalinguistic sentences, through which a being who already understands the metalanguage (and thus L itself, if L is contained in the metalanguage) could get to know explicitly in what an understanding of L consists.

Chomsky⁵ introduced a famous distinction between linguistic competence and linguistic performance. The term "performance" is used by Chomskian linguists as equivalent to "linguistic behaviour" or "the actual use of language in concrete situations". The expression "linguistic competence" is used to indicate the tacit knowledge that a speaker has of the language, a tacit knowledge which provides the basis for linguistic performance, even if, for various non-linguistic reasons (for example the efficiency of the speaker's vocal cords), the speaker's performance may not perfectly correspond with the speaker's competence. One's linguistic competence is one's knowledge of a particular language. Thus, if we adopt this terminology, according to the first requirement a theory of meaning must answer the question: what is linguistic competence? what must a speaker know in order to be a competent speaker? However, in section 5, following Dummett, I shall maintain that a theory of meaning ought not to be viewed as a psychological hypothesis. Therefore the conception of linguistic competence that

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I shall embrace is different from Chomsky's view that linguistic competence is "the mental reality underlying actual [linguistic] behavior" which is "far beyond the level of actual or even potential consciousness".

3. Second requirement: the distinction between sense and force.

A theory of meaning should distinguish two aspects in the meaning of a linguistic act: a) the force, a general ingredient which is common to all the linguistic acts belonging to a certain category; b) the sense, which constitutes the particular content of the sentence that is used in the linguistic act.

A theory of meaning aims at detecting an order in our overall capacity to use a language. The use of a language is extremely complex and diverse. In uttering sentences we can perform many different linguistic acts. We can make assertions, requests, offers, we can give commands, advices, instructions, we can ask questions or express wishes. Wittgenstein wrote that there are countless different kinds of use of words and sentences. But the fact which demands explanation is that we can recognize these different acts as such. The ability to recognize different categories of linguistic acts is an important aspect of our linguistic competence.

For example, we recognize a question as a question. This means that we recognize that it is a question and that we (implicitly) know what in general a question is. Such an understanding is clearly not sufficient for an understanding of the particular intentions of the speaker who puts the question. Martin asks "Isn't it eight o'clock?", because he wants to make me realize that it's time to go to the cinema, since we have previously agreed that we should be there at half past eight. George comes into the room just now and hears Martin's utterance. He understands what Martin has said to me, he understands that Martin has asked a question, he knows what a question is, and he understands also what particular question Martin has asked. George must understand all this, if he is a competent speaker. But he doesn't understand Martin's intention. However, his failure to understand Martin's intention does not show that George is not a competent speaker. It shows only that he doesn't know about the agreement between Martin and me. On the other hand, I understand Martin's intention in virtue of two pieces of knowledge: 1) my knowledge of our previous decision (which George doesn't

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6 Chomsky (1965) p. 4.
7 Chomsky (1965) p. 8.
8 Cf. Wittgenstein (1953) I.23.
According to the first requirement, the meaning of an utterance is what *a competent speaker* has to know about that utterance. A theory of meaning is concerned only with the understanding a speaker must have in order to be a competent speaker, i.e. a speaker who masters the language. Such an understanding, as the example shows, *does not require a knowledge of all the intentions and the beliefs of other speakers*. What a theory of meaning should explain is the understanding that George and I, as competent speakers, have in common. Such an understanding has two aspects: first, the understanding of Martin's utterance as a question; second, the understanding of what particular question Martin has asked. The first aspect is a knowledge of the *force* of the utterance. The second is a knowledge of its *sense*. The two aspects together constitute a knowledge of the *meaning* of the utterance.

Despite the variegated diversity of linguistic acts, since every speaker's knowledge is finite, it is a reasonable hypothesis that there be a finite number of categories of utterances which competent speakers are capable of recognizing as such, and a finite number of conventions which competent speakers implicitly accept concerning each category. In brief: we may reasonably assume that there be a *finite number of different forces*.

Frege in *Der Gedanke* (1918)\(^9\) was probably the first to maintain that different forces can be attached to the same sense. This is plausible because the same words can be employed in linguistic acts of different categories. The word "eight" has obviously the same sense in the question 1) "Is it eight o'clock?", in the assertion 2) "It is eight o'clock" and in the wish 3) "Would that it were eight o'clock". Moreover – even pretheoretically – if one were to describe these utterances, one would say that the speaker, by uttering 1, *asked whether* it is eight o'clock, that he or she, by uttering 2 *asserted that* it is eight o'clock and that he or she by uttering 3 *wished* the same, i.e. that it were eight o'clock. By describing 1, 2, and 3 in this way, one explicitly separates *a common content* of the three utterances from three different forces attached to it. The existence of such a common content is also shown by systematic relations among 1, 2 and 3, of which every competent speaker is aware: question 1 could be satisfactorily answered by assertion 2, and if assertion 2 were correct, the wish expressed by 3 would be fulfilled. Thus, there must be a common ingredient of the meanings of the three utterances to which three different forces are applied. Since the meanings of the words occurring in the three utterances are not affected by the different forces, we can reasonably conclude that the meanings of the words

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\(^9\) Cf. Frege (1918) p. 35.
determine the common content of the utterances. In sum, there must be an ingredient of meaning, determined by the joint contributions of the words used, which does not depend on the force of a linguistic act, but can enter into linguistic acts of different force. This ingredient is the sense of the utterance, which determines what particular question has been asked, what particular assertion has been made, what particular wish has been expressed. On the one hand, different senses distinguish different particular linguistic acts of the same category, while force is what such linguistic acts have in common; on the other hand, linguistic acts of different categories may contain the same sense, while they will always have different forces.

This leads us to the conclusion that there are two aspects of the understanding which constitutes linguistic competence: a ‘vertical’ aspect, knowledge of sense, which depends on the construction of compound expressions by combining words; and a ‘horizontal’ aspect, knowledge of the different forces, which is a knowledge of the conventions according to which the same (or almost the same) combinations of words can be employed for linguistic acts of different categories. A theory of meaning, if it is a theory of understanding, should deal with both aspects of meaning, since both aspects are constitutive of understanding. It should contain a theory of sense, dealing with the senses of the sentences that can be used in linguistic acts of different force and a theory of force dealing with the conventions constituting the forces of each category of linguistic acts. Observe that I have argued for the second requirement on the basis of the first requirement, that a theory of meaning should be a theory of understanding: a theory of meaning should distinguish between sense and force because sense and force are two distinct aspects of understanding.

4. Third requirement: compositionality (versus linguistic holism).

A theory of meaning should contain a theory of sense which specifies what counts as knowledge of the sense of each sentence in terms of what counts as knowledge of the senses of its components in such a way that knowledge of the sense of a sentential or subsentential expression, according to the theory, should presuppose only knowledge of a fragment of the language.

Also the third requirement, compositionality, depends on the first. It is based on the idea that the understanding of a sentence (and in general of an expression) normally presupposes only an understanding of a proper part of the language and not of the whole language. This idea can be made more precise by distinguishing two notions of ‘understanding’ and two notions of ‘language’.
First, we can distinguish actual understanding and potential understanding. If the speaker understands a sentence actually, then he/she uses the sentence correctly in most circumstances (when he/she does not make mistakes). But there is also a kind of understanding which is only potential, and which is not sufficient for correct use. If a speaker does not understand the words which constitute a sentence S, then it is clear that the speaker does not understand S in any sense. But if a speaker understands the words constituting S₁, S₂, S₃, and understands disjunction "∨" and negation "¬", then he or she potentially understands all the sentences that can be formed from S₁, S₂, S₃, disjunction and negation, though such an understanding is mostly not actual. The speaker understands a compound sentence like "¬((S₁∨¬(S₂∨((S₁∨S₃)∨¬S₂))))" potentially, but often not actually, for example because he or she has never encountered the sentence in question and has never considered its particular syntactic structure. Nevertheless, however complex the compound sentences may be, the speaker in a sense already knows what one has to know in order to understand them. This is an instance of the phenomenon of linguistic productivity which impressed very much both Frege and Chomsky: "with a few syllables – Frege¹⁰ wrote – [language] can express an incalculable number of thoughts, so that even a thought grasped by a terrestrial 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". According to Chomsky¹¹, linguistic productivity is the central fact to which any significant linguistic theory must address itself: a language user who has observed a very limited set of utterances of his language is nevertheless capable of producing an indefinite number of new utterances which are immediately acceptable to other members of the linguistic community.

Of course such a fact is not denied by the supporter of compositionality. On the contrary, the potential understanding which characterizes linguistic productivity is precisely what the supporter of compositionality tries to explain: it is on the basis of an actual understanding of the component words and of the laws of their combination that a competent speaker potentially understands an indefinite number of sentences which he or she has never used or heard before. But the supporter of compositionality denies that the understanding of all such sentences be actual; mostly, it is only potential. So a language user can understand component sentences or component words actually without actually understanding the more complex sentences which can be constructed from them and which are understood only potentially. The potential understanding of a compound sentence S – according to the supporter of compositionality – depends

¹⁰ Cf. the first paragraph of Frege (1923): "it is astonishing what language can do..." Eng. transl. from Frege (1977) p. 55.
on the actual understanding of its component words and of the laws of their combination. Just because an actual understanding of the components does not require an actual understanding of the sentence, the speaker who does not possess the latter understanding is capable of obtaining it on the basis of the former.

Between potential understanding and actual understanding there is a gap. The gap becomes clear if we consider that a compound sentence can be very complex. In general, even if the speaker already has an actual understanding of the component words, in order to grasp the sense of a sentence containing those words it is necessary to detect the syntactic structure of the sentence. The syntactic analysis can be rather complicated if the sentence is complex enough. In addition to the syntactic analysis one has to derive the sense of the sentence from the senses of its component words according to the detected syntactic structure, and if the syntactic structure is complex, also this task can be hard. In some cases the analysis needed can be so complicated that it can be a practically unfeasible task to obtain an actual understanding of a compound sentence, though the speaker possesses a full actual understanding of the component words and thus in principle potentially understands all the sentences that can be built out of those words.

The supporter of compositionality affirms that the actual understanding of a composed sentence implies the actual understanding of the components. Moreover the supporter of compositionality maintains that the actual understanding of the components, together with a syntactic analysis on the part of the speaker and with some reasoning based on both factors, explains the speaker's actual understanding of the composed sentence. But, in view of the gap between potential understanding and actual understanding, the supporter of compositionality denies that the actual understanding of the components implies the actual understanding of the composed sentence.

Besides distinguishing between potential and actual understanding, one should distinguish a notion of ‘language’ as a potentially infinite set of sentences (the set of all the sentences of the language) from a notion of ‘language’ as a finite set of words (the set of all the words belonging to the language). The supporter of compositionality maintains that an actual understanding of a sentence is possible without an actual understanding of the whole language, in both senses of ‘language’. But while the supporter of compositionality denies in general that in order to understand a sentence it be necessary to understand the whole language in the first sense of ‘language’, the corresponding denial is not absolutely general regarding the second sense of ‘language’. In other words, the supporter of compositionality maintains that – since the sentences belonging to a language L characterized by the phenomenon of linguistic productivity are potentially infinite and a speaker's actual knowledge is finite – it is never the case that the
actual understanding of a particular sentence S belonging to L requires an actual understanding of all the sentences of L. In this sense it is never the case that in order to understand a sentence it is necessary to understand the whole language. An actual understanding of any sentence S can require only an actual understanding of a finite number of sentences the complexity of which is not higher than the complexity of S. I call this the first compositional thesis.

Moreover, the supporter of compositionality maintains that it is almost never the case that the actual understanding of a sentence (or a word) requires an actual understanding of all the words of the language. The majority of sentences can be understood without understanding all the words of the language. In this second sense it is almost never the case that in order to understand a sentence it is necessary to understand the whole language. This is the second compositional thesis. The second compositional thesis admits the possibility of sentences S such that in order to understand S a speaker has to understand all the words of the language L to which S belongs. This does not imply that S cannot be understood by a finite being, if we assume that the number of words in a language is finite. However, sentences with these characteristics are exceptional cases. An obvious exception of such a kind is a compound sentence S which is formed by combining in some way all the words of the language L.12

From now on, in dealing with compositionality, I shall normally use "understanding" and "knowledge" as equivalent to "actual understanding" and "actual knowledge", respectively. Also in the above boxed formulation of the requirement of compositionality "knowledge" is meant as actual knowledge. The requirement of compositionality for a theory of meaning is based on the two compositional theses concerning linguistic understanding and on the idea that a theory of meaning is a theory of understanding. If the two compositional theses are right, the specification of senses given by the theory of meaning should be such that knowledge of the sense of a sentence S – according to the theory – never requires knowledge of the senses of sentences whose complexity is higher than the complexity of S and almost never requires knowledge of the senses of all the words of the language. This is exactly what the requirement of compositionality demands.

A rejection of compositionality corresponds to the view which may be called linguistic holism. One can distinguish two versions of linguistic holism according to which of the two compositional theses is denied. Linguistic holism 1 denies the first compositional thesis, and hence affirms that there are sentences S such

12 A more interesting exception will be described for an artificial language in chapter 3, section 18, example 2, where the actual understanding of a sentence in an artificial language presupposes an actual understanding of all the words of the language. Moreover see the remarks about the latter example in section 21 of the same chapter.
that an actual understanding of $S$ requires an actual understanding of all the sentences of the language $L$ to which $S$ belongs, including compound sentences of which $S$ is a component subsentence. In this sense, in order to understand $S$ one has to understand the whole language $L$. Such a view seems utterly implausible and I don't think it has been ever explicitly defended by anyone. It is utterly implausible because it implies that a speaker should have an actual knowledge of the meanings of all the infinitely many sentences belonging to $L$ in order to understand $S$. Since any finite being like us is capable only of a finite actual knowledge, the consequence is that we cannot understand sentences like $S$. Thus, linguistic holism 1 implies that there are unintelligible sentences.

Linguistic holism 2 denies the second compositional thesis and affirms that the actual understanding of a sentence always requires an actual understanding of all the words of the language. In this sense, in order to understand a sentence, it is always necessary to understand the whole language. Also linguistic holism 2 is implausible, though perhaps less implausible than linguistic holism 1. Linguistic holism 2 is implausible because it is in conflict with our pretheoretical intuitions that the words of a language are not learnt at a single blow but step by step, and that a speaker's understanding of the words of a language is not an all-or-nothing matter, but the speaker can understand a part of the totality of such words, without understanding another part. In order to check whether someone understands the word "eight" we don't need to check whether he or she understands "kitten", "female", "grass" or "green". A speaker who hasn't learnt the whole language might understand one of these words and many sentences containing it without understanding the other words. This is as plausible as it is plausible, on the other hand, that in order to understand a word it may be very often necessary to understand also other words (e.g. in order to understand "eight" one has to understand "seven").

These remarks against linguistic holism 2 can be extended from words to sentences and used also against linguistic holism 1. In order to check whether someone understands "it's eight o'clock" we don't need to check whether he or she understands sentences like "the kitten is female" or "grass is green". Consider the following examples:

i) it's seven o'clock
ii) it's eight o'clock
iii) the meat is cooked
iv) the meat is raw
v) it's seven o'clock and the meat is raw
vi) the kitten is male
vii) the kitten is female
Any English speaker would probably say that an understanding of \textit{ii} presupposes an understanding of \textit{i}, that an understanding of \textit{iv} presupposes an understanding of \textit{iii}, that an understanding of \textit{v} presupposes an understanding of both \textit{i} and \textit{iv} and that \textit{vi} and \textit{vii} can be understood only together. But every English speaker (who is not a philosopher) would probably agree also that it is not necessary to understand \textit{i} in order to understand \textit{vi} and that it is not necessary to understand \textit{v} in order to understand \textit{iv}. A theory of understanding should take account of these pretheoretical intuitions.\footnote{See chapter 3, section 10.}

What the foregoing examples about words and sentences indicate is that there are two binary relations of presupposition (or dependence), one between words, the other between sentences of a language, such that \textit{X presupposes Y} if, and only if, \textit{in order to understand X it is necessary to understand Y}. In other words, to say that \textit{X presupposes Y} is to say that the fact that a speaker \textit{S} understands \textit{X}, implies that \textit{S} understands \textit{Y}. Such relations are obviously reflexive (implication is reflexive) and transitive (implication is transitive). For example \textit{v} presupposes \textit{iii}, because \textit{v} presupposes \textit{iv} and \textit{iv} presupposes \textit{iii}.

But the two relations (in general) are \textit{not total} (neither \textit{i} presupposes \textit{vi} nor \textit{vi} presupposes \textit{i}); they are \textit{not symmetric} (\textit{v} presupposes \textit{iv} but \textit{iv} does not presuppose \textit{v}); and they are \textit{not antisymmetric} (\textit{vi} and \textit{vii} are different sentences such that \textit{vi} presupposes \textit{vii} and, viceversa, \textit{vii} presupposes \textit{vi}).

Another important intuition concerning the relation of presupposition between sentences is that \textit{a compound sentence} constructed by applying a certain word (e.g. the logical connective "and") to some component sentences \textit{presupposes} those component sentences, whereas \textit{the latter never presuppose the compound sentence}. For example, an understanding of the conjunctive sentence \textit{v} is acquired through an understanding of the conjuncts \textit{iv} and \textit{i}, but an understanding of the conjuncts does not require an understanding of the conjunctive sentence \textit{v}.

The requirement of compositionality demands that appropriate relations of presupposition between sentences and between words \textit{with the described properties} can be defined on the basis of the theory of sense for the language in question.

If linguistic holism is right, on the contrary, the relations of presupposition lack some of the aforementioned properties. Linguistic holism 1 is equivalent to the thesis that the relation of presupposition between sentences can hold not only between compound sentences and their components, but also viceversa between components and all the compound sentences which they can make up. Linguistic
holism can be described as the thesis that in general the relation of presupposition between words is total and symmetric.

Since the South African statesman Jan Christiaan Smuts coined the word "holism" in 1926 in order to express the key-concept of a sort of biologico-metaphysical conception, "holism" is used by philosophers in many different ways in the philosophy of natural and social sciences and in the philosophy of language. Here the kind of holism we are dealing with is holism with respect to meaning and understanding, which, following Dummett's terminology, I have called "linguistic holism". Many precise definitions of linguistic holism are possible. The two definitions I have given here are suggested by Dummett's treatment of the topic. Though in Dummett's many writings the formulations of the doctrine which he calls "holism" are not quite uniform, I think that Dummett's treatment of holism has many merits. Dummett distinguishes between atomistic, compositional (or molecular) and holistic views of language.

According to the atomistic view of language a word can be understood in isolation. Atomistic was the conception adopted by the British empiricists according to which to understand a word is to correlate it with an idea or a mental image, a conception to which Frege opposed his famous 'context principle' in Grundlagen. An idea underlying an atomistic conception is that we can learn

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14 In the book Holism and Evolution, written after having decided to shun politics because his South African party was defeated at the elections in 1924, Smuts gives the following explication of the meaning of the word "holism": "its primary and proper use is to denote the totality of wholes which operate as real factors and give to reality its dynamic evolutionary creative character" , Smuts (1926) p. 117. Later he adds: "Holism [is] the ultimate synthetic, ordering, organizing regulative activity in the universe which accounts for all the structural groupings and syntheses in it from the atom and the physico-chemical structures, through the cell and organisms, through Mind in animals to Personality in man [...] The all pervading and ever-increasing character of synthetic unity of wholeness in these structures leads to the concept of Holism as the fundamental activity underlying and co-ordinating all others, and to the view of the universe as a Holistic Universe", Smuts (1926) p. 317.

15 Cf. e.g. Dummett (1975) p. 128 and Dummett (1978a) p. 441.


17 Cf. Tennant (1987) about the different notions (or the different features of the notion ) of 'holism' which can be found in Dummett's writings.

18 Dummett adopts the terminology which I follow in the present work ("compositional", and "compositionality") in Dummett (1991a). In less recent writings he prefers the expressions "molecular" and "molecularity". But the meaning is the same.

19 Cf. Dummett (1973) ch. 17, p. 597.

20 The ‘context principle’ is the principle formulated in the Introduction to Frege (1884): "Nach der Bedeutung der Wörter muß im Satzzusammenhange, nicht in ihrer Vereinzelung gefragt werden", which is translated by Dummett "the meanings of words must be asked after only in the context of sentences, not in isolation" Dummett (1991b) p. 21; cf. also Dummett (1973) pp. 3-7.
the meanings of words from ostensive definitions: a teacher points to a strawberry and says "red", then he points to a tomato and says "red", and so on. But, apart from the obvious fact that such an ostensive teaching is not possible for all kinds of words (think of "Wednesday", "virus", "minister", let alone "number") it is clear that from the fact that a child has acquired the propensity to repeat "red" in front of strawberries, tomatoes, sunsets, lipsticks and other red things we cannot conclude that the child understands the English word "red". To understand "red" is also to understand that this word is a one-place predicate, and that it can play a certain role in singular term/predicate sentential constructions. The gist of the context principle is precisely that in order to understand a word one must understand its contribution to the meanings (to the potential understanding) of sentences in which it occurs. If this is right, ostensive definitions alone are not sufficient. To understand a word like "red" is to master the use of at least some sentences in which "red" occurs. Considerations of this sort lead to discard the atomistic conception of understanding.

Discarding atomism, however, may lead to two very different views: the compositional or the holistic view. According to the compositional view, in order to understand a word or a sentence, one has to understand a limited fragment of the language, but not the whole language (except for some very particular limit-cases and only if ‘language’ means the totality of words, as we have seen above). According to the holistic view, in order to understand a word or a sentence, one must understand the whole language.

Dummett has distinguished very clearly the two views and I think that such a distinction is very useful for a comparison between different conceptions of language. Fodor and Lepore in their recent book Holism give the following different definition of holism: "content holism is the claim that properties like having content are holistic in the sense that no expression in a language can have them unless many other (nonsynonymous) expressions in that language have them too". But here "many other expressions" can mean both "all the expressions belonging to a limited fragment of the language" (the compositional view) and "all the expressions of the whole language" (the holistic view in Dummett's sense). Hence such a definition hides the important difference between compositional and holistic views in Dummett's sense, and it is a regress if compared with Dummett's definition of holism. Definitions show their worth by

\[21\text{ Cf. in particular Dummett (1976) p. 79.}\]
\[22\text{ Fodor and Lepore (1992).}\]
\[23\text{ Moreover the definition given in Fodor and Lepore (1992) severs every connection with the notion of 'whole' which belongs to the etymological origin of the word: 'holism' derives from the greek word }\text{ολο}s\text{ which means 'whole'.}\]
proving fruitful, as Frege wrote,\textsuperscript{24} and I think Dummett's distinction is fruitful, that's why I have here adopted it and have tried to make it a little more precise.

The two versions of linguistic holism which I have here formulated are both very implausible views, which are not often defended directly and explicitly (their implausibility is an argument in favour of the requirement of compositionality). However many conceptions of meaning which are explicitly advocated imply linguistic holism or are very close to linguistic holism as I have here defined it. Wittgenstein wrote in the \textit{Philosophical Investigations} that "to understand a sentence is to understand a language".\textsuperscript{25} In "Two Dogmas of Empiricism" Quine says that "the unit of empirical significance is the whole of science".\textsuperscript{26} Donald Davidson in "Truth and Meaning" maintained that "only in the context of the language does a sentence (and therefore a word) have meaning".\textsuperscript{27} In the next chapter we shall see that Harman's and Field's versions of conceptual role semantics imply linguistic holism.\textsuperscript{2} Hence I think it is fair to say that linguistic holism is often endorsed, at least indirectly.

\section*{5. Fourth requirement: manifestability and the thesis that meaning is public.}

The knowledge of the sense of a sentential or subsentential meaningful expression should be completely manifestable in the exercise of a specific practical ability, so that an understanding of the expression can be publicly testable and any difference in understanding between two speakers can in principle be discovered.

The fourth requirement, the requirement of manifestability, is based on the requirement of compositionality and on the idea that meaning is public. Since Frege, the idea that meaning is public has played a decisive role in the philosophy of language. This idea can be interpreted in many ways.\textsuperscript{28} Frege's distinction between \textit{Sinn} and \textit{Vorstellung} in "Über Sinn und Bedeutung"; his platonistic conception of senses in "Der Gedanke", Wittgenstein's Private Language Argument in the \textit{Philosophical Investigations}, and Quine's linguistic behaviourism in \textit{Word and Object} are very different views which are all centred on the public nature of meaning and language. Dummett's requirement of manifestability is another development of this idea. Dummett argues in different ways for this requirement and formulates it in different ways. The way in which I

\begin{itemize}
  \item Frege (1884) § 70.
  \item Wittgenstein (1953) I.199.
  \item Quine (1953) p. 42.
  \item Davidson (1967) p. 22.
\end{itemize}
formulate it and argue for it here is influenced by Dummett's writings, though my formulation of the requirement slightly differs from his.

It is a fact that we are capable of successful communication, if we want. A theory of meaning must account for this fact. It is also a fact that there are misunderstandings. There is never a conclusive evidence that two speakers understand each other perfectly well and do not give to the same expression different meanings. We can never rule out that some misunderstanding will be later discovered. The publicness of meaning consists in the possibility in principle of discovering and eliminating each particular misunderstanding, if the speakers want to discover and to eliminate it. We can rely upon such a possibility, of course, only if the speakers want to discover misunderstandings and don't want to deceive each other. But the notion of a misunderstanding that cannot be discovered, not even in principle, and not even if the speakers want to discover it, is an idle notion. If two speakers sincerely and completely agreed on the correct use of an expression, it would be idle, it would be to stretch the notion of misunderstanding beyond its reasonable and common use, to wonder whether there could be some absolutely unknowable misunderstanding between them. On the other hand, if the misunderstanding depends on some disagreement about what counts as a correct use of the expression, such a misunderstanding can be discovered and can be eliminated by adopting a common criterion of correct use, if the speakers are well disposed towards one another. We are all familiar with the practice of discovering and non-violently eliminating misunderstandings in rational intercourses between well disposed speakers.

By the thesis that meaning is public I mean here the rejection of the notion of an absolutely unknowable or uneliminable misunderstanding. The thesis that meaning is public in this sense is here assumed because – as suggested above – the notion of an absolutely unknowable misunderstanding is idle, or, in other words, does not play any role in our linguistic practice. We speak of an absolutely unknowable misunderstanding only when we philosophize, but then we are misusing the concept.

If meaning is public, every misunderstanding must be in principle discoverable, if the speakers want to discover it. But it is not sufficient that, if there is a misunderstanding, the speakers can in principle know that there is one: they must also know how it can be eliminated. Meaning would not be public if we only knew that there is a misunderstanding but were in principle uncapable of eliminating it.

If we accept the thesis that meaning is public, a theory of meaning has to attribute to the utterances of a language a meaning which is intersubjectively testable in the following sense: if two speakers attach different meanings to the
same expression E and they both don't want to deceive each other, then they can in principle discover that there is such a difference between the meanings they attach to E. A difference between the meanings that two speakers attach to the same expression can be discovered only by discovering a difference in their use of language. Therefore, if meaning is intersubjectively testable, a speaker's attaching a certain meaning to an expression must be completely manifestable in the speaker's practical ability to use language in a certain way.

A person possesses a practical ability P if, and only if, the person would perform some actions A in certain relevant circumstances C, and then we can say that the pair C-A belongs to P. Of course the actions (more precisely: the pairs C-A) belonging to a practical ability are potentially infinite. A practical ability is never exhausted by a finite set of actions. The question then arises: in what sense can a speaker's understanding be completely manifestable in a practical ability?

Now, the phrase "completely manifestable" can be interpreted in two ways. According to the first interpretation of "completely manifestable", which does not capture what is meant here, to say that the speaker's attaching a certain meaning M to an expression E, is completely manifestable in a practical ability P is to say that there is a particular finite set \( \Phi \) of pairs C-A (circumstances-actions) which belong to P such that all the meaning M of E is manifest in \( \Phi \), or in other words, it is to say that

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\text{(♦)} \quad \text{the speaker S attaches M to E if, and only if, for any pair C-A belonging to the finite part } \Phi \text{ of P, S would perform the actions A in the corresponding circumstances C.}
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According to this interpretation, the speaker's attaching M to E is completely manifestable in a finite number of actions A performed in a finite number of circumstances C, i.e. it is completely manifestable in a part of the practical ability P, not in the whole P. If a speaker's understanding were publicly manifest in this sense, then, by bringing about the relevant circumstances C and by establishing that S does indeed perform the actions A, we could verify the right side of the

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29 Someone may ask: how can we know that two speakers don't want to deceive each other? how can we know that a speaker is sincere? My answer is that there is no conclusive knowledge of sincerity. Until we have reasons to believe that a speaker has some motive for concealing his or her understanding of an expression we can legitimately take the speaker to be sincere. We usually don't need a theory in order to assume legitimately that somebody is sincere in a given circumstance. A theory of sincerity would be a theory concerning the motives that people can have for deceiving other people. But such a theory is not part of a theory of meaning as it is conceived here.

biconditional (♦) above and then *deductively* infer that S attaches M to E. But of course meaning is not public in this sense. Wittgenstein's remarks on following a rule bring into focus that no fact about past behaviour can *conclusively* establish what a speaker means.\(^{31}\) We can never rule out that some subsequent actions show that S, in spite of his past behaviour, does not attach to E the meaning M in question.\(^{32}\)

The second, and right, interpretation of "completely manifestable" might be described as follows. By saying that "the speaker's attaching meaning M to E is completely manifestable in the practical ability P" it is meant that *attaching M to E is equivalent to possessing the whole practical ability P*, that is:

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(*) \text{S attaches M to E if, and only if, for every pair } C-A \text{ belonging to P, S would (in principle) perform the actions } A \text{ in the corresponding relevant circumstances } C.
\]

or, in other words, it is meant that:

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(**) \text{S does not attach M to E if, and only if, there are some actions } A \text{ and some circumstances } C, \text{ such that the pair } C-A \text{ belongs to P but S would not perform the actions } A \text{ in } C.
\]

On this view, there is nothing in the meaning of S which does not correspond to some aspect of the practical ability P. If a speaker's understanding of a sentence is in the latter sense completely manifestable in a practical ability to use language, then, as Prawitz says, "although each ingredient of the meaning of a sentence is capable of showing itself in some use of the language [...] no finite use in the language can fully determine [...] the meaning [of the sentence]."\(^{33}\)

We have now clarified the sense in which, if meaning is public, a speaker's attaching a certain meaning to an expression must be completely manifestable in the speaker's practical ability to use language in a certain way. We may thus conclude that a theory of meaning which agrees with the thesis that meaning is public ought to contain some general principles from which one could obtain, for each meaningful expression, a description of such a practical ability.

But, if it is also demanded that the theory satisfy the requirement of compositionality, one has to add that the practical ability in which the understanding of an expression is manifestable, according to the theory, ought to be *specifically* correlated with an understanding of that expression, or of a limited

\(^{31}\) Cf. Wittgenstein (1953) I.185.


\(^{33}\) *Ibidem.*
fragment of language presupposed by that expression, and that it should not count at the same time as a manifestation of an understanding of the whole language. If otherwise, according to the theory of meaning, the practical ability in which an understanding can manifest itself were the same practical ability for all language, for example the global practical ability to master the whole language, then a difference between two speakers in such a practical ability would indicate the presence of a misunderstanding between those speakers, without indicating where the misunderstanding lies, without indicating what expressions are understood differently by the two speakers. A specific misunderstanding could not be located. The only discoverable misunderstanding would be a misunderstanding concerning the whole language. The understanding of a language would publicly show itself as an all-or-nothing matter, against the requirement of compositionality.

Thus, if we endorse both the thesis that meaning is public and the requirement of compositionality, we have to accept also the requirement of specific manifestability on a theory of meaning: the sense of an expression E, according to the theory, must be such that a specific practical ability can be correlated with a knowledge of the sense of E as a complete manifestation of such a knowledge. If knowledge of the sense of E is completely manifestable in a specific practical ability to use language in a certain way, every particular misunderstanding between two speakers concerning E can in principle be discovered and eliminated by mutually adjusting the respective specific practical abilities, if the speakers are willing to cooperate, without having to accomplish the unfeasible task of equalizing the whole use of the two speakers.

It is important to emphasize that a practical ability in this sense is not a behavioural disposition in the strict sense. Strictly speaking, a behavioural disposition has to do only with the bodily reactions with which a subject (animal, human being, machine etc.) responds to changes in the macroscopic physical environment. Thus, strictly speaking, a behavioural disposition must be specified in what the logical empiricists called a thing-language, i.e. in terms expressing observable properties of observable physical objects of medium size. A subject X has a behavioural disposition if and only if, whenever placed in a certain condition C, X manifests a behaviour B, and both C and B can be described in a thing-language. For example: if the green light flashes, the guinea pig comes near the feed dispenser. A practical ability in my sense, for instance the ability to play chess, does not correspond to a behavioural disposition in the strict sense. There are some conditions C* in which a person X performs the actions A* which display that X has the relevant practical ability, but first: C* is not completely

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34 Cf. Carnap (1936) p. 69.
specifiable in a thing-language, second: A* too may be such that one cannot
describe it completely in a thing-language. For example, first: if Martin is able to
play chess, there is no observable physical condition sufficient for his performing
those actions which show that he can play chess. Of course it is not sufficient to
place him in front of a chessboard. He will begin to play only if he wants to play.
Otherwise he can fail to exercise his practical ability. Secondly, the actions
through which Martin displays his ability are best described by saying that he,
moving the chessmen, acknowledges a move as a correct move only if he realizes
that it conforms to the rules of the game concerning the different kinds of
chessmen (queen, king, bishop, etc.) and to the more general rule that moves
should be aimed at winning the game (at checkmating the other player). This is
not a behaviouristic description in thing-language because it involves non-
behaviouristic phrases like "to realize that a move conforms to the rules", "to
acknowledge as a correct move" and "moves should be aimed at winning".
Martin may have the behavioural disposition to make some systematic mistake
(e.g. to move the knight wrongly), although he knows the rules, and thus knows
that it is a mistake (if somebody calls Martin's attention to the mistake, he
withdraws the move). But, if we identify practical abilities with behavioural
dispositions, we should say that Martin does not have the practical ability to play
chess, and this is clearly wrong.\footnote{Cf. Kripke (1982) p. 29-30 where a similar objection to the dispositional view is raised.}

Even if we knew in every detail the observable chess-behaviour of chess players, such a knowledge alone would not give us an
understanding of the game of chess, because we would not be capable of
distinguishing a correct move from an unnoticed mistake, or a good move from a
bad move, a move that never occurs because it is obviously a bad move from a
move that never occurs because it is not allowed by the rules.\footnote{Cf. Dummett (1978b).}

To say that a speaker understands an expression \(E\) if, and only if, he or she has
the practical ability to use \(E\) in the way in which one uses \(E\) if one understands \(E\)
is of course futile: it doesn't say anything about what it is to understand \(E\),
because in this case the non behaviouristic description of the practical ability in
question contains only a circular attribution of an understanding of \(E\) to the
speaker and we actually haven't offered any clarification of the nature of such a
practical ability. However, a description of the practical ability in which an
understanding of \(E\) manifests itself can provide a genuine informative
clarification by employing notions like 'correct inference' that are not reducible
to strictly behaviouristic terms. Such a clarification can be given even if the
description contains the expression \(E\). For example, if we say that to understand
the word "red" is to have a practical ability which involves (among other
specified inferential uses concerning "red") the capacity to assert "it is red" in
front of observably red objects, we have given an informative account of what it is to understand "red". Of course, nobody would acquire an understanding of "red" by means of our description, because in order to understand the description one has to understand "red". But if we already know what "red" means, through such a description we understand explicitly what it is that a person must be taught in order to acquire an understanding of "red", and the latter is a piece of knowledge which was not explicitly contained in our understanding of "red", because to understand "red" is not the same thing as to know in what an understanding of "red" consists.

In the present study I contend that an understanding of an expression is completely manifestable in the practical ability to accept as immediately correct (in that language) argumentation steps in which the characteristic structures of certain rules are recognized. To accept as immediately correct some argumentation steps is to accept them as adequate means for supporting the truth-claim which is involved in an assertion. Thus, a description of the practical ability in question resorts to the notions of ‘assertion’ and ‘truth’ which are not behaviouristic notions. This is not to say that the notions of ‘assertion’ and ‘truth’ cannot be explicated in some way and that our raising a truth-claim when we assert a sentence does not manifest itself in our practices. On the contrary, in chapter 6 I shall offer an explication of truth and assertoric force in accordance with the argumental conception of meaning, which connects our raising truth-claims in assertions with our willingness to revise and enrich our languages so as to comply more and more with different criteria of epistemic fruitfulness and simplicity. Here I am only suggesting that the notions of ‘assertion’ and ‘truth’ cannot be reduced to behaviouristic language. If I am right, also the practical ability which counts as a manifestation of the understanding of an expression cannot be described in a behaviouristic language.

As we have seen, the requirement of manifestability is connected with the requirement of compositionality. According to the requirement of compositionality, a theory of meaning should be capable of distinguishing the understanding of a particular (sentential or subsentential) expression from the understanding of the whole language. According to the requirement of manifestability the understanding of a particular expression should be completely manifestable in a specific practical ability, i.e. in a particular feature of the use of that expression and possibly of a limited set of related expressions, but not in the

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37 This is in conflict with some of Dummett's formulations of manifestability: cf. Dummett (1977) p. 376, where Dummett writes that the practical ability which counts as a manifestation of the understanding of a word must be a linguistic ability that can be specified without appeal to any semantic notion.
use of the whole language. If one aims at a theory of meaning that gives a systematic picture of how language functions, one cannot merely identify meaning with the whole use of language. The whole use is in general an aggregate of different intertwined practices. Pretheoretically, the various interconnections of all these practices are unclear to us. A theory of meaning should try to detect an order in such a cluster of interconnected practices, and thereby to give an articulated picture of our use of language, a picture which can count as an explanation of our overall ability to master the language by analysing that complex ability into its interrelated components. If one aims at a theory of meaning in this sense, one should try to discover which particular practical ability, which particular feature of use, corresponds to an understanding of a particular expression.

The latter remarks shed light on the first requirement. According to the first requirement a theory of meaning is a theory of understanding. But a theory of understanding in this sense is not a psychological hypothesis. It aims at clarifying what it is to understand. This aim is different from the aim of discovering the psychological processes through which individual human beings are capable of understanding. That there is a difference can be clearly seen if it is considered that we, for example, can check whether our fellow-speaker understands the sentence "it's eight o'clock" on the basis of her or his mastery of the language, though we know almost nothing about the psychological mechanisms behind it. The question which a theory of meaning has to answer is: what is the practical ability specifically concerning the sentence "it's eight o'clock" which a speaker who understands that sentence must possess? The answer should specify a particular practical ability. It is irrelevant what the psychological mechanisms are, which underlie such a practical ability. According to the theory, our fellow speaker gives a certain sense to a sentence if, and only if, he or she possesses a certain practical ability, regardless of internal processes. If we discovered that one of our fellow-speakers, who has the same relevant practical abilities we have, is an intelligent alien from outer space, and that the internal processes which causally determine this alien's practical abilities are entirely different from the internal processes of our own mind (or brain), this would not make us draw the conclusion that the alien does not understand. When we check whether our fellow-speakers understand a sentence as we do, we never take into account the hidden (probably diverse and idiosyncratic) psychological causes underlying their use.

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38 Cf. Dummett (1976) p. 70.