

Meaning and Rules

Eva Picardi

*Denn eben, wo Begriffe fehlen,
Da stellt eine Regel zur rechten
Zeit sich ein.*

1. Knowledge of Meaning

The topic I wish to discuss is 'knowledge' in the sense in which this notion occurs in ascriptions of propositional knowledge, where these ascriptions are based on linguistic utterances made in their natural settings. The relevant utterances belong to the assertoric type, i.e. they are utterances of declarative sentences issued with assertoric force. I shall deal with the following three questions:

- (1) What type of theoretical knowledge, if any, does the understanding of sentence-meaning consist in?
- (2) How is this understanding of meaning related to the complex abilities people display in their use of language, in suiting, as it were, the linguistic force to the words and the words to the world?
- (3) To what extent, if any, is the connection between knowledge of the meaning of a sentence (the proposition expressed by it) and the ability to use it illuminated by

seeing the latter as due to a form of *tacit knowledge* of rules governing the application of the component words of the sentence in question?

By 'tacit knowledge' I mean a type of knowledge which, even though it can somehow be manifested, need not, and in many cases cannot be articulated *linguistically* (as is the case with many practical abilities of a non-linguistic type). This qualification is intended to rule out the notion of 'cognising' a system of rules (a grammar), where cognising is conceived as an inaccessible mental process or state — an idea which has been in vogue with grammarians of the generative-transformational school.¹ With respect to the grammarians' alleged rules (in contrast to the rules tacit knowledge of which can in our sense become manifest) the notion of tacit guidance is too weak to play the desired explanatory role.² However, if the idea of being guided by a rule *can* be elucidated by a theory which enables us to understand or invites us to improve a practice of ours, then there is no reason to resist the explanation offered by that theory. The account of our inferential practice given by a Gentzen-style explanation of the meanings of the logical constants seems to be a case in point.³

Few philosophers would nowadays claim that in giving an account of our practice of speaking a language any appeal to cognitive notions, such as 'grasping the meaning', 'seeing the point', 'accepting as correct', 'realising the bearing of', 'responding appropriately to', etc., can be dispensed with. Many, however, would maintain that these notions become relevant only at the pragmatic level or at the level of performance, where we are faced with the problem of accounting for the use of language and the quirks and twists encountered in the utterances of individual speakers. But these elements remain, so to speak, inert, for the relevant questions about meaning can be answered e.g. by employing the notions of truth, satisfaction, primitive denotation, or, perhaps, by means of a soberly modalised version of these notions. As one of the main points of using language is to convey relevant information to an audience by means of sentences held or believed to be true and perspicuously formulated, it is

supposed to follow that the employment of cognitive notions will be confined to the spelling out of conversational implicatures, presuppositions, implications, and whatever else attaches to a sentence, not in virtue of the meaning of its component words and the way they are put together, but in virtue of our uttering it e.g. in a certain context with a certain audience-directed intention and in accordance with a rough estimate of the audience's epistemic expectations.

It will then be the main task of an approach which sees cognitive notions as merely secondary to offer an explanation of what 'relevant information', 'sentence held true', 'perspicuous formulation', etc. mean, by appealing to nothing but the results yielded by a theory of truth-conditions. A programme of this type has been advocated and defended by Donald Davidson. It is not as if Davidson believed that the above-mentioned cognitive notions were irrelevant. As a matter of fact, in his theory they play the role of unanalysed primitives, used but not mentioned. Thus even in Davidson's austere framework it will still make sense to say that understanding a language is related to theoretical knowledge, though not with knowledge of what individual sentences mean but (for reasons connected with Davidson's holism) with knowledge of *entire theories*.

Before proceeding to discuss the questions raised at the beginning of this paper, I want to mention a very general and radical objection that might be levelled against the view to be defended here, that knowledge of meaning has a lot to do with knowledge proper. The objector will emphasise first of all that any appeal to the notion of knowledge proper — no matter whether this is construed as justified true belief or as evident judgment or as true belief produced by an appropriate causal chain — contains an implicit reference to the notion of truth. This reference emerges, he will argue, in two natural assumptions regarding certain ways of manifesting knowledge: (a) that an explicit knowledge-claim carries with it a truth-claim, and (b) that in which our alleged knowledge consists involves knowing a way of verifying, justifying, supporting the claim that the proposition in question is true, and hence being able to back the correctness of the assertion made

by means of a sentence intended to express that proposition. Thus applying the notion of knowledge proper to meaning will, if successful, not only assimilate understanding the meaning of a sentence to knowing the proposition it expresses; it will also establish a close connection between meaning, truth, and ways of attaining and manifesting knowledge. Now, however, our objector will insist that such an account of meaning will be badly incomplete. For it will, according to our objector, disregard the dependence of our understanding meaning on our ability to use language to produce effects of non-cognitive types, and he will make much of the perlocutionary element in our use of language (as for example when we produce by linguistic means fright, amusement, or even certain quasi-hypnotic states in an audience). Further, he will stress that in this perlocutionary use of language the sharing of information, and hence the notion of truth, will play no role.

A related line of attack upon the connection between meaning and knowledge suggested above is the following. We often speak, for example, of *understanding* a poem, or a piece of music, or a work of art; and yet it is hard to see what sort of theoretical (much less propositional) knowledge could be said to be involved in this kind of understanding. Moreover, the type of situation here alluded to is one where it is difficult to see whether the requirement of 'manifestability' of understanding is fulfilled.⁴ The trouble is that there seem to be no generally applicable criteria for crediting people with an understanding, or lack of understanding, of a work of art. Thus the notion of understanding here appears to be very remote from what is generally meant by 'knowledge' in the strict sense.

To this objection, however, we may reply by pointing out that the problem here is not so much one of criteria of 'manifestation', but rather a problem concerning the peculiar notion of understanding alluded to in the case in point. In the case of ordinary uses of language the question of what 'understanding' consists in can be quite perspicuously and clearly reformulated as a question about what to count as a manifestation of such understanding. And here we have plenty of criteria: we can give explanations of meaning, synonyms, antonyms, paraphrases, trans-

lations into different languages, we can produce examples of applications of the word in question, point out links between sentences containing that word and sentences that can be 'inferred' from them (in a loose sense of inferring including, for instance, lexical inferences). Thus understanding is not a matter of all or nothing; it typically comes in degrees, and this may lead to certain types of puzzle, but it does not mean that a wedge can be driven between the notions of understanding and of knowing the meaning of an expression, nor that no criteria can be specified where we are dealing with a manifest case of understanding an expression.

As regards the more general objection, it will surely not do to deny the existence of the perlocutionary uses of language mentioned; I do not wish to suggest that all understanding of meaning can be reduced to the true-false dimension, nor that propositional knowledge can be reduced to the dimension of verifiability-falsifiability. Speaking a language requires a number of complex skills, and to be sure some of these skills are designed to serve ends very remote from the Augustinian characterisation of the point of language as '*ut doceamus et commemoremus*'. Still, as to explanations of meaning and understanding meaning, it seems preferable to start from uses of language which are basic in an obvious way — ostensive definitions, statements of recognition and re-identification — and these uses do have a dimension of truth and falsehood. Moreover, it seems difficult to see how perlocutionary effects can be caused independently of what is generally regarded as the meaning of the relevant expressions. Finally, there is no way of giving a general and systematic survey of perlocutionary effects, and thus we cannot hope to arrive at a tenable characterisation of meaning (and of understanding meaning) by starting from perlocutionary uses alone.

2. Meaning, Belief and Interpretation

In Davidson's, as in Quine's, account, knowledge of a language is compared to knowledge of a scientific theory. Let us follow their lead and consider the corpus of sentences of a language held true at a certain time;⁵ there is nothing amiss in regarding this body of sentences as articulating a picture of the world which is largely correct (on the plausible assumption that, as Davidson puts it, 'much of what is agreed must be true if some of what is agreed is false').⁶ A rather indirect construal of this body of knowledge is offered by Davidson's theory of radical interpretation.⁷ This theory does not even purport to explain what it is that speakers actually know or understand and what it is that enables them to assent to or dissent from given utterances, but only what information needs to be imparted to a potential interpreter so that he will be able to speak the language. In the framework of such a theory assent and dissent are supposed to suffice as behavioural data to allow the radical interpreter to start off on his enterprise; for he is not interested in questions concerning that substantial knowledge which the linguistic performances of the natives can be seen as manifestations of. By contrast, a theory dealing with the question of how understanding manifests itself in the use of language will choose as its data linguistic acts more specific than assent and dissent; among these, assertions in the strong sense will play an important role, since they are linguistic acts which speakers usually volunteer and regarding which questions as to grounds and justifications have real substance, whereas mere assenting does not normally commit a speaker to such an extent that he would be expected to feel obliged to answer that kind of question.

There is of course a sharp contrast between holding a sentence true and its being true, and this contrast is indeed emphasised by Davidson. Yet sentence-meaning and belief must be related, for my holding a given sentence true depends on my grasp of its meaning on the one hand and my judgment as to its semantic value on the other. 'A speaker who holds a sentence to be true on an occasion does so in part because of what he means, or would mean,

by an utterance of that sentence, and in part because of what he believes'.⁸ The contrast between sentence-meaning and belief is implicitly appealed to when we are explaining to a speaker the source of a mistake of his by pointing out that he has an imperfect grasp of what the words used mean or an incorrect understanding of how things are. We say that he either misunderstands the meaning of an expression or falsely believes that things stand in the way suggested by his sentence. This use of the concept of belief — that is, when it is employed to 'take up the slack between objective truth and the held true' —⁹ is, according to Davidson, at the basis of all our attempts at trying to interpret the speech of our fellow human beings. If in a community language were used in such a way that it would not be possible to tell which of two speakers who disagree on the truth value of a given sentence was right for the reason that in their community it was admissible to understand words in different and somehow unaccountable ways, we should find it difficult to make any sense of what they were doing in their use of language. Indeed we should be reluctant to describe it as being in any sense an *activity*, as something that was carried out with a view to the satisfaction of certain desires on the basis of certain beliefs.

It would, however, be rash to conclude that smoothness of communication is of itself a guarantee that whenever people agree with each other — no matter whether this agreement manifests itself in explicit assent or tacit acceptance — we shall be able to sort out the following two components, viz. what the sentence *means to them* because of the other things they know and believe, and the objective meaning of the sentence, i.e. what it *says* independently of its being a possible object of belief or knowledge for them. That conclusion would be particularly rash, if we thought — as Davidson no doubt does — that some version of Quine's indeterminacy thesis needed to be taken into account.¹⁰ Quine's claim, in this context, is that as soon as we abandon the safe region of stimulus meaning and observation sentences, it becomes increasingly difficult to sort out meaning from belief and an increasingly tricky problem to tell whether agreement and disagreement are due to our ways of understanding and

misunderstanding the meaning of our sentences or to our sentences' being such that their meaning is objectively underdetermined by the empirical data. In fact, Quine explicitly rejects the idea of a sharp line between meaning and belief; according to him, meaning is what can be gleaned from an intersection of idiolects. Davidson, on the other hand, thinks that such a line *can* be drawn, though not in a unique way. Moreover, it is a consequence of his holistic standpoint that it does not make sense to ask which piece of knowledge or which belief a specific utterance purports to convey. Radical interpretation, like a scientific theory, is subject to holistic constraints, and the relevant 'optimum fit' is between the totality of T-sentences¹¹ and the available evidence concerning sentences held true by the native speakers in question.¹²

Here, however, we shall need more and finer distinctions than that between meaning and belief. What must sharply be distinguished are the following:

the *content of a sentence* (e.g. that John met Bill in Chicago last week),

the *ways of establishing it*,

the *information* that it conveys to different speakers on the basis of what they know already and are willing to believe.

Information is not, in my opinion, part of meaning proper. As regards the notion of content, it is natural to wonder whether the content of a sentence given in terms of truth-conditions exhausts all that we may want to say about knowledge of meaning.¹³ For even if a sharp distinction is made between the content of a sentence and the ways of establishing it as correct, we may still argue that, in order to account for the ability to use a sentence appropriately, essential appeal has to be made to knowledge of *how* to establish its truth or of what counts as a way of establishing it as true. Moreover, the question will arise whether, among the ways of establishing a sentence as true, some may perhaps count as more primitive, more fundamental than others.¹⁴ (Knowing certain ways of

establishing a sentence as true may, of course, involve information available in the community as a whole but not to each and every speaker of the language of the community. Nevertheless, we shall want to make a distinction between knowing the meaning of a sentence like 'The water is boiling' and knowing all or some of the scientific information possibly relevant to such a sentence.)

Now, a theory constructed along Quinean or Davidsonian lines will offer an account of the 'interanimation of sentences'¹⁵ and of the mechanism whereby further pieces of knowledge can be gathered from knowledge of the content of a sentence (as given by its truth-conditions). For example, from 'Bill met John at the conference in Chicago' I can infer that there is someone whom Bill met, that this event took place in the past, etc. Moreover, I may fit the (possibly new) information conveyed by that sentence into my system of beliefs and make guesses such as: 'So Bill preferred the Chicago conference to the London conference, and hence did not meet Jack, etc.' Plainly such guesses cannot be accounted for by a theory of radical interpretation; they are what Ramsey calls beliefs 'of the primary sort', and such beliefs constitute 'a map of neighbouring space by which we steer. It remains such a map however much we complicate it or fill in details. But if we professedly extend it to infinity, it is no longer a map; we cannot take it in or steer by it. Our journey is over before we need its remoter parts.'¹⁶ Thus, even if a speaker's beliefs and the speaker's meanings of the sentences he uses are systematically related to objective sentence-meanings, they do not belong to the latter. Obviously knowledge of objective meaning also involves awareness of entailments such as 'If Bill met John, then John met Bill', which can be accounted for in terms of lexical inference, i.e. by referring to our knowledge of the fact that 'meet' (unlike 'see') expresses a symmetric relation.

However, there seems to be a reference to the tacit exercise of skills such as the inferential abilities exemplified by inductive, deductive, and lexical reasoning also in Davidson's account of that type of theoretical knowledge which is implicit in knowledge of the meaning of a sentence.¹⁷ For in order to articulate the theoretical know-

ledge which is implicit in knowing the meaning of a sentence, we cannot help appealing to a form of tacit knowledge of *how* to unravel the relevant entailments. For such unravelling to be possible we must, moreover, assume that meaning is somehow 'stable', that words do not change their use: the use of a word must be in harmony with its meaning, it must as it were be 'responsible' to its meaning. (More on the notion of harmony in section 4. below.)

3. Recognitional Capacities

Wittgenstein, in his *Notebooks*, wonders whether we should try to 'find an expression . . . for HOW MUCH a proposition says' (p. 54). But even independently of the somewhat austere framework of the early Wittgenstein one may speculate about this idea, and then it becomes clear that a measure of how much a sentence says would also be a measure of how much one is expected to understand in order to be credited with full mastery of its sense. Here 'full mastery' means being able to use it correctly and/or recognise it as true under appropriate circumstances (no matter whether on a given occasion we, by accident, make mistakes in this regard). The 'appropriate circumstances' are those that we have been taught to regard as appropriate and are commonly regarded as appropriate, or at least relevant, to establishing the correctness of the claim in question; and this may involve sensory experience, methods of verification, calculation, measurement, and, in general, the exercise of certain recognitional abilities of varying degrees of sophistication.

In the context of propositional knowledge the word 'recognition' can be taken either in a strong or in a weak sense. In the weak sense it signifies acceptance or acknowledgement of the truth of a proposition as something a speaker may express on the basis of mere hearsay, or of the testimony of some expert. In the strong sense it means that one has exercised one's own recognitional abilities

(perceptual faculties, acquired techniques of measuring or calculating, etc.) in order to find out whether the circumstances verifying the assertion in question are given.

That there is a genuine difference between two types of linguistic act corresponding to these two ways of understanding 'recognition' can be seen when one notices that the act corresponding to the weak sense of 'recognition' can be called an act of assertion only in an attenuated sense: it shades off into what may be regarded as the separate act of assenting. Paradigmatic cases of assenting and asserting are quite obviously connected with different degrees of knowledge on the part of the speaker, but it is very difficult to spell out what amount of knowledge is necessary to turn an affirmative utterance — an expression of assent — into an assertion proper and what lack of knowledge would disqualify an utterance from counting as a genuine assertion.

The difference at issue here may become clearer by considering the familiar — and frequently frustrating — experience of reading e.g. a comment in the financial pages of a newspaper or a musicologist's account of a piece of music we have listened to. It may be that inwardly we assent to what we read, but when it comes to expressing our assent we may well wonder what basis there is for our doing so. Not only are we at a loss to describe a possible method of verification of the statement in question — we should probably not be able to recognise a verifying circumstance even if confronted with it. But worse is yet to come. Once we have started wondering what right we have to assent to, or even assert, statements based on knowledge we do not possess, we may then go on to ask ourselves whether we have fully understood their meaning. Now, a lot has been said about the problems involved in this type of situation, which clearly reflects the 'linguistic division of labour'.¹⁸ We should not, however, regard such cases as normal, for in most everyday situations expert knowledge of the more esoteric kind plays no significant role, and the relevant knowledge of most speakers can for our purposes be regarded as equal. It is plausible to suggest that an account of our understanding a language contain a substantive reference to speakers' recognitional capacities, which chiefly consist

in means and methods of verifying statements containing expressions of whose meaning we have an implicit grasp.

'True' and 'false' are words that are used to elucidate what we mean by 'proposition'. As Wittgenstein has pointed out in the *Investigations* (cf. I, 136), they belong to the kind of things we tend to say about propositions but must not be regarded as defining their essence. It is not as if, within a given set of sentences, one could simply discriminate those suited for statement-making and then go on to inquire under which conditions they would turn out to be justifiably assertible in virtue of their meanings and our recognitional capacities on the one hand and of how things are on the other. We start, instead, from the observation that people engage in the activities of asserting, refusing to assert, assenting, dissenting, asking questions, giving grounds, expressing opinions on the strength and appropriateness of these grounds, stating deductive arguments, etc., and armed with these data we then ask ourselves whether there is a notion or a set of kindred notions broad enough for being used to redescribe their linguistic performance in reason-giving terms and to form a conception of the content and significance of what they say.

It is natural to regard the acts of assenting, dissenting, etc. as expressions of understanding and, in the case of the linguistic act of assertion, as expressions of knowledge. The naturalness of this assumption resides in this: that understanding manifests itself in the ability to form correct judgments under appropriate circumstances and in the capacity to utter some of these judgments in the form of assertions in contexts which are thought to be theoretically relevant or practically useful or conversationally appropriate. It is therefore natural to think that a significant insight in the content of these utterances can be gained if, instead of asking 'Which are the (possibly recognition-transcendent) truth-conditions of sentences used to make assertions?', we ask questions such as 'What beliefs (or knowledge) do these assertions purport to articulate?' 'How is it *generally* possible to attain the beliefs (or types of knowledge) manifested on this particular occasion by this particular speaker?', 'Which

features of our behaviour can be seen as connected with our having certain beliefs?’

4. The Harmony between Meaning and Rules

It is no doubt possible to understand the meaning of a sentence without knowing its truth value; it suffices to know which possibilities it rules out and which possibilities it allows. Yet once we know a route that leads to establishing its truth value (no matter whether we ourselves are capable of following that route), we command a better grasp of the meanings of its component words, and it is in virtue of this fuller understanding that we may be able to form a judgment. But is it legitimate to explain the ability we display when, say, making a correct perceptual judgment, performing a calculation, seeing certain features instantiated in a given pattern, etc., as issuing, at least in part, from a fuller grasp of the meanings of the words we use, as if these meanings enshrined the possibilities of application?

Frege suggests that this notion of ‘enshrining’ or ‘containing’ can be understood in terms of the metaphor of plant and seed (Frege 1884, sec. 88; 1903, sec. 147). In the second volume of the *Grundgesetze* he writes that we ‘hope to be able to develop the whole wealth of objects and functions treated of in mathematics out of the germ [*Keim*] of . . . eight functions’.¹⁹ And in *Grundlagen* he says apropos of his notion of analyticity that the conclusions which, in arithmetic, extend our knowledge ‘are contained in the definitions, but as plants are contained in their seeds, not as beams are contained in a house’.²⁰ The justification of this claim requires both the construction of a formal system and a viable explanation of what it is for a (simple or complex) sign to have a *Bedeutung* and of that which gives ‘life’ to a sign,²¹ viz. its sense. The first task was fulfilled in *Begriffsschrift* and completed in the *Grundgesetze*.

Of course, if the interest of Frege’s considerations were confined to the philosophy of mathematics or a

theory of deductive inference, they would be of little relevance in the present context. But, as a matter of fact, they contain a profound and elaborate theory of meaning, and thus contribute to fulfilling the second task mentioned in the previous paragraph. This theory became the object of Wittgenstein’s sustained criticism and thus the starting-point from which he began to develop his own conceptions of meaning. The point at issue is the above-mentioned notion of ‘harmony’ (cf. end of section 2. above); this notion is much wider than that of analyticity and is intended to apply to the whole of language. The question is, roughly speaking, whether it is legitimate to say that the *uses* we make of a given word in all kinds of context have to be in accordance with the main features of its meaning as exemplified in a privileged type of context. Further questions concern the desirability and reality of this kind of harmony.

In his vitriolic attack on Hermann Schubert’s account of the extension of the number-system Frege outlines several of the themes later discussed in the *Grundgesetze*²² and gives a compendious statement of his views on the connections between sense, rules, and *Bedeutung* (reference):

So the string of signs is supposed to be assigned a sense, and it is supposed to follow from this sense that the string may be manipulated according to certain rules. This is clear enough: the rules according to which the string is to be manipulated depend on the sense of the signs. Nothing could be simpler, except that it is diametrically opposed to a certain formalist doctrine according to which signs have no sense, or at least need not have a sense, but are to be conceived as similar to chess figures, where the rules of manipulation can be established quite arbitrarily and irrespective of a sense. . . The domain of objects is itself governed by certain laws, and it is clear enough how these laws are mirrored in the form of rules regulating the use of the corresponding signs.²³

Technically the ‘mirroring’ alluded to in this quotation is achieved by laying down the semantic interpretation of the

above-mentioned eight functions which contain all further developments — as in a seed.²⁴

Sentences have sense; they express thoughts; their truth depends *both* on the meaning of the individual words occurring in them *and* on that which makes them true in reality. When using a word for making new statements we must not disrupt the extant fund of sentences held true in which that word occurs. In the case of a formal system the rules and definitions which we may introduce must be in harmony with the original sense conferred upon our words by the statements already accepted as true (e.g. axioms). The rules which govern the employment of number-words must be in agreement with their *sense*, say, as *Anzahlen* (cardinal numbers) or *Masszahlen* (measures) respectively: for sense is our only way of articulating our knowledge of the *laws* that reign in the realm of numbers.

This conception leads to the well-known point that there has to be harmony between rules which govern the handling of connectives in derivations and the meaning of connectives as given, say, by their truth-functional explanation. The idea is familiar: it was illustrated by Prior (1960) and commented on by Belnap (1962). Suppose we wished to introduce the propositional connective 'tonk' by laying down the following rules governing its introduction and elimination:

tonk I	A	B
	A tonk B	A tonk B
tonk E	A tonk B	A tonk B
	A	B

Then we can prove by means of a simple derivation that any two propositions are logically equivalent.²⁵ The moral drawn by Prior is that not any rule would do: rules have to be in harmony with our semantic intuitions, e.g. as laid down by means of truth tables. Belnap remarks that the

new connective does not yield a 'conservative extension' of our previous calculus, where an extension counts as conservative if it does not generate new theorems containing only the 'old' constants. Using Dummett's (1973a) terminology we may say that there is no harmony between the grounds for asserting 'A tonk B' and the consequences we draw from it.

There is another, interestingly similar case, mentioned by Belnap, viz. 'Peano's operation' ?, which is defined in the following way:

$$\frac{a}{-} \quad ? \quad \frac{c}{-} =df. \quad \frac{a + c}{b + d}$$

Here we can say that this rule would immediately allow us to prove a contradiction or, to take a more general example from Kleene, that the function $(p, q) \circ (r, s) = (p + r, q + s)$ 'is a perfectly well defined operation (function) on fractions which does not induce an operation on rationals'.²⁶ The moral is that (not even) in logic can we make up the rules as we go along, whether or not Frege's suggestive picture of the harmony between rules and the senses of expressions whose use is governed by these rules is accepted. Perhaps in order to bring out this type of harmony Frege, in his essay "Compound Thoughts" ("Gedankengefüge"), supplements his account of truth-functionally defined connectives with a hint as to their inferential role. But as Frege does not see the point of proving uniqueness (i.e. that rules characterise exactly *one* connective), his remarks have only heuristic significance.

Wittgenstein's attack on the conception outlined above is essentially an attack on the assumption that there is 'harmony' between meanings and rules. Take for instance the following passage on negation from the *Investigations*:

There cannot be a question whether these or other rules are the correct ones for use of 'not'. (I mean, whether they accord with its meaning.) For without

these rules the word has as yet no meaning; and if we change the rules, it now has another meaning (or none), and in that case we may just as well change the word too.²⁷

Wittgenstein's attitude towards the problems surrounding the concept 'rule' is ambivalent. In the passage quoted above he seems to argue in favour of the theory Frege so vehemently opposed in *Grundgesetze*, viz. the theory of arithmetic as a game of chess. On the other hand, we know that he disagreed with Hilbert's formalist philosophy of mathematics, which according to Wittgenstein's view reduced mathematical reasoning to formal manipulations. Kreisel²⁹ calls Wittgenstein's philosophy a 'philosophy of rules and proofs'; it seems to me, however, that on closer scrutiny Wittgenstein's arguments against meaning-platonism apply just as well to rule-platonism.²⁹ Besides, we should be wary of saying that understanding meaning is a matter of rule-following. There are, to be sure, certain practices whose essence consists in following rules (e.g. calculations, drawing diagrams according to explicit instructions, etc.) but these are practices of limited scope: only of cases where a rule is actually 'involved' in a calculation can we really say that they are cases of rule-following;³⁰ a rule 'does not act at a distance'.³¹ As I do not see any direct connection between meaning and rule-following in the sense specified above, I think that to talk of 'rules of meaning' is to stretch that notion in an illegitimate way.³²

Wittgenstein criticises the idea that meaning guides us along invisible rails and tells us which extensions of meaning are compatible with our initial stipulations or pre-existing practices and which are not;³³ he criticises the view that *use*, or application, flows from meaning, or from some canonical example of its application. Meaning is that which we seem to understand 'mit einem Schlag'; use extends in time; if meaning = use, are not these two images in conflict? Our earlier steps do not determine our later steps, at best they influence them. At each step we need a new decision, but as there are no obvious grounds determining which decision is to be taken, it follows that what we do is arbitrarily giving or withholding assent to

a new application of the word. Is this really the picture that Wittgenstein is suggesting that we embrace? And, if so, which consequences are we to draw as far as 'knowledge of meaning' is concerned?

Wittgenstein's criticism of the conception described above has several facets. It may be read as the claim that we have a wrong theory of our practice: we credit ourselves with knowledge we do not possess and/or misconstrue the knowledge which we do possess. However, Wittgenstein is often interpreted as suggesting the view that we possess no peculiarly *linguistic* knowledge that enables us to take part in the speaking of language. Speaking a language is so interwoven with other practices, forms of life, techniques that it is hopeless to disentangle what belongs to knowledge of meaning from what belongs to something else. Thus, according to this way of reading Wittgenstein, there could be drawn no distinction between the content of a sentence, the information it conveys to different speakers, and ways of establishing it as true. I think that this sort of interpretation of Wittgenstein is to be rejected.

Wittgenstein insists that all ascriptions of knowledge of meaning have to be anchored in external criteria (*Investigations*, I, 269, 305-9). That is, we are bound to form a wrong conception of the meanings of our words if, say, in explaining our use of the word 'remember' we appeal to an 'inner process' for which the word is supposed to stand (305). In section 2, above, we interpreted this requirement as having the consequence that a manifestation of such understanding consists in the ability to form correct judgments under appropriate circumstances and in the capacity to utter some of these judgments in the form of assertions in contexts which are thought to be either theoretically relevant or practically useful or conversationally appropriate. When giving an improved account of how understanding manifests itself in behaviour we shall very probably appeal to the relevant *recognition abilities*. The dictum 'I recognise a proof when confronted with one' can be applied outside the province of mathematics. We often use similar locutions in other contexts. We say that we can recognise a face, a smile, a way of walking when we

see it. We have practical abilities which cannot be articulated linguistically.

In trying to give an explanation of meaning we may find ourselves in a position similar to that in which we want to express how to exercise a practical skill. The difficulties involved in this are hinted at by Wittgenstein when he writes, 'When we want to describe the use of a word, — isn't it like wanting to make a portrait of a face? I see it clearly; the expression of these features is well known to me; and if I had to paint it I shouldn't know where to begin'.³⁴

Wittgenstein usually appeals to recognitional capacities in contexts where he asks questions such as whether or not a new specimen falls within a given familiar pattern. Now, in order to throw light on the notion of harmony and its possible connection with our recognitional capacities, I shall mention a few examples that could be seen as calling in question some of our previous claims. Some of these examples actually occur in Wittgenstein while some are my own invention. I shall then elaborate on a very simple example.

Does the word 'planet' as it occurs in Kepler's law of planetary motion (before 1630) acquire a new meaning in 1791 (discovery of Uranus), in 1846 (discovery of Neptune), in 1930 (discovery of Pluto)?

Answer: No. For the law is to be taken 'in intension'; unlike contingent generalisations, it licenses subjunctive conditionals such as 'If a tenth planet were discovered, it would obey Kepler's Law'. Frege would say: It does not speak of heavenly bodies but of concepts; we may understand the proposition expressed without knowing the name of a single planet.

Does the expression 'polygon constructible with ruler and compasses' acquire a different meaning in 1801 when Gauss comes up with the formula which tells us which the regular polygons are?

Answer: the meaning does not change; yet the relevant procedures and techniques are, surely, different, and the

problem, once solved, becomes uninteresting. Thus the answer is a qualified No.

Does the number-word 'five' have a different meaning for the tribe which counts '1, 2, 3, 4, 5' from the meaning it has for us?

Answer: Yes, our 'arithmetics' would obviously be different, and it would show in our practices as well: that set of numbers is not closed under addition.³⁵

Does the number 2 when used as an *Anzahl* ('2 chairs') have a different meaning from the number 2 when used as a *Masszahl* ('2 metres long')?

Both Frege and Wittgenstein answer Yes. Many would say that they can be shown to be 'equivalent' in a technical sense of the term.³⁶

In which sense can our techniques of measuring (e.g. weighing) be said to differ from those of a tribe where wood is sold by the lengths of the piles, leaving their heights out of account? Are they the same up to a point and then start to differ?³⁷

I should say that the techniques were different from the start, but it requires some argument to show that this is the case.³⁸

Do the meanings of $\&$, \vee , \rightarrow , etc., change when we add the quantifiers, thereby extending our calculus?

The answer is No: the quantifiers conservatively extend the calculus.

Now, let us consider a simple case. Doubts might arise about whether a certain piece of furniture can still be called a chair. Neither an alleged mental 'template' of a chair nor a functional characterisation of a piece of furniture of this sort will here be of any avail. It will be better to see our judgment as the outcome of a different way of looking at things, viz. of our attempt at fitting

the object in question into a pattern of continuous gradations. It will be more adequate to reformulate our judgment, for example in the following way: 'Well, given that *this* is called a chair, and *that* too, we may also call *that* object over there a chair.' What gives my judgment its point is, so to speak, an underlying structure of comparatives. Perhaps a comparison with colour words is appropriate here: although we may be in doubt as to the criteria for, say, 'pink' and hesitate to apply the word to a given specimen, we may on various occasions formulate such conditionals as 'If you call this pink, you have to call this other specimen pink too'. That such conditionals may have a well-determined sense, even though the colour words themselves are vague, shows that what gives these conditionals a point is the underlying structure of comparatives and its appropriateness to (some) cases of colour words. Similar considerations may suggest a clue to the understanding of vagueness and the structure of overt comparatives and superlatives.

Many of Wittgenstein's remarks that belong in this context are meant to show that our actual decisions about whether or not to apply a certain word are not to be seen as issuing from the recognition of necessary and sufficient conditions which a certain type of object is supposed to satisfy,³⁹ but from our capacity to fit things into patterns, which involves our ability to be struck by certain similarities while not responding to others. It may happen that only in a given context do certain aspects or patterns become salient, while in other contexts they remain absent. This is exemplified by many of the experiments described by Gestalt psychologists and referred to by Wittgenstein in his later work. The examples mentioned above, on the other hand, lack this feature: to be sure, we can gain important structural insight by, say, constructing the real numbers out of the natural ones (or the other way around) or by comparing the expressive powers of different languages. But I do not think that this situation is similar to that in which, say, one half of a grey ring appears lighter on being seen against a black background than the other half, which is seen against a white background. And it is because of this dissimilarity that many *mathematical* or *logical* examples given by Wittgenstein in

order to engender doubts about sameness of meaning and to make us aware of the tension between the meaning of a word and its rule-governed application seem to fall wide of the mark. This is not to deny that these examples can be of heuristic significance, at least in the sense of reminding us of how little we know about our recognitional abilities.

But what have these recognitional abilities got to do with knowledge of meaning? Could we not just say: These are brute facts of our natural history ('the frog's eyes differ from man's eyes, etc.')? Is it a fact of our natural history that our vocabulary for describing smells is so poor (*Investigations*, I, 610)? I do not know. However, before yielding to this 'naturalistic' temptation and handing over our philosophical problems to psychologists, biologists, etc., we'd better have a closer look at the matter. And a first step, I have argued, is to try to express our question more precisely: How does the mention of recognitional capacities enter into an explanation of our knowledge of meaning? In sum, it is not as if (e.g. in applying a given concept to new instances) we were free at every step: it is simply that our 'bondage' is not that imposed on us by a rule, or a decision-procedure, or a picture, but the far more insidious one imposed on us by the practice of exercising our recognitional abilities.⁴⁰

Notes

1. Cf. Chomsky 1976, pp. 164f.: 'Let us say that if a speaker knows the language L then he *cognizes* L. Furthermore, he cognizes the linguistic facts that he knows (in any uncontroversial sense of "know") and he cognizes the principles and rules of his internalized grammar, both those that might be brought to awareness and those that are forever hidden from consciousness.'

2. For a discussion of the distinction between rules 'fitting, overtly guiding, and implicitly guiding speakers' behaviour', cf. Quine 1972, pp. 440-6.
3. The questions are (a) whether or to what extent an account along such lines can cover further aspects of meaning, and (b) exactly which features of knowledge of meaning the notion of rule-guidance can be supposed to explain.
4. The requirement that propositional knowledge be manifestable is a regulative principle of the anti-realist account of meaning given by Michael Dummett (1976, 1978). This requirement is connected to a further principle concerning sentences with recognition-transcendent truth-conditions (e.g. counterfactual conditionals, sentences with undecidable predicates, quantified sentences whose quantifiers range over infinite or unsurveyable domains, sentences in the past tense): if such sentences are understood at all, they are not understood in any way analogous with our relatively uncontroversial way of understanding observation sentences. Our understanding of the former type of sentences does not consist in our apprehending what it would be like for them to be *barely* true under conditions in principle inaccessible to our recognitional capacities, conditions to which the manifestation requirement cannot be applied (cf. Dummett 1976, pp. 89ff.). For it is an unintelligible claim to say that we could grasp a truth-condition whose obtaining we are in principle unable to recognise. According to Dummett, our understanding of such sentences does not consist in grasping their truth-conditions, but in our knowledge of the conditions which would warrant their assertion. Assertibility-conditions (of which verifiability-conditions are a special case) do not obtain undetectably. It is, however, not possible to give a uniform statement of these conditions, and consequently the notion of warranted assertibility lacks many of the advantages of the classical notion of truth. For a discussion of the requirement of manifestability, cf. Prawitz 1977; Wright 1980; Edgington 1984.

5. The attitude of holding a sentence true plays a central role in the activity of radical interpretation (see note 7) as this is envisaged by Davidson: 'A good place to begin is with the attitude of holding a sentence true, of accepting it as true. This is, of course, a belief, but it is a single attitude applicable to all sentences, and so does not ask us to be able to make finely discriminated distinctions among beliefs. It is an attitude an interpreter may plausibly be taken to be able to identify before he can interpret, since he may know that a person intends to express a truth in uttering a sentence without having any idea *what* truth.' (Davidson 1984, p. 135.)
6. Davidson 1984, p. 200.
7. Davidson discusses radical interpretation mainly with reference to a situation where one person tries to understand the utterances of a speaker of a foreign language by means of a theory fulfilling certain formal and empirical conditions. However, the problems involved in radical interpretation are also present in the case of trying to understand a speaker of one's own language, only less obviously so. According to Davidson, 'All understanding of the speech of another involves radical interpretation' (1984, p. 125). The term 'radical interpretation' itself is of course 'meant to suggest strong kinship with Quine's "radical translation". Kinship is not identity, however, and "interpretation" in place of "translation" marks one of the differences: a greater emphasis on the explicitly semantical in the former' (ibid., p. 126n.). For a general appraisal of the aims and claims of Davidson's programme of radical interpretation, cf. Lepore 1982.
8. Davidson 1984, p. 142.
9. Davidson 1984, p. 170.
10. Quine's indeterminacy thesis is a thesis about the indeterminacy of *translation*. In the following passage it is stated in very general terms: '. . . rival systems of analytical hypotheses can fit the totality of speech behaviour to perfection, and can fit the totality of dispositions to

speech behaviour as well, and still specify mutually incompatible translations of countless sentences insusceptible of independent control' (1960, p. 72). Davidson repeatedly affirms that he accepts the indeterminacy thesis; but at the same time he points out that his approach will narrow the range of indeterminacy as compared with what Quine considers possible. Davidson's reasons for believing this are (1) that his theory reads more quantificational structure into the language that is to be interpreted, and (2) that he (Davidson) applies the principle of charity (according to which 'assertions startlingly false on the face of them are likely to turn on hidden differences of language', Quine 1960, p. 59) in a more general way than Quine.

11. Cf. Davidson 1984, p. 130: 'A theory of interpretation for an object language may then be viewed as the result of the merger of a structurally revealing theory of interpretation for a known language, and a system of translation from the unknown language into the known. The merger makes all reference to the known language otiose . . . We have such theories, I suggest, in theories of truth of the kind Tarski first showed how to give (cf. Tarski, "The Concept of Truth in Formalized Languages"). What characterizes a theory of truth in Tarski's style is that it entails, for every sentence *s* of the object language, a sentence of the form:

s is true (in the object language) if and only if *p*.

Instances of the form (which we shall call T-sentences) are obtained by replacing "*s*" by a canonical description of *s*, and "*p*" by a translation of *s*.'

12. Cf. Davidson, 1984, p. 139.

13. Dummett 1976; Wright 1976.

14. Cf. Dummett 1973 and 1973a; Prawitz 1977, 1978.

15. Quine 1960, pp. 9ff.

16. Ramsey 1978, p. 134. Cf. Davidson 1984, p. 279.

17. In the austere account offered by Davidson the 'skills' alluded to are those of the radical interpreter and not those of the foreign people whose language he is trying to understand.

18. Putnam 1975, pp. 228f. The hypothesis of the division of linguistic labour is meant to explain the fact that every language 'possesses at least some terms whose associated "criteria" are known only to a subset of the speakers who acquire the terms, and whose use by the other speakers depends upon a structured cooperation between them and the speakers in the relevant subsets' (ibid., p. 228). Consequently an 'average' speaker who acquires a term subject to the division of labour does not thereby acquire anything that fixes the term's extension (p. 229).

19. Trans. Geach and Black 1960, p. 181.

20. Trans. Austin 1953, p. 101.

21. Cf. Wittgenstein 1969, p. 4.

22. Vol. II, sections 138-55.

23. Frege 1984, p. 263. Cf. 1903, sections 110, 158, and the following passage: 'The gulf between arithmetical formulas and their applications would not be bridged. In order to bridge it, it is necessary that formulas express a sense and that the rules be grounded in the reference of the signs. The end must be knowledge and it must determine everything that happens' (sec. 92, trans. Geach and Black, p. 188).

24. Cf. *Grundgesetze*, vol. I, sec. 31.

25. Cf. Sundholm 1986.

26. Kleene 1967, p. 161.

27. *Investigations*, p. 147 (b). To me Wittgenstein's remarks on the meaning of logical constants, and especially of negation, are singularly unenlightening. Of course, it is a matter of stipulation which type of negation we admit in a logical system: but these different types of 'negation' have different justifications; for instance, they hang together with different conceptions of falsity, for which linguistic usage gives us but little guidance. Moreover, we can gain insight by making a comparison between the different expressive powers of languages with different types of negation. But here we are dealing with a difficult problem and should not simply say that we can choose between different stipulations. If such stipulations are to have any point at all, they must be answerable to some informal notion whose strength and consequences we may want to investigate.

28. Cf. Kreisel 1978.

29. Cf. Baker and Hacker 1984.

30. Wittgenstein 1969, pp. 12f.

31. *Ibid.*, p. 14.

32. I should not have dwelt on this point, had not the way from scepticism about rules to meaning-scepticism been so persuasively paved by Kripke (1981). What Wittgenstein really thought about the issue of rule-following is clearly expressed in section 81 of the *Investigations*: 'in philosophy we often *compare* the use of words with games and calculi which have fixed rules, but cannot say that someone who is using language *must* be playing such a game . . . All this, however, can only appear in the right light when one has attained greater clarity about the concepts of understanding, meaning, and thinking, for it will then also become clear what can mislead us (and did mislead me) to think that if anyone utters a sentence and *means* or *understands* it he is operating a calculus according to definite rules.' (Translation corrected.) For a critical discussion of Kripke's interpretation see Goldfarb 1984.

33. Cf. *Investigations*, I, 218.

34. Wittgenstein 1980, sec. 944. Cf. the parallel passages in *Investigations*, I, 228-235, where understanding something is compared to perceiving a physiognomy. It is a pity that the translator has failed to bring out the simile intended by Wittgenstein when he uses '*Gesicht*', '*Zug*', '*Physiognomie*', a type of simile reminiscent of certain elements of Goethe's morphological thought (cf. Schulte 1984).

35. Cf. Wittgenstein 1953, I, 555.

36. Cf. Frege 1903, sec. 155; Wittgenstein 1953, I, 553; Kleene 1967, sec. 30; Binmore 1980, ch. 10.

37. Wittgenstein 1974, I, sections 143-150.

38. Cf. Picardi 1981, pp. 234-41.

39. Cf. Baker and Hacker on *Merkmal* definitions, 1980, pp. 381ff. *et passim*.

40. For comments and criticisms I wish to thank Amedeo G. Conte, Ernest Lepore, Gabriele Lolli, Enrico Moriconi, Ernesto Napoli and Barry Smith.

References

Baker, G. and Hacker, P. 1980 *Wittgenstein: Understanding and Meaning*, Oxford: Blackwell.

— 1984 *Scepticism, Rules and Language*, Oxford: Blackwell.

Belnap, N. 1962 "Tonk, Plonk and Plink", *Analysis*, 22, 130-4.

- Binmore, K.G. 1980 *Foundations of Analysis: A Straightforward Introduction, Book 1*, Cambridge: Cambridge University Press.
- Chomsky, N. 1976 *Reflections on Language*, London: Temple Smith.
- Davidson, D. 1973 "Radical Interpretation", as repr. in Davidson 1984, 125-140.
- 1974 "Belief and the Basis of Meaning", as repr. in Davidson 1984, 141-154.
- 1975 "Thought and Talk", as repr. in Davidson 1984, 154-70.
- 1977 "The Method of Truth in Metaphysics", as repr. in Davidson 1984, 199-214.
- 1984 *Inquiries into Truth and Interpretation*, Oxford: Oxford University Press.
- Dummett, M. 1973 "The Justification of Deduction", as repr. in Dummett 1978, 300-8.
- 1973a "The Philosophical Basis of Intuitionistic Logic", as repr. in Dummett 1978, 215-47.
- 1976 "What is a Theory of Meaning? (II)", in *Truth and Meaning*, ed. by G. Evans and J. McDowell, Oxford: Clarendon, 67-137.
- 1978 *Truth and Other Enigmas*, London: Duckworth.
- Edgington, D. 1984 "Verification and the Manifestation of Meaning", *Proceedings of the Aristotelian Society*, Supplementary Volume 58, 33-52.
- Frege, G. 1879 *Begriffsschrift*, repr. Darmstadt: Wissenschaftliche Buchgesellschaft (1973).

- 1884 *Die Grundlagen der Arithmetik*, Eng. trans. J. L. Austin, Oxford: Blackwell (1953).
- 1893-1903 *Grundgesetze der Arithmetik*, repr. Hildesheim: Olms (1966).
- 1923 "Gedankengefüge", trans. in Frege 1984, 390-406.
- 1960 *Translations from the Philosophical Writings of Gottlob Frege*, ed. by P. Geach and M. Black, Oxford: Blackwell.
- 1984 *Collected Papers on Mathematics, Logic, and Philosophy*, ed. by B. F. McGuinness, Oxford: Blackwell.
- Goldfarb, Warren 1984 "Kripke on Wittgenstein on Rules", *The Journal of Philosophy*, 82, 471-88.
- Kleene, S. C. 1967 *Mathematical Logic*, New York: Wiley.
- Kreisel, G. 1978 "The Motto of *Philosophical Investigations* and the Philosophy of Mathematics", *Grazer Philosophische Studien*, 6, 13-38.
- Kripke, S. 1981 "Wittgenstein on Rules and Private Language", in *Perspectives in the Philosophy of Wittgenstein*, ed. I. Block, Oxford: Blackwell.
- Lepore, E. 1982 "In Defense of Davidson", *Linguistics and Philosophy*, 5, 277-94.
- McGinn, C. 1980 "Truth and Use", in *Reference, Truth, and Reality*, ed. by M. Platts, London: Routledge and Kegan Paul, 19-40.
- Picardi, E. 1981 *Assertibility and Truth: A Study of Fregean Themes*, Bologna: CLUEB.
- Prawitz, D. 1977 "Meaning and Proofs: On the Conflict between Classical and Intuitionistic Logic", *Theoria*, 43, 2-40.

— 1978 "Proofs and the Meaning and Completeness of the Logical Constants", *Essays on Mathematical and Philosophical Logic*, ed. by J. Hintikka and E. Saarinen, Dordrecht: Reidel, 25-40.

Prior, A. 1960 "The Runabout Inference-Ticket", *Analysis*, 21, 38-39.

Putnam, H. 1975 "The Meaning of 'Meaning'", *Mind, Language, and Reality*, Cambridge: Cambridge University Press.

Quine, W.V. 1960 *Word and Object*, Cambridge, Mass.: M. I. T. Press.

— 1972 "Methodological Reflections on Current Linguistic Theories", *Semantics of Natural Language*, ed. by D. Davidson and G. Harman, Dordrecht: Reidel, 442-54.

Ramsey, F. P. 1978 *Foundations: Essays in Philosophy, Logic, Mathematics and Economics*, ed. by D. H. Mellor, London: Routledge and Kegan Paul.

Schulte, J. 1984 "Chor und Gesetz: Zur 'morphologischen Methode' bei Goethe und Wittgenstein", *Grazer Philosophische Studien*, 21, 1-31.

Sundholm, G. 1986 "Proof Theory and Meaning", *Handbook of Philosophical Logic*, vol. III, ed. by Gabbay and Guentner, Dordrecht: Reidel, 471-506.

Tarski, A. 1936 "The Concept of Truth in Formalized Languages", as repr. in Tarski, *Logic, Semantics, Metamathematics*, Oxford: Clarendon Press, 1956, 152-269.

Wittgenstein, L. 1953 *Philosophical Investigations*, Eng. trans. by G. E. M. Anscombe, Oxford: Blackwell.

— 1969 *The Blue and the Brown Books*, Oxford: Blackwell.

— 1974 *Bemerkungen über die Grundlagen der Mathematik*, Eng. trans. by G. E. M. Anscombe, Oxford: Blackwell.

— 1979 *Notebooks 1914-1916*, Oxford: Blackwell.

— 1980 *Remarks on the Philosophy of Psychology*, vol. I, Eng. trans. by G. E. M. Anscombe Oxford: Blackwell.

Wright, C. 1976 "Truth-Conditions and Criteria", *Proceedings of the Aristotelian Society*, Supplementary Volume 50, 217-245.

— 1980 "Realism, Truth-Value Links, Other Minds and the Past", *Ratio*, 22, 112-132.