

names of arrangements of dots. The natural conclusion to draw, then, would be that numerals are not really names at all.

The mistake in all this, Frege believes, is made at the outset: asking for the meaning of (types of) words outside of their role in propositions. What we ought rather to ask is whether we can give adequate explanations of the meanings of sentences in which numerals occur, in a way which is consistent with their being assigned the role of proper names. And this Frege thinks he can do.

It is clear, then, that one aspect of Frege's employment of the Context Principle must lie in his according a fundamental role to sentences within language. For the points above only make sense on the supposition that sentences are somehow radically different in purpose and function from proper names, since it needs to be maintained that a sign's being a proper name is just a matter of its contributing to the truth-conditions of sentences in which it occurs in a certain characteristic way. This is an important insight, expressible in the claim that a sentence is the smallest bit of language with which one can actually say anything.<sup>2</sup> Then since the whole purpose of individual words lies in the contribution which they make to the meanings of sentences in which they occur, it is this which should be investigated if we want to know what sort of meaning they possess.

However, there must be more to Frege's employment of the Context Principle than this. For one fairly natural account of the way in which a proper name contributes to the content of a sentence would be to say that its role is simply to stand for an individual object, the rest of the sentence then saying something which purports to be true of that object. And it would be wholly consistent with this to insist that all genuine proper names must be introduced, ultimately (that is, when the chain of explicit definitions runs out), by means of ostensive definitions. So Frege would still be left with a problem: his opponent would be objecting that numbers cannot really be objects since there can be no such thing as pointing out, or being presented with, a number. Indeed, this is surely the most sympathetic way of interpreting the objection from our inability to form adequate images of numbers. For an appropriate image would be a representation of the sort of thing which could be presented in an ostensive definition.

It is not entirely fanciful to see the Context Principle as the precursor of the later Wittgenstein's remarks on ostensive definition in *PI*.<sup>3</sup> Frege's reply to the above objection would be to challenge the idea that ostensive definition plays a foundational role in the explanation of the terms of a language. Since 'a word has meaning only in the context of a sentence', there must be a great deal more to fixing the meaning of a term than the

## 2 The Context Principle

While the non-referential semantics for predicates implicit in the Picture Theory does not strictly entail that there are no property-types, I believe that Wittgenstein accepted such a consequence, for the reason that metaphysical and ontological issues are secondary to semantical and logical ones. In this chapter we start our exploration of this approach to philosophy, beginning with the *TLP* endorsement of the Context Principle, that words only have *Bedeutung* in the context of a proposition.

### (A) The Context Principle in Frege

Wittgenstein's employment of the Context Principle, at 3.3 and 3.314, echoes Frege almost word for word, in what must have been a conscious acknowledgement (see *The Foundations of Arithmetic* 71 and 73). It is therefore reasonable to assume, at least as a working hypothesis, that Wittgenstein understood the principle and its significance in essentially the same manner as Frege. So this is the obvious place to begin: what did Frege understand by the principle, and what did he take its philosophical significance to be?

The immediate point of Frege's deployment of the Context Principle in *FA* is to defend his view that numbers are objects, together with the corresponding view that numerals are genuine proper names. It is introduced in response to the objection that numerals cannot really be names, since we can form no idea – no image – which can adequately capture their meaning. For if we ask, outside of any propositional context, what the meaning of the numeral '4' is, then it is almost inevitable that we should attempt to conjure up some mental image or other; perhaps of four dots arranged in a square. But this is entirely inappropriate to capture the sense of the word. For whatever else may be the case, it is clear that the numerals are not

bare assignment of a referent. On the contrary, its 'logical grammar' must also be fixed – it must be determined how it will fit together with other expressions to form a significant sentence, what basic principles of inference will govern the result, and so on. It is just not intelligible that all of this could be conveyed in a simple ostensive definition, or by any sort of pre-linguistic presentation of a referent. On the contrary, understanding an ostensive definition must presuppose considerable linguistic competence, since you will need to know at least what sort of thing is being pointed out to you, and the criterion of identity for things of that kind.

For example, consider what is necessary for someone to understand the ostensive definition 'This is Mary.' Firstly, of course, they must take 'Mary' to be a proper name rather than, for instance, a predicate describing a kind of appearance (the *Mary Gestalt*) or a colour of hair. Secondly, they must take 'Mary' as the name of a person, rather than of a particular item of clothing or of a point of the compass. Thirdly, they must grasp which person in particular is Mary. So they must know the criteria of individuation-at-a-time and of identity-over-time for persons. (If this is Mary, then her twin sister cannot also be Mary – persons are not sets of similarly appeared humans; and if this is Mary in London, then I cannot meet Mary in New York tomorrow unless she travels.) So an ostensive definition can only work as an explanation (as opposed to conferring understanding by a miracle) if a considerable background of conceptual equipment is already possessed by the person to whom the definition is directed. They must already have taken on board the distinction between proper names and predicates, together with the sortal concept to which the object being ostended belongs (in this case, the concept of a person). Thus it follows that ostensive definitions cannot be the fundamental form of linguistic explanation.

It would seem that linguistic explanation must begin with some sort of training in the use of whole sentences. For the chain of explicit (verbal) definitions must come to an end somewhere, yet it cannot come to an end in ostensive definitions if these themselves presuppose linguistic competence. Moreover, it is certainly plausible, as Frege demonstrates, that one can adequately explain the truth-conditions of sentences in which numerals occur functioning as proper names. So if the primacy of ostensive definition is dethroned by the Context Principle, as I am suggesting, then nothing apparently stands in the way of taking grammar at face value, and recognising numbers to be objects. Indeed if, as I shall argue in the next chapter, we cannot settle what basic kinds of objects there are in the world

by any sort of pre-linguistic looking and seeing, then what other alternative is there but to take language as our guide?

It is not just over the existence of the numbers, but in metaphysics generally, that Frege adopts this sort of approach. For example, he takes it as established that the entities which constitute the referents of predicative expressions must be in some way 'incomplete' because of his belief that such expressions themselves, and their senses, are essentially incomplete.<sup>4</sup> So what emerges is that the Context Principle can be seen to underlie a great deal of Frege's approach to philosophy. Given the primacy of the sentence, and the impossibility of conferring meaning on individual terms by any sort of bare presentation of a referent – indeed, since there can be no such thing as non-linguistic access to metaphysical truths – he thinks the only way of coming to discern the essential nature of reality is through the study of language.<sup>5</sup>

### (B) The principle in TLP

Our question now is how much of the above survives into TLP. Does Wittgenstein, too, base questions of ontology and metaphysics upon considerations to do with language? And if so, is this approach founded upon an appreciation of the fundamental position of whole sentences within language, and on the impossibility of conferring meaning on words by a pre-linguistic presentation of their referents?

One initial difficulty concerning the interpretation of 3.3 and 3.3.14 is raised by the thesis defended in Chapter 1, that 'Bedeutung' in TLP means 'semantic content', which in turn means 'contribution to truth-conditions (Sinn)'. For to say that it is only in the context of a proposition that a name makes any contribution to truth-conditions is so truisitic that one wonders why Wittgenstein should give it such prominence. Can this really be all that he is saying? Now, one sort of answer would be to point out that we have been already told, at 3.203, that the *Bedeutung* of a name is an object. So 3.3 also tells us that a name only refers to an object within the context of a proposition. But a better reply is to draw attention to the central position accorded to whole sentences by the very notion of *Bedeutung*. Since *Bedeutung* (semantic content) is contribution to *Sinn* (truth-conditions), and since 3.3 tells us that it is only propositions which have *Sinn*, we have here an acknowledgement of the central role of the sentence within language, just as in Frege.

So what ought to be fairly uncontroversial is that the Context Principle,

in Wittgenstein as in Frege's *FA*, serves to emphasise that it is only with a proposition that one can (non-parasitically) say anything. In fact it reaffirms the central position of the sentence against Frege's later – retrograde – doctrine that sentences are complex names of the True and the False,<sup>6</sup> as well as justifying the immediate corollary, that the meaning of a word is (is identical with) the contribution which it makes to the meanings of sentences in which it can occur. (See 3.3–3.314, 4.431, 5.02).

The other corollary of the principle – the denial of any fundamental role for ostensive definition, and consequent acceptance of the idea that the introduction of language must somehow involve training in the use of whole sentences – is also endorsed in *TLP*. At 3.263 (immediately prior to the statement of the Context Principle at 3.3) Wittgenstein writes:

The *Bedeutungen* of primitive signs can be explained by means of elucidations. Elucidations are propositions which contain the primitive signs. So they can only be understood if the *Bedeutungen* of those signs are already known.<sup>7</sup>

It is clear from the previous context (a discussion of names, 3.2ff.) that the 'primitive signs' spoken of here are the simple names which form the terminus of analysis. And it is being claimed that such names will have to be explained through propositions containing them, which can only be understood if those names themselves are already understood – that is, which presuppose, for their understanding, that one has already grasped what the explanation is trying to get across.

I take the above to be an explicit rejection of the primacy of ostensive definition. Since 'a name only has meaning in the context of a sentence', understanding a name will mean knowing how it fits together with other expressions to form a sentence, and the contribution which it makes to the truth-conditions of the sentences which result; and it is simply not intelligible that such knowledge might be conveyed through any kind of bare presentation of a referent. So we have no alternative, in explaining the meaning of primitive names, but to make use of propositions containing them, in the hope that the trainee will gradually 'cotton on'. In effect, what Wittgenstein is saying is that you can only teach someone to speak by talking to them.<sup>8</sup> And note that it does not matter to this interpretation if the 'elucidations' which Wittgenstein has in mind are themselves ostensive definitions, as some have claimed.<sup>9</sup> For by emphasising that to understand such a definition requires prior knowledge of (at least) the logical grammar of the name being defined, he would still be rejecting the view that ostensive definitions form the basis of language. On the contrary, the point would be essentially that made at *PI* 30–2: that an ostensive definition can

only explain the meaning of a word when its overall use in the language is already clear.<sup>10</sup>

Thus far it would appear that Wittgenstein's understanding of the Context Principle is closely parallel to Frege's. But our main question must be whether Wittgenstein, too, draws out of these considerations a belief in the priority of logic over metaphysics. Certainly at one time he had believed this. For in the 1913 'Notes on Logic' he explicitly states that philosophy consists of logic and metaphysics, with logic forming the basis (*NB* 93). Of course this is not in itself very strong evidence of his *TLP* view. But consider 3.031, where he writes:

It used to be said that God could create anything except what would be contrary to the laws of logic. – The truth is that we could not say what an 'illogical' world would look like. [Italics in original.]

There is no way of making sense of the contrast being drawn here if (as some have done) you take Wittgenstein's view to be that a speaker will 'read off' their knowledge of what is permissible in language from their knowledge of what is possible in the world.<sup>11</sup> For what ought, in that case, to have been said is on the contrary that we cannot say what an illogical world would look like because God cannot create anything contrary to the laws of logic – that is, because the essence of the world is as it is. Whereas Wittgenstein is clearly wanting to claim some sort of priority for the logic of language over what is possible in the world.

Perhaps Wittgenstein's clearest commitment to the priority of logic comes at 3.317 (soon after the statement of the Context Principle at 3.3 and 3.314). In the course of discussing the idea that every expression can be regarded as a propositional variable, where the values of the variable are all of the propositions in which that expression can figure, he writes:

And the *only* thing essential to the stipulation [of the values of a propositional variable] is that it is *merely a description of the symbols and states nothing about what is signified*. [Italics in original. See also 3.33, whose import is very similar.]

Recall from Chapter 1 that a symbol is a sign together with its sense (together with its mode of determining a *Bedeutung*). So it is being claimed that in stipulating, for instance, that 'the book' is a permissible argument of the variable in 'x is red' whereas '7' is not, we should concern ourselves only with the sorts of sense which those expressions have, and not with their referents. It is being explicitly (and most emphatically) ruled out that we might attempt to justify the allowability of certain substitutions by appealing to essential features of the world – by saying, for example, 'Any

physical object can have a colour.' We must, on the contrary, confine ourselves to recognising, on the basis of our knowledge of sense, what is possible or essential at the level of language.

### (C) Philosophical method in TLP

If Wittgenstein thinks that logic is prior to metaphysics, as the above passages suggest, then we should expect this to have implications for his conception of philosophical method: we should expect him to take the view that the way to do metaphysics and ontology is by reflecting on the nature of thought and language. And this is just what we find. Of course we never explicitly find him asserting quite this, for metaphysical and ontological truths belong to the realm of the unsayable, on the official TLP account of what it is to say something. But he certainly seems to think that metaphysical truths can be shown, and that what shows them will be considerations to do with language. Thus 3.3421 tells us that the possibility of alternative modes of signifying can disclose something about the essence of the world – an idea which is then put to work at 5.53–5.5352, where an alternative to our way of expressing identity is used to show that identity is not really a relation.<sup>12</sup> Moreover, 6.12 tells us that the fact that certain propositions are tautologies can be used to show the essential features of the world.

As we shall see in the next chapter, the textual evidence is not wholly unambiguous in support of our interpretation. But what has emerged already is that there is at least a strong case to be made that Wittgenstein, like Frege, took logic and semantics to be prior to metaphysics and ontology; and that he too believed that the correct method in philosophy would proceed *via* reflection on thought and language. However, this is not to say that the two of them are wholly in agreement. On the contrary, there is at least one crucial difference. For Frege is ready to allow himself to be guided by surface-grammatical features of language, most notably over the status of numbers, as we shall see shortly. Whereas Wittgenstein always insists that we should look to what is essential in the kind of talk in question.

For Frege, the fact that numerals function in sentences in all respects like proper names, coupled with the fact that many of the sentences in which they figure are true, is taken to show that numbers are genuinely existing objects. Thus we make predications of numbers ('7 is prime'), we refer to them by means of definite descriptions ('The successor of 6 is prime'), we quantify over them ('Some number is prime'), we take '7 is prime' to imply

'Some number is prime'; and most importantly, we make statements of identity with respect to them ('7 is 4 plus 3'). So numerals purport to be referring expressions. In which case, how could it be true that 7 is prime unless the number 7 really exists as a genuine object of reference? (Compare: how could it be true that Mary has freckles, unless Mary really exists?) Frege feels that the only alternative to recognising numbers as objects would be to take the drastic course of rejecting all number statements as false.<sup>13</sup>

For Wittgenstein, however, all this is insufficient. As we shall see in more detail in the next section, he thinks that it is not enough to show that numerals do as a matter of fact function as proper names; we also need to show that they *must* do so. Or better: we need to show that there is no other way of saying what we currently use numerals to say. We need to show that there is no way of expressing numerical truths except by employing signs whose function is apparently to refer to them as objects. So for Wittgenstein, the thesis of the priority of logic and its resulting philosophical method are intimately connected with the idea of analysis. A form of expression can only reveal something about the essence of reality if it, in its turn, is essential: if there is no way of analysing what is said by it differently, or if we cannot construct quite a different form of notation to perform the same task.

### (D) Numbers

If he is to make good his claim that numbers are objects, Frege recognises that he must provide a criterion of identity for them.<sup>14</sup> His main task is then to lay down truth-conditions for statements of the form 'The number of Fs = the number of Gs' – let us write this as ' $NxFx = NxGx$ '. He shows how this can be done in terms of a notion of one-to-one correspondence between the instances of the concepts  $F$  and  $G$ , where this notion can be explicated without presupposing a prior grasp of number-words.<sup>15</sup> So we have the definition:  $NxFx = NxGx$  if and only if  $Fx \text{ } 1-1 \text{ correlates } Gx$ . But of course it is not enough merely to fix the truth-conditions of statements of numerical identity. He must also lay down truth-conditions for statements of the form 'There are  $n$  Fs', which play a central role in our use of the number-words. These statements for him take the form of an identity: ' $n = NxFx$ '. This requires him, in turn, to give explicit definitions of the individual numerals. He could, had he wished, have given the following sequence of definitions:  $0 = Nx(x \neq x)$ ,  $1 = Nx(x = 0)$ ,  $2 = Nx((x = 0) \vee (x = 1))$ , and so on.<sup>16</sup> (His actual definitions were – disastrously, in view

of Russell's Paradox – given in terms of sets of sets.) In which case the truth-condition of 'The Earth has one moon' would come out as  $\exists!x(x = 0) = \exists!x(x \text{ is a moon of the Earth})$ , which in turn would say that the concept  $x = 0$  is 1–1 correlated with the concept  $x$  is a moon of the Earth.

For Wittgenstein, on the other hand, the very possibility of Frege's analysis shows that numbers are not really objects, since it shows how we could have a language which does not employ any expressions seeming to refer to them, but which would say all of the same things in terms of relations between concepts. I take it that this is the point of his statement at 6.021 that a number is an exponent of an operation, and of the definitions given at 6.02. The idea is that the only thing essential to a system of numbering is an iterable rule which will produce a sequence of signs in a unique order, each member of the sequence being distinct from every other. Then the statement 'The Earth has one moon' can be regarded as saying: 'The concept  $x$  is a moon of the Earth is 1–1 correlated with the concept  $x$  is a move necessary to reach the sign "1" in the series of numerals.' And something like this is, after all, what goes on when we count: for every instance of the concept under which we are counting we produce a distinct numeral, following the order of the numerals and taking care not to produce more than one numeral for any given instance; the number of things being given by the last numeral that gets produced.<sup>17</sup>

More needs to be said before we can pronounce Wittgenstein the victor in this debate. For after all, it is common to both parties that the surface form of a statement can be misleading. So what is to prevent Frege replying that reference to numbers is covertly taking place even in a notation like that sketched above, where we only appear to have talk of 1–1 correlations between concepts? Indeed, his position must be something like this anyway, since he regards his definitions as providing, not an eliminative reduction of number-words, but rather an epistemic route into reference to numbers.<sup>18</sup>

The decisive consideration on Wittgenstein's behalf is provided by the Principle of Semantic Relevance, which I think we can see as being implicit in the reasoning behind a number of TLP doctrines.<sup>19</sup> This holds that if reference is to be attributed to an expression, then the evidence which speakers would take to bear on the truth of sentences containing it (particularly, where available, anything they would count as a canonical mode of verification) should display sensitivity to the existence and nature of the referent. The idea is that a semantic theory should reflect the main features of the use of an expression – in verifying, falsifying and offering evidence. Since truth is to depend upon reference, evidence of truth should, as it

were, 'point towards' the referent – especially where the evidence is of the most direct sort, where we may think of the truth of the sentence being manifest to us.<sup>20</sup>

It follows from the above principle that the most direct method for establishing the truth of a sentence containing an expression which has both sense and reference will involve a two-step process: first locate the referent, relying upon your knowledge of the sense; then determine whether or not the referent fits together with the semantic content of the remainder of the sentence in such a way as to yield a truth. Then if numerals were really proper names of numbers, we should expect their mode of contribution to a canonical verification of sentences in which they occur to involve just such a two-step process. We would first of all identify, in accordance with our grasp of the sense of the numeral, its referent (a particular number), and then see how that thing fits together with the semantic content of the other component expressions in the sentence to determine a truth-value. In particular, a canonical verification of a statement of the form 'There are  $n$  Fs' would be that which is appropriate to a statement of identity, since on a referential view of numerals this really says ' $n =$  the number of Fs'. But in fact there is nothing in our practice of using number-words to warrant this sort of interpretation. On the contrary, the most direct way of verifying 'There are  $n$  Fs' reflects Wittgenstein's view of the matter exactly: we correlate, by counting, the concept  $F$  one to one with the sequence of moves necessary to reach the sign ' $n$ ' in the series of numerals.

### Summary

Wittgenstein's employment of the Context Principle is essentially similar to Frege's. Both of them intend it to emphasise the central position of the sentence within language, to undermine the supposedly central position of ostensive definition, and to establish the priority of logic and semantics over metaphysics. But Wittgenstein goes beyond Frege in claiming that it is only essential (use-reflecting) features of language which are metaphysically significant.