

Frege's Theory of Sense and Reference: Some Exegetical Notes¹

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Abstract: Frege's theory of indirect contexts and the shift of sense and reference in these contexts has puzzled many. What can the hierarchy of indirect senses, doubly indirect senses, and so on, be? Donald Davidson gave a well-known 'unlearnability' argument against Frege's theory. The present paper argues that the key to Frege's theory lies in the fact that whenever a reference is specified (even though many senses determine a single reference), it is specified in a particular way, so that giving a reference implies giving a sense; and that one must be 'acquainted' with the sense. It is argued that an indirect sense must be 'immediately revelatory' of its reference. General principles for Frege's doctrine of sense and reference are stated, for both direct and indirect quotation, to be understood iteratively. I also discuss Frege's doctrine of tensed and first person statements in the light of my analysis. The views of various other authors are examined. The conclusion is to ascribe to Frege an implicit doctrine of acquaintance similar to that of Russell.

Keywords: Frege, sense and reference, indirect senses, immediately revelatory senses, tensed and first person statements, doctrine of acquaintance, backward road

IN TRANSLATING Frege's terms "*Sinn*" and "*Bedeutung*", I follow Max Black's translation as "sense" and "reference", or "referent". For a long time this was standard, although other translations have been proposed, and later some have thought that standard German usage should be followed in the translation of "*Bedeutung*". However unusual Frege's usage may be, there should not be any doubt that for Frege "*Bedeutung*" is what a term stands for.²

1 The present paper is based on a transcript of a lecture given in Stockholm, Sweden, on 24 October 2001, on the occasion of the award of the Schock Prize in Logic and Philosophy. There are occasional references to works postdating the original lecture, obviously added to the present version. There has been considerable rewriting and editing of the transcript, but the essence of the lecture remains unchanged, except in a few places that are explicitly noted.

2 In standard German "*Bedeutung*" should be translated as "meaning" and recent translators have advocated that this be done. See Beaney (1997, pp. 36–46), for some of the controversy over this issue; he himself leaves "*Bedeutung*" untranslated.

The argument for translating "*Bedeutung*" as "meaning" is a principle of "exegetical neutrality"; that one should not deviate from standard German for exegetical reasons. However, I assume that there would be no such issue had Frege used "*Bezeichnung*" and "*bezeichnen*", and he does explain that by "*bedeuten*" he means "*bezeichnen*". Already in "Über Sinn und Bedeutung" Frege says: "Ein Eigennamen . . . drückt aus seinen Sinn, bedeutet oder bezeichnet seine Bedeutung. Wir drücken mit einem Zeichen dessen Sinn aus und bezeichnen mit ihm dessen Bedeutung" (Frege, 1892, p. 31 in the original; p. 156 in Beaney, 1997). Beaney's edition translates "*bedeutet*" as "stands for" and "*bezeichnet*" as "designates". Whatever ambiguity there might be in the first verb, I assume that there is no such ambiguity in the second one. (My thanks

Frege introduced the notion of sense to explain how there can be non-trivial but true identity statements. In such a case, there are two terms with the same reference but different senses. For example, the phrase “the president of the US when I am giving this lecture” designates the same thing as “the president of the US in 2001”,³ which also has the same *Bedeutung* as the proper name “George W. Bush”. So there can be many different senses with one referent. This leads to Russell’s famous slogan: “There is no backward road from denotations to meanings”,⁴ or as we would put it, from referents to senses. There could be many senses determining the same reference.

The phrase “there is no backward road”, however, should not mislead: one does not, when using an expression or introducing an expression, have to specify two things, its reference and its sense. Once one specifies the reference one has specified the sense. How can that be? It is because the sense is the way the reference or *Bedeutung* is specified. So, for example, in *Grundgesetze* (Frege, 1893, sections 31 and 32, pp. 87–90), Frege gives⁵ the truth-conditions for all the sentences of his language. Then he concludes that every sentence of his language expresses a thought, namely that these given truth-conditions hold. In that way there *is* a backward road in every particular case of an explanation of a given phrase.⁶

to Dagfinn Føllesdal for this reference.) I have seen other passages where “*bedeuten*” and “*bezeichnen*” are used interchangeably.

I should mention that Church (1995, p. 69) objects to the use of “reference” as violating proper *English* usage. (His point appears to be that it is speakers who refer to things, and that they can do so without using any term designating the object.) Maybe so, but since Black introduced “reference”, it has become too standard to give up. Perhaps “referent” is somewhat better. Church himself favors Russell’s “denotation”, which is also used by Montgomery Furth and David Kaplan, and no doubt others. (However, Russell himself also uses “denoting” in another way of his own.) One might have favored “designation”; Feigl’s “nominatum”, which Carnap (1947) followed, clearly failed to gain wide currency because it was too awkward.

Subsequently all references to “Über Sinn und Bedeutung” come from Beaney (1997) with pagination accordingly, unless otherwise specified. Beaney himself gives the original pagination. Although I have used “reference” and “referent” in this article, when quotations from Frege derive from Beaney’s edition they perform follow his practice of leaving “*Bedeutung*” untranslated.

3 Or most of 2001 anyway. He took office on 20 January. In an article like this we need not discuss whether he was “really” elected.

4 Russell writes:

And C must not be a constituent of this complex (as it is of “the meaning of C”); for if C occurs in the complex, it will be its denotation, not its meaning, that will occur, and there is no backward road from denotations to meanings, because every object can be denoted by an infinite number of different denoting phrases. (1905, p. 487)

5 It does not matter for present purposes that Frege’s attempt to do this is fallaciously circular, and therefore fails.

6 Dummett says:

. . . when Frege is purporting to give the sense of a word or symbol, what he actually *states* is what the reference is . . . in saying what the referent is, we have to choose a particular way of saying this, a particular means of determining something as the referent. . . . we *say* what the referent of a word is,

So far, perhaps, so easy. Complications come in with Frege's doctrine of so-called "indirect" or *ungerade* reference. If someone says (this is Frege's own example; Frege, 1892, p. 160):

Copernicus believed that the planetary orbits are circles

this is an example of indirect discourse. Frege's doctrine was that in a case like this, the referent of "the planetary orbits" is not the orbits themselves, but the *Sinn* or meaning⁷ of the phrase "the planetary orbits". Some commentary on Frege would be needed as to why he says this, but the arguments will be familiar to the present readership.

Frege believed that the referent of a sentence is its truth-value, the True or the False. The *Gedanke* or thought expressed is its *Sinn*. The referent of "that the planetary orbits are circles" is the *Gedanke*; that is what is believed. But since the *Gedanke* is the *Sinn* of the sentence, its components are themselves *Sinne*, and hence must be the references of the component parts of the sentence following the "that" clause.⁸

So there is a reference shift in indirect contexts. Since the reference must be determined in some way, there has to be therefore not only an indirect reference but also apparently an indirect sense. As far as I know Frege does not ever explicitly consider iterations of "that" clauses, such as, for example, "We should remember that Copernicus believed that the planetary orbits are circles", and so on for arbitrary iterations. If we do consider such iterations, the familiar consequence is that Frege is committed to a hierarchy of doubly oblique indirect referents and senses, triply oblique, and so on.

Another way of generating a hierarchy ought to be mentioned also. If an expression has a *Sinn*, presumably another expression could designate that *Sinn*. But then the second expression presumably has a *Sinn* also, which can be designated by yet another expression, and so on. Given Frege's doctrine that an expression in indirect contexts designates its *Sinn*, the two ways of generating a hierarchy are of course related.

and thereby *show* what its sense is. (This is the correct answer to Russell's objection . . . that there is "no backward road" from reference to sense.) (1973, p. 227; original emphasis)

There are qualifications and other remarks in Dummett's text that I do not necessarily endorse. Dummett seems to imply that the point he is making can be found in many places in Frege, but the main case I am aware of is the one cited above from the *Grundgesetze* (1893). Many who write on Frege give insufficient recognition to this point, perhaps to an extent even Dummett himself. That there is a "backward road" in the sense in question already states the main moral of the present paper in advance.

⁷ Later Tyler Burge's claim (in 1979b) that *Sinn* and meaning have been wrongly equated will be discussed (and his argument rejected). The issue is probably not crucial at this point, but may affect some of my own argument below.

⁸ The general compositional principles involved will be stated below.

There are papers on the hierarchical question by Terry Parsons (1981) and Tyler Burge (1979b).⁹ There is a famous objection to Frege, made by Donald Davidson (1965) in a well-known paper that precedes the papers by Parsons and Burge. Davidson argues that if there were such an infinite hierarchy, then, say, for a Swede to learn English as a foreign language, the Swede would have to learn infinitely many things. That is, not just the sense – if that is the meaning of the English phrase – but also its indirect sense, its doubly indirect sense, and so on. He similarly objects to Church's (1951) well-known formalization of Frege's theory in "A Formulation of the Logic of Sense and Denotation", where the infinity of primitives is very clear.¹⁰

How could that be? How could we learn such a language, either a natural language under the Fregean hierarchical view, or the corresponding formal language given by Church? It cannot be that we have to learn infinitely many independent things. I actually think this objection is valid, but I also think it is not so much needed as people seem to believe. A simpler version, indeed inspired by Davidson's remarks, can take its place.

Let us forget about any iterations either of operators such as "believes that", or of referring to a sense. Let us just consider the original simple case:

Copernicus believes that the planetary orbits are circles.

There are two problems here. Ordinarily, we should think that to teach English to a foreigner one simply teaches some grammar, the vocabulary, and what all the words mean, and then we are through. But not according to this: she will not understand this sentence because she has not learned the indirect senses of these words, if these are independent entities from the ordinary senses.

To know what the sense of a sentence is is to understand it, to know what thought it expresses. Normally, we would think that that is enough, that the foreigner has learned English. But apparently this is not so according to Frege's theory of indirect senses. According to this theory, it appears that the foreigner cannot understand belief and other indirect discourse sentences, such as the one about Copernicus. The foreigner should say to the teacher: "Unfortunately you have not taught me how to understand these 'belief-sentences', or 'said that-sentences', or other indirect discourse sentences. For these I need not only to know the senses of the English words,

9 I agree with Burge (see especially his postscript in Burge, 2004) that the hierarchy is an actual consequence of Frege's theory. (Qualifications of this will emerge from the present article.)

Various writers have tried to avoid this consequence. Carnap (1947) abolishes it by *fiat*, replacing Frege's "method of the name relation" by his "method of extension and intension". Dummett (1973, pp. 267–268) proposes to emend Frege's theory to avoid this consequence. Without going into the matter, I do not find his proposal to be successful, but nevertheless I have found his discussion helpful and influential for my own interpretation.

10 This paper, and the issue of its fidelity to Frege's intent, will be discussed in a little more detail below.

as I have just been taught, but also their indirect senses.” And the teacher might then reply “Oh yes! Next year we will get out Volume II, the dictionary of indirect senses. Then you will learn indirect English, and will be able to understand these belief sentences. But I cannot go so fast as to teach this in the first year.” Clearly the teacher’s speech is absurd, as is the student’s puzzlement, and no infinite hierarchy is needed to see this.¹¹ English, if the issue stopped there, might be a learnable language in Davidson’s sense, but it takes an implausible amount of work to learn it.

A related objection which has been raised against Frege is: what *are* these indirect senses? He does not give us any idea what they are.¹² Given Russell’s slogan, “there is no backward road from denotations to meanings”,¹³ assuming it applies at every level, there could be words with the same senses but different indirect senses. And expressions could actually be synonymous, in the sense of having the same *Sinn*, but nevertheless have different *ungerade Sinne* (indirect senses). Then we have a very strange situation for language learning.

Frege does say the following:

In order to speak of the sense of an expression “*A*” one may simply use the phrase “the sense of the expression ‘*A*’”. (Frege, 1892, p. 154)

That certainly has the same reference – namely, the ordinary sense – as the indirect sense, whatever entity this may be. Could this be what Frege thinks is the indirect sense? The suggestion that this is what an indirect sense is, is rejected by Dummett as implausible in *Frege: Philosophy of Language* (1973, pp. 267–268); but then in

11 See Davidson (1968, p. 214). He remarks that in our “semantic innocence”, we never would have imagined that expressions mean something different in indirect discourse from what they mean in ordinary contexts. This in effect expresses the objection to Frege’s theory that I have just given in a stronger and simpler way. See Kaplan (1968), who emphasizes that Frege’s theory is an ambiguity theory. It should be noted that Russell’s theory of descriptions is semantically innocent in Davidson’s sense, and that he could have claimed this as an advantage of his view. I am not sure that I can really get Frege out of the “innocence objection”, but I will try to come close. See footnote 44 below.

12 I have in mind Carnap (1947). He writes:

And since he [Frege] assumes that nominatum and sense must always be different, he had thus to introduce a third entity as the oblique sense. Incidentally, it seems that Frege nowhere explains in more customary terms what this third entity is. (Carnap, 1947, p. 129)

Since Carnap actually studied with Frege (and the direction of his entire career was changed by the experience), it is too bad that he apparently found Frege to be an intimidating teacher. He might simply have asked him.

13 There are those who believe that here Russell has anticipated Davidson’s learnability argument, or perhaps has the germ of a beginning of his argument. See Salmon (2005) (who sees an anticipation both of Davidson’s learnability argument and Carnap’s question) and earlier writers, some of whom he cites. Dummett (1973, pp. 267–268) thinks that Russell has anticipated Carnap’s question in the following form: since there is no “backward road”, which of the infinitely many candidates for an indirect sense is the right one?

his later book, *The Interpretation of Frege's Philosophy* (1981, pp. 89ff.),¹⁴ he says that he does not know why he regarded this suggestion (which he attributes to Heidelberger) as so obviously implausible and gives a more elaborate discussion.

Whatever an indirect sense is, it is not plausible to me that it is this. To understand any English sentence, it is (necessary and) sufficient to understand the senses of all its components. In particular, to understand an indirect discourse context, it is sufficient to understand the indirect senses of its components. Now someone who knows virtually no English can perfectly well understand the phrase "the sense of 'the planetary orbits are circular'" if all he knows are the English words "the sense of", but has no idea what "the planetary orbits are circular" means. Then, if the analysis in question were true, he will understand "Copernicus believed that the planetary orbits are circular" as long as he understands "Copernicus believed that" and the phrase "the sense of 'the planetary orbits are circular'" without having any idea what "the planetary orbits are circular" means. But this consequence is plainly absurd.^{15,16}

This suggestion about indirect senses would make them a metalinguistic notion. On the other hand, Casimir Lewy in his "Critical Notice" (1949) – actually, *very* critical notice – of Carnap's book denies that Frege gives no explanation in "more customary terms" of what an indirect sense might be. He points out that Frege says explicitly that the sense of a sentence in an indirect context is the sense of the words "the thought that . . .", where the dots are supposed to be filled in with the sentence in question (see Frege, 1892, p. 160). Well, *of course* this is Frege's view; but it says nothing as to what the indirect senses of the significant parts of the sentence are, nor how they combine to give the sense of the whole. Lewy's remarks do avoid the

14 I have not checked Heidelberger's original, which, as Dummett remarks, would obviously be inconsistent since he accepts Church's translation argument.

15 Fussy details: on this account one really needs simply the concept (Fregean *Sinn*) expressed by the English phrase "the sense of 'the planetary orbits are circular'" (including, therefore, quotation), and that this is what "the planetary orbits are circular" means in English indirect discourse. One need not have learned this by learning even the *English* phrase "the sense of". What one does need to know about English is how to recognize indirect quotation contexts ("that clauses") and that in them words have indirect senses.

Another delicate point: should one really have written "the sense in *English* of 'the planetary orbits are circular'", as most writers on the subject probably assume? Or should one understand quote conventions in such a way that the expression referred to carries its language with it, even if a phonetically identical expression might appear in another language? See Geach (1957, pp. 86–87) (on "ja"), and pp. 97–98 ("jam dies"). Kaplan (1990), in his rejection of the conventional type/token analysis of expressions (the "orthographic conception"), might well agree with Geach.

16 In his second discussion of the matter, Dummett says that he hopes he was not misled by the Church translation argument (or something similar), which he rejects. (See Dummett, 1981, pp. 89ff.) I myself am a believer in the argument, but I also think, as Church does (see Church, 1950, p. 98 (the objection to (6) and the translation argument following), and 1956, p. 62, footnote 136), that the translation argument only brings out the arbitrariness of the connection of a given phonetic or written sequence and what it stands for or means. Normally this can be brought out in another way.

unfortunate ascent to a metalinguistic notion in indirect contexts, as in the theory discussed in the previous paragraph; but they really leave the matter as mysterious as Carnap says it is.

The discussion of the metalinguistic interpretation of indirect senses suggests a further requirement on indirect senses. An indirect sense must be *revelatory*. First let me say what I mean by a sense being revelatory: a sense is revelatory of its referent if one can figure out from the sense alone what the referent is. For example, one can understand the description “the prime minister of England on 1 January 1970” perfectly well without knowing the relevant historical fact: not knowing who was the prime minister of England at that time, one fails to know the referent even though one knows the sense.¹⁷ Similarly, for the famous Quinean example of “the number of planets”. In each case, one can understand the sense without knowing the referent. Further information is required for the latter. So the senses of these phrases are *not* revelatory. On the other hand, both “nine” and perhaps even “the square of three” do have revelatory senses. Given that one can understand them, one can tell what the referent is. The same holds for “George W. Bush” and almost for “the father of George W. Bush’s (biological) children” (though in the latter case, strictly speaking, one has to know that George W. Bush is male and has children).

Now, these “knowing what” phrases or “knowing who” phrases have had a curious history in recent philosophy. Some have declared them to be entirely unscientific and context-dependent or even interest-relative.¹⁸ And under the influence of Quine and others this view has been widespread.¹⁹ Sometimes the extreme position is taken that any definite description determining the object tells us what it is given some appropriate interest, but I do not see that the examples of

17 In other contexts (not this one), I have heard some people object to an example on the grounds that “it depends on the analytic–synthetic distinction” (really the *a priori*–*a posteriori* distinction), which Quine supposedly refuted. If someone really worries about this, replace it with the notion of what could have been known to someone, say in the year 1000, even in principle. The date could vary with the example, and other things could vary. Anyone who says that Quine or anyone else showed that such distinctions make no sense is simply incredible.

Of course Quinean objections to the analytic–synthetic distinction and to the notion of meaning are out of place in a discussion of Fregean *Sinne* anyway. Surely these objections would go against Frege’s entire apparatus, except on a very unusual interpretation of Frege that I can only speculate about.

18 In my own opinion the latter two notions should carefully be distinguished, but I will not go into the matter here.

19 See Quine (1979, p. 273); see also Sosa (1970) (which strictly speaking is about *de re* propositional attitudes, not “knowing who”, and as far as I know remains the classic exposition of its point of view), and Boër and Lycan (1986) (with which I am only partly familiar). In his book *Knowledge and Belief* (1962), Hintikka emphasizes “knowing who” as the condition for a transition from *de dicto* to *de re* knowledge. Not every author accepts the connection, but some do. Many regard “knowing who” and related notions as hopelessly interest-relative, even taking the extreme view mentioned in my text. I regard the interest-relativity of these notions as exaggerated, though not entirely nonexistent.

interest-relativity that have been given would support such an extreme position.²⁰ Quine's longstanding remarks against "frankly inequalitarian" attitudes towards different ways of designating the same object have been a big influence here.²¹

I have a lot more to say about this issue and I have done so in lectures on the natural numbers (Kripke, unpublished).²² It is *not* true, as I have heard some say, that whatever may be the case for ordinary language and day-to-day thought, no serious science is based on such notions. I assume that recursion theory or computability theory is a serious science. A computable function is a function f such that for each given n , if you put in a particular number, the value $f(n)$ can be computed. And what does that mean? That given the definition of the function and an argument n , you can know, by computation, what the value $f(n)$ is. This would hardly make sense if all ways, even all mathematical ways, of designating a number, were on a par. For then every function²³ would be computable, since the value of f for a given n could simply be "computed" as $f(n)$! To say otherwise would be to adopt an "inequalitarian" attitude towards different ways of designating a number, supposedly a sin. Similarly, complexity theory is another such inequalitarian science.²⁴

In the light of this discussion, one might say that a sense is *immediately revelatory* if no calculation is required to figure out its referent. If f is a non-computable mathematical function, then the sense of " $f(n)$ " might be revelatory in the weak sense that no empirical information is required to find the referent, though perhaps a mathematical argument is required to do so. More important, even a computable function may not yield an immediately revelatory sense. For example, even "the square of three" does not have an immediately revelatory sense, since a computation, in this case a very easy one, is required to obtain its value. In the general case, the computation could be much more difficult. "Nine", however, is immediately revelatory.²⁵ We can now strengthen the requirement on indirect senses to say that

20 Most or many of these examples simply do not work, to repeat my opinion, though perhaps there are special cases where they do. One thing that helps create an exaggerated impression of context or interest relativity is an overemphasis on the case of persons. Also, even in the case of people, philosophers pay insufficient attention to the variety of "knowing wh-" notions available in ordinary language.

21 See his famous example of "the number of planets" and "nine", alluded to before.

22 The argument given here is excerpted from these lectures, which go into the matter in greater detail. Other versions of the material have been given as lectures elsewhere, sometimes with the last part of the title changed ("The identification of numbers", or something like that).

23 Or if one restricts the view to mathematically defined functions, every mathematically defined function. (Though one should watch out about such a restriction, in view of the Richard paradox.)

24 Strictly speaking, the formal theorems of these theories would still exist, even given the "equalitarian" view, but their motivation (as, say, in Turing's analysis) would not.

25 In the case of the natural numbers, there are subtleties involved that are discussed in my aforementioned lectures on the natural numbers, where numerical terms with immediately revelatory senses are called "buck stoppers".

they must be immediately revelatory: anyone who understands an indirect sense must immediately know its referent (the direct sense).

Frege thought that the *Bedeutung* of a sentence is its truth-value, T or F. One might understand the sense of a sentence but not know what its truth-value is. Will George W. Bush run in 2004 and win? Or, who will be the president at the end of the century (or whatever)? We do not know.²⁶ Now, suppose you take the sentence "George W. Bush will run and be elected in 2004". We do not know the outcome of the 2004 election, and so we do not know the truth-value (*Bedeutung*) of the sentence, though we understand it and therefore grasp its *Sinn*. But if all ways of designating an object were equally good, we *would* know the truth-value of the sentence about George W. Bush, namely the truth-value that Bush will run and be elected in 2004. Similarly for any other sentence. But in fact, only an omniscient being could know the Fregean referent of every sentence. This could be true of God but of no one else. To favor equalitarianism of ways of designating truth-values is to obliterate this important distinction between God and His creatures.²⁷

Let me turn to another aspect of Frege's theory. In his well-known paper "Quantifying In", David Kaplan says that one should not let the complications of Frege's theory obscure the basic idea. According to Kaplan, Frege's theories of indirect and direct quotation are simply instances of the familiar fact that some words have a usual denotation (reference), but in some secondary contexts have a less usual one. He gives the following example: "F.D.R." is the name of a president of the United States (and that is its usual reference). Apparently it was also the name of some television show, an unusual reference (the truth is I have never heard of this show, and there is some joke here, but I am not sure exactly what it is) (Kaplan, 1968, p. 183).²⁸ And of course though "London" primarily refers to a great city in England, it is also the name of a city in Ontario (Canada), and for all I know of other cities. No doubt many other examples could be given.

According to Kaplan, Frege's theory of direct and indirect quotation (and, he suggests, of other contexts that are unspecified) is that the ambiguity in these

26 Remember, for some of the examples, that these lectures were given in 2001.

27 I owe this point to Nathan Salmon, who has in print otherwise advocated the interest-relative view of "knowing which", but he gave me this example.

28 Kaplan's example of a confusing sentence is:

Although F.D.R. ran for office many times, F.D.R. ran on television only once.

His example actually (without explicit acknowledgement) trades not only on the ambiguity (really homonymy) of "F.D.R.", but also of "ran". (Prominent philosophers have denied that the "F.D.R." case is any sort of homonymy, because names are not in the language. I will not go into the issue here; but "F.D.R.", especially the second usage, is surely grist for their mill. I myself disagree with these philosophers, and I have been criticized by them; but no one will dispute the "ran" case.) See footnote 77, below.

contexts is similar. In direct and indirect quotation contexts phrases do not have their usual denotation. So far so good, and no doubt this *is* Frege's theory.²⁹

However, Frege surely believed that a formal logical language should avoid ambiguities, even if they exist in natural language. Frege actually confirms this in a letter to Russell, where he says:

To avoid ambiguity, we ought really to have special signs in indirect speech, though their connection with the corresponding signs in direct speech should be easy to recognize. (Frege, 1980, p. 153)³⁰

But there is something a bit evasive about the assertion that the connection should be "easy to recognize". Are they independent symbolic expressions or are they not?

It is significant that Frege says that, because in Church's famous paper, "A Formulation of the Logic of Sense and Denotation" (1951), he does in fact use distinct symbols for each expression and its counterpart in indirect speech. Since indirect contexts can be iterated, there is an infinity of separate and independent symbols, giving rise to Davidson's unlearnability objection. Dummett criticizes Church for doing so, and states that he has abandoned Frege's doctrine of indirect references and senses, that is, the contextually determined ambiguity doctrine. ("Most striking, perhaps, is the fact that the doctrine of indirect reference is abandoned".)³¹ In fact, in this respect it is Church, and not Dummett, who is faithful to Frege's explicit *ipse dixit*. Not only that, but Frege's declaration, as we have seen, is an obvious consequence of his general attitude that a proper formal language should avoid such ambiguities.³²

29 But it is significant that these are not ordinary ambiguities or unusual references, unlike the F.D.R. case Kaplan cites, or the "London" example. For in Frege's theory of indirect quotation and the like, the unusual references are determined entirely by the context. In the other examples the unusual reference can often be *guessed* from the context, but it is not determined by any semantic rule. Kaplan's discussion does not make this distinction clear.

30 My thanks to Eva Picardi for helping me to relocate the passage in the correspondence with Russell.

Perhaps Frege's remark in "Über Sinn und Bedeutung" itself could also be cited in this connection: "To every expression belonging to a complete totality of signs, there should certainly correspond a definite sense; but natural languages often do not satisfy this condition, and one must be content if the same word has the same sense in the same context" (Frege, 1892, p. 153). As I remarked in the previous footnote, the ambiguity created by indirect discourse is completely determined by context. But Frege seems clearly to be saying that such an ambiguity is a defect of natural language, and therefore that it should be avoided in a scientific *Begriffsschrift*.

31 See Dummett (1973, pp. 292–293) (top). The quoted sentence is on p. 292. In contrast, Kaplan recognizes that Church's system is the natural result of an attempt to avoid ambiguities. See Kaplan (1968, p. 184). Kaplan does not quote Frege's explicit assertion (which may not have been available to him at the time).

32 Dummett makes several doubtful criticisms of Church's paper, but he is strangely unaware of the main problem with it, viz. that all three systems proposed collapse for purely formal reasons, even formal inconsistency in some cases.

In spite of my criticism of Dummett on the question of fidelity to Frege, Dummett's approach (taking the contextual ambiguities to be an essential part of the theory) seems to me to be highly suggestive and to have a good deal to recommend it, but that is for later in this discussion.³³

Now Church has a category o_0 of truth-values T and F, which are the referents of the sentences. Then there is a category o_1 of senses of sentences, that is, Fregean thoughts, *Gedanken*. And then there is a category o_2 of what Church calls "propositional concepts", that is, senses of "that clauses" or of names of Fregean thoughts, and so on. Each category consists of senses determining elements of the previous category as referents. There is a similar sequence starting out with the individuals (or objects). One way Church does deviate from Frege is that the truth-values are not assumed to be among the individuals, but are assigned a separate logical type of their own.³⁴

Then various particular notions also come in a hierarchy. For example, and here I simplify Church's own notation, consider the (material) conditional. \supset_0 is the function on the truth-values $\{T, F\}$, given by the familiar truth-table. \supset_1 is supposed to be a sense determining \supset_0 as a referent, and so on. However, not only does this automatically lead to Davidson's unlearnability objection, there is something else. \supset_1 is supposed to be a sense determining \supset_0 as a referent, but which one? Plainly many such senses determine the same referent ("no backward road"). Church gives no explanation whatsoever. Thus, it is not merely a problem of an infinite sequence: as early as the second level we are not told what a symbol is supposed to mean.

If Church had a doctrine of "privileged" senses, then perhaps the system might be intelligible. But this was not Church's view. In very late writings his attitudes are

Church later published revised versions of his original formal systems, which in general lead to even more complicated hierarchies. At least one of his revisions was inconsistent, and yet another version was proposed by C. Anthony Anderson. We do not need to go into these complications here, and we will stick to the original formulation.

33 When Dummett says that the doctrine of indirect reference has been abandoned, he is motivated by the fact that a person who began with Church's system alone would no longer think of indirect or "oblique" contexts as special problematic cases of "intensional" contexts, generating a special problem for substitutivity that Frege needs to solve. Such a person would think of belief contexts, etc., as just as obviously extensional as any others. For Dummett, the double (and iterated) uses of terms in indirect contexts are an essential part of the theory. As we have seen, Church's paper *is* faithful to Frege in this disputed respect. However, Dummett's contrary point of view is close in spirit to my final conclusions.

As I have mentioned (footnote 9 above), Dummett himself proposes a modification of Frege's notion of sense (and of indirect sense), giving rise to a two-level theory similar to that of Carnap, but with another justification. I myself am not inclined to accept Dummett's modification. The present article will show why I think such a modification unnecessary. Without going into details, I also think that Dummett's modified definition of sense probably suffers from a problem of circular definition.

34 Dummett (1973, pp. 182–184) favors just such a revision of Frege, but in his very critical discussion of Church's system, he fails to note that Church makes exactly the same revision. Nor does he note in the pages just cited that he is echoing Church (no doubt with more philosophical discussion of the desirability of the revision, which Church makes without argument and without even noting that it is a revision).

close to Quine's on this point. In fact, on this type of issue he comes in this very paper to the extreme conclusion that the problem of different ways of designating the same thing makes a problem even for modal propositional logic, a conclusion that Quine never drew.³⁵

Leaving Church, we return to Kaplan. He believes that Frege's treatment of indirect quotation is a special case of a more general principle governing all "oblique" contexts, that is, contexts in which words cannot have their ordinary referents.³⁶ He also thinks that Frege in "Über Sinn und Bedeutung" applies the theory to direct quotation, taking him to advocate the theory that in direct quotation the whole of an expression, and each of its component parts, refers to itself. In other words, just as the prefixes "believes that", "says that", and the like create contexts in which terms refer to their senses, so the "says" of direct quotation (followed by quotation marks in the written language) creates a context in which words are used autonomously, i.e., referring to themselves.

35 Discussing the characteristic axiom of S4 – that necessity implies double necessity – Church says: According to the present theory, the answer to this question depends on what concept of the proposition is employed. For example, *that it is necessary that everything has some property or other* is no doubt itself necessary; but that *the proposition mentioned on lines 27–28 of page 272 of Lewis and Langford's Symbolic Logic is necessary* is true but not necessary. (Church, 1951, footnote 23; original emphasis)

Some of the rest of us would take the first way of determining the proposition in question to be privileged over the second. In my own terminology above, the first way of determining the proposition is immediately revelatory, whereas the second is not revelatory at all. So, if Church regards this example as typical, he ought to be a believer in S4. But clearly Church accepts no such distinctions. There is more that I would have to say here, even from the point of view of Church's system, but the matter would call for an extensive digression. For a later writing, see Church (1973) p. 27, and the accompanying footnote 2. See also Church (1988). But see also footnote 88 below.

36 Kaplan says:

Frege's treatment of oblique contexts is often described as one according to which expressions in such contexts denote their ordinary sense or meaning or intension (I here use these terms interchangeably). But this is a bad way of putting the matter for three reasons. (1) It is, I believe, historically inaccurate. It ignores Frege's remarks about quotation marks (see below) and other special contexts. (2) It conflates two separate principles: (a) expressions in oblique contexts don't have their ordinary denotation (which is true), and (b) expressions in oblique contexts denote their ordinary sense (which is not, in general, true). And (3) in focusing attention too rapidly on the special and separate problems of intensional logic, we lose sight of the beauty and power of Frege's general method of treating oblique contexts. . . . My own view is that Frege's explanation, by way of ambiguity, of what appears to be the logically deviant behavior of terms in intermediate contexts is so theoretically satisfying that if we have not yet discovered or satisfactorily grasped the peculiar intermediate objects in question, then we should simply continue looking.

. . . Look for something denoted by a compound, say, a sentence, in the oblique context. (In ordinary contexts sentences are taken to denote their own truth values and to be intersubstitutable on that basis.) And then using the fundamental principle: the denotation of the compound is a function of the denotation of the parts, look for something denoted by the parts. It was the use of this principle which, I believe, led to Carnap's discovery of individual concepts, and also led Frege to the view that quotation marks produce an oblique context within which each component expression denotes itself (it is clear in quotation contexts what the whole compound denotes). (1968, p. 185)

Now what Frege actually says is:

If words are used in the ordinary way, what one intends to speak of is their *Bedeutung*. It can also happen, however, that one wishes to talk about the words themselves or their sense. This happens, for instance, when the words of another are quoted. One's own words then first designate words of the other speaker, and only the latter have their usual *Bedeutung*. We then have signs of signs. In writing, the words are in this case enclosed in quotation marks. Accordingly, a word standing between quotation marks must not be taken as having its ordinary *Bedeutung*. (Frege, 1892, pp. 153–154)

In the very next paragraph he goes on to give his well-known theory of indirect quotation and indirect reference (to the ordinary sense), the dominant theme of this paper, already alluded to in the paragraph just quoted.

So far one might think that everything supports Kaplan's interpretation, but there is an oddity. If types, not tokens, are in question, then the theory amounts to what Kaplan says; but if so, why not state things as Kaplan does, that the words designate themselves, rather than the words of the other speaker?

When I gave the present talk I left the matter there, but assumed that Kaplan was correct, in spite of the oddity. However, a few pages later Frege says:

In direct quotation, a sentence designates *another* sentence, and in indirect speech a thought. (Frege, 1892, p. 159; emphasis added)

So there are two possibilities. One is that here "sentence" means a token, since otherwise one should not speak of "another" sentence. To me, to use "sentence" in English to mean a token, so that two people that say exactly the same thing are uttering different sentences, is very odd. The same thing would seem to apply to the German "*Satz*"; I would like to know if "*Satz*" ever means a token elsewhere in Frege's writings. Moreover, even stipulating that tokens are meant, the proposed Fregean theory in terms of tokens seems to me to have considerable substantive difficulties.³⁷ If such a theory cannot be defended, one seems forced to conclude that Frege was confused in the passages in question.

37 See, however, Picardi (1992), pp. 284–290. She defends a token interpretation and even thinks that it is required for the case in question, if I understand her communication to me correctly. The book, written in Italian and published in Italy, was for these reasons unknown to me then and now. Obviously she deserves considerable credit for noticing that the autonomous interpretation of Fregean quotation marks, as stated by Kaplan, does not seem to accord with the text. Notice that the putative Fregean theory in terms of tokens should not be confused with Davidson (1979).

Picardi has also called my attention to the discussion in Mendelsohn (2005), ch. 10, section 1. He thinks that Frege was simply mistaken in regarding quotation of another speaker as a case of reference at all; as opposed to the usual use of quotation marks discussed in philosophy, and indeed introduced by Frege himself.

As is well known, Frege does use quotation in his own writings to designate signs, without their necessarily being used by another particular speaker or writer.³⁸ I have been hard pressed for an explicit statement of his convention. Such a statement might give his general theory of direct quotation. Perhaps the following helps:

As such proper names of the sentences of the object-language I use these very sentences, but enclosed in quotation marks. (Frege, 1979, p. 261, original emphasis)

Read very carefully, this does indeed seem to say that quotation simply creates a context in which the sentences are used autonomously. (One can presume them to be composed out of their component parts, also used autonomously, in agreement with Kaplan's attribution.) But I must say that this is a great deal to be squeezed out of a single sentence.

One should add (or repeat) that the analogy between direct and indirect quotation stated by Frege in "Über Sinn und Bedeutung", as quoted above, certainly would go best with Kaplan's interpretation, even though the rest of the text does not seem to mean that. I will go on, as I originally did, assuming that Frege does hold the theory of direct quotation that Kaplan attributes to him.³⁹

Strangely enough no one, to my knowledge, has raised the hierarchy problem regarding the theory of direct quotation. After all, direct quotation can be iterated any number of times. Would Frege's theory lead to a hierarchy problem, analogous to the problem people see for indirect quotation?

Now, analogously to Frege's "indirect reference", we could naturally use the term "direct reference" for the reference of a term to itself in direct quotation. But in recent philosophy "direct reference" has come to mean something else, so instead we shall introduce the cumbersome phrase "the direct quotation reference". Let me abbreviate this as the "quote-reference". Then there will be a quote-sense, and then won't there also be a whole hierarchy of a quote-quote reference, a quote-quote sense, and so on? Yet no one has thought that there was such a mystery here, or at least no one has argued for there being such a mystery, given Frege's theory of direct quotation. Nor have the issues that I raised about indirect quotation (the second German course and so on) been raised about direct quotation. So let us take another look at this.

38 This is Mendelsohn's "philosopher's quotation", much discussed in the literature, especially since Davidson (1965) emphasized the theoretical problems involved in earlier accounts.

39 Corey Washington (1992) advocates the theory in question and attributes it to Frege and to Searle (1989, p. 76) (presumably independently; I have not read Searle on this question). Peter Geach, a great admirer of Frege, advocates the same theory but attributes it to no one else. See Geach (1963; also in 1972, section 5.8) (in the preface to Geach (1972) he expresses some hesitation as to whether this theory of quotation is true). Mendelsohn (2005, p. 173) quotes Reichenbach (1947) as advocating a similar theory. Already Church (1956, p. 61) interprets Frege in the same way as Kaplan does later.

Let me first mention some analogues to what I want to say. Suppose we make a very general statement:

- (1) When someone uses the word “here” the speaker (or writer) refers to the place of utterance (or writing).

David Kaplan has made clauses like (1) prominent in his theory of demonstratives (statement (1) is not entirely accurate, and I think Kaplan (1989) realizes that fact, but to simplify matters let us retain it).⁴⁰ Is there anything else about the sense of “here” that you need to know? Doesn't (1) determine the reference for all cases? And similarly for other indexicals. For example, “now” refers to the time of utterance, and “I” (a case that we will return to later) refers to the speaker or source of the utterance. These are general directions for the referents in the language, no matter when and by whom they are uttered. One does not, it would seem, need anything more. However, in any particular case, to determine the reference one needs a specification of the speaker, the time, or both (or alternatively, of the particular utterance token, which might determine both).⁴¹

In other cases, however, general directions like (1) can be given that will determine the reference for any sentence, or perhaps discourse, without the supplementation of anything external to the sentence or discourse in question. I am thinking of anaphora, pronominalization, and the like. In such cases as “the latter”, “the former”, “the aforementioned person”, and various pronominal cases such as “him”, where the reference is determined by the sentence itself, as opposed to demonstrative pronouns, the general rule determines the reference for each sentence or discourse, without the supplementation of anything else such as speaker, time, or whatever. The general rule given may be syntactically complicated, but it should determine the reference in any particular case. Hence, as applied to any particular case, it must be, on a Fregean theory, a Fregean sense, since anything that determines a reference is a sense.

Let us apply these ideas to Frege's apparent theory of direct quotation, and to his theory of indirect quotation.

There are two relevant principles. For direct quotation we have:

- (α) When words appear in direct quotes, they refer autonomously, that is, to themselves.

As Kaplan emphasizes, the corresponding principle for indirect quotation is completely analogous:

40 Theories such as those of Davidson and Montague would have similar clauses.

41 This case, and some qualifications of the apparent drift of this paragraph, will be discussed again below.

- (β) When words appear in indirect contexts, that is, “says that”, “believes that”, and so on, they refer to their senses in the clause following the “that”.

Both (α) and (β) are intended to be understood iteratively, so that when there are iterative direct quotations, or “that clauses”, the reference is determined recursively from the clause within the quote or following “that”.⁴²

Certainly in the case of (α), one is unlikely to feel any mystery about the iteration, since the rule that expressions refer autonomously is very clear. One would feel no more mystery than in the case of anaphoric usages such as “the latter”, and the syntactic rule involved is actually more straightforward. What about the case of (β)? Well, consider first the simple uniterated case. Words in an indirect context refer to their ordinary senses. But what is the sense in the indirect context? Here we should surely say that the rule (β) itself, applied to each indirect case, gives the indirect sense. For we have conceded that it determines the reference in each particular case, and whatever determines a reference is a Fregean sense. This consideration can then be applied iteratively, and we appear to have a theory of the entire hierarchy.

Something very strange has gone on here, because these are entirely general directions that ought to determine the reference in every case. How could there be any mystery here? In the case of (β), one aspect of the mystery has come from such feelings as that the ambiguity involved in indirect senses is an ordinary ambiguity, as in Kaplan’s exposition, without emphasizing the contextual determination of the ambiguity. This leads to the feeling that in a real *Begriffsschrift* the ambiguity ought to be removed, as Frege says (with some fudging) in the letter to Russell quoted before, and hence to Church’s system. In Church’s system, as I have said, there is in effect a similar fudge, since the different symbols in the infinite sequence do systematically resemble each other in the subscripting system, but in fact are completely independent, as Davidson rightly emphasizes. I doubt that this aspect of the mystery would have arisen if case (α), as brought out by Kaplan, had been the primary case considered.

However, even more crucial for the feeling of mystery in case (β) has been the feeling that we have little real idea what the indirect senses, doubly indirect senses, and so on, are. When this is combined with the aspect mentioned in the previous paragraph, one feels that one not only has an unlearnable infinite hierarchy, but that one has scarcely any idea what this hierarchy might be. My reply here is that the rule (β), every time it (recursively) specifies a reference, also implicitly gives a sense, since Frege’s theory is that to determine a reference is to give a sense. Hence, (β) itself gives the indirect sense, and when recursively applied gives the doubly indirect

42 Actually, (α) and (β) should be understood together, since a direct quotation may appear inside an indirect quotation, and vice versa, producing a more complex pattern of iterations.

sense, and so on. (What I say here will be expanded, and in a sense qualified, later.) Here I am in agreement with Dummett (as I anticipated above) that the contextual ambiguity of phrases in indirect contexts (both for reference and for sense) is an essential, not an accidental, part of the theory,⁴³ in spite of Frege's own *ipse dixit*.

Important to this presentation of Frege is that he has given general directions for the reference of terms in all contexts and that this cannot possibly be incomplete. There are indeed infinite hierarchies generated by both (α) and (β), but these are given by a recursive rule.

Two compositional principles are generally attributed to Frege, rightly I should think, though he himself used them rather than stating them. The first is that the referent of a whole is a function of (or is determined by) the referents of its parts. The second principle analogously replaces "reference" by "sense". What these principles mean is that if in any piece of language one replaces some significant part by one with the same referent (sense), the referent (sense) of the whole is unchanged.⁴⁴

A converse principle about senses seems less widely stated: the relation of senses of a whole to the senses of its significant parts is not only that of a function, but that of a *one-to-one* function. This is because to understand the whole one must understand its constituent parts, and hence the sense of the whole breaks down into the senses of its constituent parts. As Dummett puts the matter:

The sense of a complex is compounded out of the senses of its constituents. (Dummett, 1973, p. 152, original emphasis)⁴⁵

43 I am not in agreement with his attempt to revise the sense-reference theory, so as to appear to avoid any hierarchy problem, in parallel with the earlier attempt by Carnap. See footnote 33.

44 For senses (if they are identified with meanings of the constituent parts of a whole sentence and hence constituent parts of the thought they express) the principle should be obvious. But is the principle so obvious for reference (*Bedeutung*)? Why shouldn't the reference of the whole be allowed to depend on other features of the parts? Indeed, why not just say that exceptions to this principle obviously exist, e.g., in indirect contexts and possibly in quotation? (In fact just this appears to be Quine's position. See Quine (1960), p. 151, where he says that Frege "nominally rectified" exceptions to the principle by inventing his doctrine of oblique reference, whereas Quine himself says that such contexts are not purely referential.) Then the entire complicated doctrine of oblique and, in particular, indirect contexts that has been my main topic would not exist. (See also Davidson's remarks quoted in footnote 11.)

Looking over the transcript of my lecture, I see that I raised this question in passing, but did not give an answer that I had previously proposed in classes on Frege. It could be argued that for Frege the principle is analytic. The context shows what we are talking about, and that is what the referent is. See for example Frege (1892), p. 153:

If words are used in the ordinary way, what one intends to speak of is their *Bedeutung*. It can also happen, however, that one wishes to talk about the words themselves or their sense. (Full quotation given above.)

I think that what I am saying here is in agreement with Kaplan's exposition in his (1968).

45 That Dummett has in effect stated the relevant principle, though not perhaps in terms of one-to-oneness, is new to the present version of this lecture.

But this means that we not only have a functional relationship from the parts to the whole, but a converse functional relationship, in effect a one-to-one relation.⁴⁶ (Clearly no such principle holds for reference.) For Frege's own enunciation of this principle, see a passage from his letter to Russell of 13 November 1904:

... Mont Blanc with its snowfields is not itself a component part of the thought that Mont Blanc is more than 4000 metres high ... The sense of the word "moon" is a component part of the thought that the moon is smaller than the earth. The moon itself ... is not part of the sense of the word "moon"; for then it would also be a component part of that thought. (Frege, 1980, p. 163)

Russell himself, in "On Denoting", says:

In the proposition "Mont Blanc is over 1,000 meters high", it is, according to him [Frege], the *meaning* of "Mont Blanc", not the actual mountain, that is the constituent of the *meaning* of the proposition. (Russell, 1905, p. 483, footnote 2; original emphasis)⁴⁷

The general principle is enunciated in Frege's late *Introduction to Logic*, in the section on Sense and Reference:

As the thought is the sense of the whole sentence, so a part of the thought is the sense of part of the sentence. (Frege, 1979, p. 192)

The same passage also mentions the "Mont Blanc" example again.

One does not grasp the sense of the whole, without grasping the sense of the parts. And to understand something is to grasp its sense.

As I said, Frege has given general directions for a theory of the references of words in quotation-context in (α) and for indirect contexts in (β), and no one has ever suggested that there is a mystery about the theory in (α).⁴⁸

Why is (α) not mysterious? What (α) says is clear enough. But for it to be of any use speakers or writers must be able to apply it in particular cases. For example:

46 As is well known, there are late passages where Frege appears to go back on this. See his letter to Husserl of 9 December 1906 (Beaney, 1997, pp. 305–306), which comes close to identifying the thoughts expressed by logically equivalent sentences, though it has a qualification that only adds perplexity (at least to the present writer).

Since according to Frege arithmetic reduces by appropriate definitions to logic, a sentence containing "738" will retain the same sense with "643 + 95" in its place. This is a radical alteration of Frege's earlier remarks on sense and reference. See also Frege (1918–1919), p. 331, on the active–passive transformation, or the corresponding interchange of "give" and "receive", which are said not to affect the thought; but perhaps allowing these transformations is compatible with the principle.

47 Note Russell's terminology: he uses "meaning" for Frege's "*Sinn*". He himself thought (at the time of the relevant correspondence with Frege) that the mountain itself was a constituent or component part of the proposition, and takes this position in the correspondence.

48 Although I must admit that it is unfair to stress this fact too much; perhaps no one thought that there was a mystery about (α) because almost all the discussion of Frege and the mysterious hierarchy has concentrated on (β), and (α) has received much less attention.

Abraham Lincoln said "Four score and seven years ago . . ."

(α) says that the quoted words refer autonomously to themselves. How do we know what these words are? Well, in a particular case of writing or utterance we see or hear the entire sentence, and *a fortiori* hear or see any parts, including the autonomously referential part. Here what we hear or see are tokens, and thereby are aware of the corresponding types. So there should be no mystery as to how to apply the theory in a particular case. Even if we are only contemplating the sentence type in our mind, to fully comprehend it is to comprehend the type as a part. It is like Russellian acquaintance.

Similarly for case (β). Once we see that any time a referent is given it must be given by a sense, we have seen that (β), just like (α), really does give general (recursive) directions for the entire hierarchy of senses and indirect senses. However, there is the question of how an individual speaker will apply (β). My suggestion, once again, is that Frege, like Russell, has a doctrine of direct acquaintance. Every time we determine a referent, we are introspectively acquainted with how the referent is determined, and that is the corresponding sense. And our introspective acquaintance with this sense gives us a way of determining it, and of referring to it, and this is the indirect sense. Thus the Fregean hierarchy of indirect senses, doubly indirect senses, and the like is given this way. Each level of the hierarchy is the acquaintance-sense of the previous level. So Frege, although the doctrine may be less explicit, depends on a theory of acquaintance very much like that of Russell.⁴⁹

I already talked about a revelatory sense, and more strongly, about an immediately revelatory sense. One could now use the term *acquaintance-revelatory*. An indirect sense, since it determines its referent by acquaintance, is such that one needs no information, or even calculation, to realize what the referent is. On this interpretation, not only does Frege, at least implicitly, have a doctrine of acquaintance; but also, the list of objects of acquaintance that he would accept is not so vastly different from Russell's final position. In "On Denoting", as is well known, he says, in contrast to Frege, "there is no *meaning* [that is, there is no *Sinn*], and only sometimes a *denotation*" (Russell, 1905, p. 483, footnote 3; original emphasis) as he puts it. He also ends the paper with his well-known conclusion that "in every

49 The order of presentation here is not the order in which I thought about these problems. Some years before this lecture I had concluded that Frege must have an implicit doctrine of direct acquaintance with senses, in order to make sense of the Fregean hierarchy of indirect senses and so on. I had stated this view in various seminars. That the matter should be put in terms of how individual speakers apply general directions, as in the case (β), and the analogy with the case (α) was much more recent. Nor did I think of the analogy between (α) and (β) and general linguistic rules for anaphora. Also the relation to cases with indexicals (some of which will be discussed in Fregean terms later in the lecture). It was probably presented this way in the present lecture for the first time.

proposition that we can apprehend . . . all the constituents are really entities with which we have immediate acquaintance” (ibid., p. 492). Under the pressures of the requirements of his semantical theory, the list of such entities becomes progressively narrower. One’s own sense-data, perhaps one’s own self, and abstract entities such as universals, are the objects of acquaintance and the constituents of propositions.⁵⁰ One could never be acquainted with Mont Blanc, with all its snowfields, nor could it be a constituent of a proposition. There is an unconditional surrender to Frege on this point.

That Russell’s ultimate list of propositional constituents would be acceptable to Frege, or close to it, is in large part already clear. Some of the rest might become clearer if we consider Frege’s relatively late paper “Der Gedanke” (1918–1919).⁵¹ This paper contains Frege’s first extensive explicit discussion, as far as I know, of indexicals, demonstratives, the first person, one’s own private inner states, and so on.⁵²

Three distinguished and well-known writers have based important claims about the interpretation of Frege on a crucial passage in this paper. Tyler Burge, in his marvelously titled paper, “Sinning Against Frege” (Burge, 1979a),⁵³ argues that “the basic misunderstanding is the identification of Frege’s notion of Sinn (sense) with the notion of linguistic meaning” (Burge, 2004, p. 213) (surely the “misunderstanding”, if there is one, is indeed a common one). Burge’s argument is simple. What about tensed senses, or sentences containing indexicals? Consider, for example, “Today it is raining in Stockholm”.⁵⁴ The meaning of this sentence does not vary from day to day. Obviously its truth-value does vary, and the variation in truth-value is due to a variation in the reference of “today”. But sense determines reference, and the reference of the whole sentence is its truth-value. Hence, “today” must have different senses on different days (otherwise sense would not determine reference). Similarly, the whole sentence must have different senses on different days, since it has different truth-values (references, and sense here determines truth-value).

50 In saying this we ignore his later rejection of propositions altogether.

51 The title is translated by Beaney as “Thought”, by Geach and Stoothoff as “Thoughts”, and by A. M. and M. Quinton as “The Thought”. (Otherwise Beaney follows the Geach–Stoothoff translation in the text of the paper.) I will follow the Beaney pagination as usual.

52 On my view, anyway. Tyler Burge, as will be discussed below, interprets “Über Sinn und Bedeutung” as already involved in a theory of indexicals. (However, see footnote 58 below for a possible anticipation of one aspect of “Der Gedanke” already in the *Grundlagen* in 1884.)

53 All references are to the 2004 reprint. Burge gives some credit for the pun in the title to Paul Benacerraf.

54 The example is my own, obviously influenced by the place where the lecture was given. That I am giving a fair representation of Burge’s argument should be clear to any reader of the first few pages of his paper. Frege himself discusses “today”, and the passage containing this discussion is the basis of Burge’s interpretation.

John Perry, in his influential article “Frege on Demonstratives” (1977), first states (correctly) that, where *S* and *S'* are two sentences, “If *S* is true and *S'* is not, *S* and *S'* express different thoughts” (ibid., p. 476).⁵⁵ Perry then argues that there is a problem for Frege here: “Russia and Canada quarreled today” can be true on 1 August but false on 2 August (ibid., pp. 478–479):

So, if “today” provides a completing sense on both days, its sense must change just at midnight. But what we know when we understand how to use “today” doesn't seem to change from day to day. (ibid., p. 479)

The main difference between Perry's argument (which Burge cited) and Burge's is that Perry presents the argument simply as a problem for Frege, where Burge draws the conclusion that for Frege sense and meaning are two different things. Burge does not note the odd omission in Frege, if *Sinn* is *not* meaning, of any technical term for the ordinary notion of meaning.⁵⁶ It is as if David Kaplan, in his well-known distinction in “Demonstratives” (1987), had introduced his term “content” but no term for “character”. (If Burge were right, Frege's use of *Sinn* would be closely analogous to Kaplan's “content”, and “meaning”, in the ordinary sense, to Kaplan's “character”.) Kaplan, by the way, is deeply influenced in his discussion of the relevant issues in Frege by Perry's paper, and is the third distinguished author to whom I have alluded.⁵⁷

But all this goes directly contrary to what I understand to be the plain meaning of Frege's explicit *ipse dixit* in the very passage quoted and emphasized by Burge:

If a time-indication is conveyed by the present tense one must know when the sentence was uttered in order to grasp the thought correctly. Therefore the time of utterance is part of the expression of the thought. (Frege, 1918–1919, p. 332)

What does this mean? “Today it is raining in Stockholm”, or even better, “Now it is raining in Stockholm”, or more simply, “It is raining in Stockholm”, is not the expression of a complete thought. Also included in the expression of the thought, and hence in the sentence (*Satz*), is not merely the verbiage, but also a time. The real *Satz* or expression of a thought (*Gedankenausdruck*) is therefore an ordered pair:

55 Perry refers to some opening passages in “Der Gedanke” to support his claim. Actually, Frege says there: “And when we call a sentence true we really mean [meinen] that its sense is true” (Frege, 1918–1919, p. 327). But without going into fussy terminological questions (and Perry himself quotes the passage as saying that it is thoughts for which the question of truth-value arises) it is easy to see that, carefully phrased, Perry's claim would obviously be correct.

56 Frege, of course, has preempted “*Bedeutung*” for denotation or reference, whatever the translators may decide to do, and therefore, on Burge's account, still owes us a technical term for meaning in the ordinary sense.

57 See Kaplan (1989). Kaplan gives no sign of agreement with Burge on the point in question, and I do not intend to give the opposite impression. Perry's influence on him will come out below.

(L,*t*)

Here *t* is the time of utterance, where L is the piece of language, such as “It is raining now in Stockholm”. But really, since it is part of the expression of the thought, the time of utterance is, for Frege, an unrecognized piece of language.

To what does *t* refer? That is, what is its *Bedeutung*? To make any sense of the passage, it must refer autonomously, that is, to itself. Thus, “It is raining in Stockholm” is incomplete – what it expresses must be filled out.⁵⁸ Take it to be “It is raining in Stockholm at –”. If this were read with a tenseless “is” (not really much to be found in ordinary language in connection with times and dates; it is really philosophers’ jargon)⁵⁹ it could be filled out with various completions such as “noon”, “15 April 2005”, or “the same moment when Kennedy was shot”, and the like. But if uttered with the ordinary present-tense “is”, the completion is the time of utterance used autonomously. It therefore stands in place of a specific date and time, or definite description, as in the examples above, which are conventional pieces of language.

The *Sinn* of the corresponding *Gedanke* is therefore that of autonomous designation, just as in the case of quotation.⁶⁰ The speaker (or writer or thinker) is

58 See already in the *Grundlagen* where he says:

The concept “inhabitant of Germany” contains, in fact, a time-reference as a variable element in it, or, to put it mathematically, is a function of the time. Instead of “*a* is an inhabitant of Germany” we can say “*a* inhabits Germany”, and this refers to the current date at the time. (Frege, 1884, pp. 59–60)

Perhaps the last sentence is a bit vaguely stated, but the whole is an anticipation of the later doctrine of “Der Gedanke” – that present-tensed verbal expressions are incomplete.

59 In his discussion of the matter, Frege explicitly recognizes the use of “is” in the laws of mathematics as tenseless. This we may accept, and there may be other cases, but I do not think that a tenseless “is” is involved in ordinary language very often in connection with ordinary things. In particular, ordinary language giving the time when an event occurred (occurs or will occur) is invariably tensed. If a speaker does not know whether a given date is past, present or future, she/he will use a disjunction of tensed clauses, not a tenseless “is”.

60 Thus on this exegesis Burge is right to deny that the referent is a part of the thought, or that in this case sense is to be identified with referent. See Burge (2004, p. 216). Rather the sense is that of autonomous designation. Nevertheless, Burge does recognize that Frege says that the sense is part of the expression of the thought. How after all can something be part of the expression of a thought and not have a *Sinn* that is part of the thought? Burge simply seems to ignore this question in his argument against the identification of *Sinn* and meaning, and does not recognize that it threatens his argument, regardless of what the *Sinn* of the time may be. For there is no longer a *Sinn* that changes while the meaning is constant, once one realizes that the *Sinn* of a time is part of the thought too.

If my exegesis is correct, the situation is very close to what Burge wants to deny, even though sense and referent cannot literally be identified.

Dagfinn Føllesdal has called my attention to the writings of Wolfgang Kühne of which Kühne (1992) is a representative example. Like the present account, Kühne stresses that for Frege times, persons, etc., can be part of the expression of the thought. However, his reading is certainly not mine in significant respects. For example, he agrees with Burge that Frege’s *Sinn* is not meaning, and concludes that Frege has no term for linguistic meaning (see p. 723). Nor, at least here, does he say anything about my doctrine of acquaintance *Sinne* for autonomous designation. I should add, where demonstration is involved, as in

acquainted both with the time of utterance (or writing or thought), and he must be acquainted with the *Sinn* as well, a *Sinn* of autonomous designation. Everything could be put in terms of general truth-conditions analogous to (α) above, but to apply these general conditions the subject must be acquainted with the time of utterance, as in the quotation case and the application of (α). As general conditions, we have conditions for when a present-tense expression of a thought is true, even though no token needs to be uttered, written, or thought. What expresses the thought is an ordered pair of a sentence and a time.⁶¹ But in particular applications, there is a token, and the speaker (writer, thinker) is acquainted with the time it is uttered. The speaker is also acquainted with the autonomous *Sinn* involved.^{62,63}

Frege reiterates his view towards the end of the paper:

The thought that we express by the Pythagorean theorem is surely timeless, eternal, unvarying. But are there not thoughts which are true today but false in six months' time? The thought, for example, that the tree there is covered with green leaves, will surely be false in six months' time. No, for it is not the same thought at all. The words "This tree is covered with green leaves" are not sufficient by

pointing, to me it is clearly that act of demonstration, not the object designated (as in Künne), which is part of the expression of the *Gedanke*. The object itself is the *Bedeutung*, and the *Sinn* is the rule connecting a demonstration such as pointing to its object.

61 The ordered pair representation is of course my own mathematical transcription of Frege's informal idea that the time is part of the representation of the thought. Nothing hangs on it if someone prefers something else.

62 Perry writes:

By breaking the connection between senses and thoughts, we give up any reason not to take the options closed to Frege. We can take the sense of a sentence containing a demonstrative to be a role, rather than a Fregean complete sense, and thoughts to be the new sort, individuated by object and incomplete sense, rather than Fregean thoughts. (1977, p. 493)

Actually, the theory Perry is suggesting (which I have not entirely tried to grasp) seems to be related to Frege's actual theory. The real Frege holds that the senses of statements containing demonstratives and indexicals are incomplete. They are completed by senses given by objects that autonomously designate themselves, or sometimes by gestures such as pointing, whose senses are that the object pointed to is what is designated.

63 Gareth Evans, in his important paper "Understanding Demonstratives" (1981; all references are to the 1985 reprint), also discusses the question of whether Perry's position is "just a notational variant of Frege's [real] theory" (1985, p. 314; and see also the subsequent pages through 317). See also his representations by ordered triples, etc., of various Fregean thoughts in reply to Perry. It is clear that Evans's views have some strong relation to my own, though I have not attempted a detailed comparison.

I regret that when I gave the present lectures I was apparently unaware of Evans's discussions of the relevant issues about time, the first person, demonstratives, and his reply to Perry. Perhaps I did not know this paper at the time (though I have discussed Evans's views in some later presentations of the material). Alternatively, I may have remembered it primarily for its controversial and, as stated, I think unacceptably strong claim (under some influence of John McDowell) that "I know of no passage in which Frege can be construed as insisting that singular terms *must* have an existence-independent sense", even in natural language. I may have mistakenly thought of the paper as entirely *resting* on this claim. (Evans seems to have softened his position on the issue later, and he is right to call attention to Frege's emphasis in some passages on fiction and lapses into fiction.)

themselves to constitute the expression of a thought, for the time of utterance is involved as well. Without the time specification thus given we have not a complete thought, i.e. we have not a complete thought at all. Only a sentence with the time-specification filled out, a sentence complete in every respect, expresses a thought. But this thought, if it is true, is true not only today or tomorrow but timelessly. (Frege, 1918–1919, p. 343)⁶⁴

On this theory, then, tensed sentences are on Frege's view incomplete. What is their *Bedeutung*? Plainly concepts, that is concepts applying to times, or functions from times to truth-values. On this theory "now" designates an identity function mapping each time to itself. "Today" denotes a function mapping each time into the day containing it (it could be explicitly defined as "the day it is now").⁶⁵

However, the way Frege continues the earlier passage, where he asserts that the time is part of the expression of the thought, does create some confusion:

If someone wants to say today what he expressed yesterday using the word "today", he will replace this word with "yesterday". Although the thought is the same its verbal expression must be different in order that the change of sense which would otherwise be effected by the differing times of utterance may be cancelled out. (Frege, 1918–1919, p. 332)

Burge instead translates the end of the passage as:

... the verbal expression must be different, to compensate for the change of sense which would otherwise be brought about by the different time of utterance. (Burge, 2004, p. 214)

If Frege really means that we have expressed literally the same thought again, it is very hard for me to see how to reconcile this assertion with his other doctrines. On my own exegesis, there are two times of utterance t_0 and t_1 and the two utterances are ordered pairs, $\langle S_0, t_0 \rangle$ and $\langle S_1, t_1 \rangle$, where S_0 is the earlier utterance with "today", and S_1 is the later utterance with "yesterday". "Today" denotes a function which when applied to t_0 (used autonomously) gives the day containing t_0 , and "yesterday" similarly denotes a function that gives the previous day to the day containing t_1 . Although these are indeed the same day, they plainly pick it out in different ways, paradigmatic cases of difference in sense. Moreover, it is hard to see how *any* exegesis compatible with Frege's general principles could yield a different result. If times of utterance are indeed part of the expression of a thought, and designate autonomously, it is clear that different times (considered as bits of language) have different senses. Also, the sense of "the previous day to the day containing" is part of the sense of the second sentence.

64 I am indebted to Evans's "Understanding Demonstratives" (1981) for emphasizing this passage.

65 Frege thinks that in a *Begriffsschrift* functions should be defined for all arguments, and artificially extends the definitions of functions with restricted domains. But here we are concerned with ordinary language.

How could anyone argue that the two sentences in question have the same sense? The basic principle that would have to be violated is that the sense of a sentence (the thought) is composed of the senses of its parts. In this case the principle would have to be replaced by Frege's talk of "canceling out" or "compensation". But such a move would be a highly specialized violation of Frege's own general principles.

My own view is that a present-tense thought expressed at a time t_0 (and perhaps using "now" or "today") cannot be recaptured at any later time, if Frege's account of how these thoughts are expressed is correct.⁶⁶ This is simply because the earlier time is never with us again, and it is supposed to be part of the expression of the thought. We can indeed remember having had such a thought, and describe it, including the time at which it occurred, but it can never be repeated in exactly the same way.⁶⁷

These considerations are reinforced when one considers longer passages of time. In English we have to say "the day before yesterday". But in Frege's own language we could say "*vorgestern*".⁶⁸ In principle we could imagine expressions for arbitrarily long time lapses. Or we could consider expressions frankly involving a number, e.g., "*n* days ago", "524 days ago". How could anyone imagine that they preserve the sense of the original? One could doubt them, or make mistakes about them, not because of any change of mind, or forgetting the original situation, but rather because of a miscalculation of the number of days. It would be very un-Fregean to say that the thought is the same as long as the number of days involved is reasonably short. What would be the boundary for "reasonably short"?⁶⁹

However, there are some important problems to be considered here. We can pick up an old newspaper and read, "Russia and France are now at war". How can we understand this if the thought expressed can never be entertained at any later time, as I have claimed must be the Fregean view? We understand this because we understand the general rule, discussed above, as to how to understand

66 Thus I do not agree with Evans's attempt to rescue Frege on this point, even though his paper should certainly be consulted, as an attempt to argue the contrary. I will not go into his arguments against the "atomistic" nature of my conception.

67 What about modern "four-dimensionalist" views? Perhaps in some sense the earlier time is still with us. First, there is little evidence that Frege is involved in these all-too-modern views. Second, in any case the time t_0 was the time of utterance; this indeed happened only once.

68 I mentioned Hebrew in the lectures, but as people pointed out, why not emphasize Frege's own language?

69 See Frege's remarks on Kant in Frege (1884), p. 6 (last paragraph). Even if only one day's lapse in time appears to be involved, one can be confused about the time period. See Kaplan (1989), p. 538, who mentions Rip van Winkle (in spite of his admiration for Frege's remarks on "yesterday" and "today" as anticipating the modern theory of demonstratives).

sentences containing “now”. They are incomplete and are to be completed by the time of utterance considered as part of the expression of the thought, and so on, as we have seen. A general rule was given, and we know how the rule is to be applied by a writer, speaker, or reader, at any time. This involves the fact that the writer was acquainted with the time of writing when he wrote the sentence, just as we are acquainted with the present time when we are reading the old report. And so on.

What if we report on what the newspaper said? We express this by something like, “At the time of its appearance, the newspaper said that Russia and France were then at war”. This does not mean that “Russia and France were then at war” expresses the same thought at the present time as “Russia and France are now at war” expressed at that time in the newspaper. Rather, the change from “now” to “then” expresses at the present time a conventional way of describing a thought expressed with “now” at the earlier time. The very same convention would be followed by the journalist who wrote the report at the earlier time.⁷⁰

The case of reporting on the next day is similar. If someone says, “today it is raining in Stockholm”, the next day we can report “yesterday John said that it was raining in Stockholm”. Perhaps more relevantly, someone can tell me today “yesterday it was raining in Stockholm”, and I can report “John told me that yesterday it was raining in Stockholm”. The same will hold for an individual recalling his own past beliefs. These reporting conventions should not give rise to the illusion (in a Fregean analysis)⁷¹ that “yesterday it was raining in Stockholm” expresses the same thought on one day that “today it was raining in Stockholm” expresses on the previous day. The point is that we know what it is like to express beliefs involving “now”, both because of the general principles enunciated involving the content of these beliefs and what it is like for a believer to be acquainted with a given moment. We apply conventional transformations in indirect discourse reports on these beliefs, even though such reports describe thoughts that are no longer, strictly

70 Gareth Evans mentions the problem of an old newspaper (yesterday’s in his case), using it to argue that of course we understand yesterday’s newspaper, that we would report on it using “yesterday”, and that these facts must support Frege’s statements that we still understand the old *Gedanke* and can report on it using “yesterday”. He quotes some other philosophers as taking Frege to hold that we (nearly enough) can reproduce a thought provided that the reference of the subject is preserved even with a change of sense.

Evans rejects these philosophers’ interpretation of Frege as totally “antagonistic . . . to the theory . . . of sense and reference” (Evans, 1985, p. 307). He asks whether Frege might just as well have used “my birthday” instead of “yesterday”. In view of Frege’s notorious footnote on “Aristotle” as quoted in *Naming and Necessity* and below in the present paper, there is some opening for the philosophers he opposes to be right. (See also Kaplan on the pseudo *de re*, (1989), p. 555.) However, I think Evans is right that Frege is supposing a more intimate relation between the “yesterday” and “today” statements, leading him to suppose that they express the same thought. In the “Aristotle” case, he plainly does not think that the same thought is literally expressed by different speakers, as I have argued.

71 I am not saying what one should think in a non-Fregean analysis. See footnote 79 below.

speaking, available to us.⁷² And we can read the old newspaper and understand it, though the thought it expresses is no longer available.⁷³

Frege's treatment of the analogous case of first person statements will be described below. My revision of Frege's remarks on "today" and "yesterday" is meant to make Frege's treatment of the temporal case consistent with his treatment of the interpersonal case. The later discussion of that case may make my remarks on the temporal case clearer.

Let me return to Burge's views on the nature of *Sinn*. Burge argued that Frege's treatment of (temporal and other) indexicals shows that *Sinn* cannot be identified with meaning. My own analysis is that Frege's treatment of the phenomena in question, properly understood, creates no objection against such an identification. Burge uses his analysis to criticize some of my remarks in *Naming and Necessity* (Kripke, 1980) on Frege's view of ordinary proper names. Since I have rejected Burge's view, it will give me no reason to retract the remarks in question. However, in my own self-defense, I will take the opportunity to elaborate a bit further on the issue.⁷⁴

Consider the following well-known footnote in "Über Sinn und Bedeutung", which I quote from Burge's own translation:

In the case of an actual proper name such as "Aristotle" opinions as to the sense may differ. It might for instance be taken to be the following: the pupil of Plato and teacher of Alexander the Great. Anybody who does this will attach another sense to the sentence "Aristotle was born in Stagira" than will a man who takes as sense of the name: the teacher of Alexander the Great who was born in Stagira. So long as the reference remains the same, such variations of sense may be tolerated, although they are to be avoided in the theoretical structure of a demonstrative science and ought not to occur in a perfect language. (Burge, 2004, p. 217)

72 In a discussion session after my paper, Gunnar Björnsson asked how I would handle "you promised (yesterday) that you were coming today". At the time I took this question under advisement. John Perry also thinks, in his "Afterword" to the reprinted version of "Frege on Demonstratives" in Perry (1993), that indirect discourse reports, both in the temporal and the interpersonal cases, form a crucial objection to Evans's defense of Frege. In the discussion above, I have tried to reply to these objections. The indirect discourse reports, and other reports on thoughts we cannot express or even think, give our own conventional descriptions of the nature of these thoughts.

I should add that although Perry is not sure he is interpreting Evans rightly on the issue (and I have not looked into the matter), he takes Evans to be defending Frege by proposing that days (times, subjects) actually are components of thoughts. To this notion of thoughts he objects that "if objects, rather than modes of presentation of them, figure in Evans' thoughts, then they represent the same *sort* of departure from Frege's theory as . . . I proposed . . . It is a departure, for Frege disavowed such hybrids" (Perry, 1993, p. 23). As I have said, I have not tried to figure out the relation to Evans's proposal, but on my interpretation, it is not the time of utterance itself that figures as a *Sinn* in the "now" thought, but the type of autonomous designation of a time by itself given by the speaker's acquaintance with the time. "Today" is analysed as "the day containing now", etc.

73 I am indebted here to conversations with Romina Padró.

74 Burge also has things to say about rigid designation and the like. I confine my remarks here to what he says about one issue, the issue raised by Frege's "Aristotle" footnote in "Über Sinn und Bedeutung."

Since Burge makes a point of giving his own translations of all quotations from Frege, and seems to be suggesting that previous translators are unreliable, I must add that in this instance his translation is virtually identical with that of Max Black, as anyone who compares the two will see. I myself took Frege to be saying that given the first definition, “Aristotle was born in Stagira” would be non-trivial, whereas someone who used the second definition would regard the same sentence as trivial. I also took him to be supposing that the definition of proper names by definite descriptions was typical, and attacked the description theory of ordinary proper names as a view to be found in Frege and Russell.

Whether I was right in ascribing a description theory of proper names to Frege (which certainly agrees with his examples) would not be the main issue here. Gareth Evans, in a piece of writing that as far as I know was not published, remarked that certainly Frege, like Russell, had generally been understood in this way. This made it important for me to rebut the theory, whether historically it was Frege’s theory or not.

More important for present purposes is the following: I certainly had understood Frege as saying that many proper names mean one thing to one speaker and another to another; that there is a divergence of idiolect, and that this result is counter-intuitive. Burge thinks that his own understanding of Frege on the distinction between “sense” and “meaning”, and its relation to Frege’s theory of indexicals, will give rise to an entirely different interpretation of the passage.

Burge points out that Feigl’s translation (which was earlier than Black’s), though it usually renders “*Sinn*” as “sense”, translates one sentence in the footnote just quoted as: “Whoever accepts this sense will *interpret the meaning* [my italics] of the statement ‘Aristotle was born in Stagira’ differently from one who interpreted the sense of ‘Aristotle’ as the Stagirite teacher of Alexander the Great”.⁷⁵ According to Burge, this “slip” reads the identification of sense and meaning into the passage, and was “probably influential, as we shall see” (Burge, 2004, p. 220).

The influence turns out to be on me. I did indeed quote the Feigl translation in *Naming and Necessity* (Kripke, 1980, p. 30). Burge seems to suggest (Burge, 2004, p. 203) that if I had only been aware of the Black translation, I would not have been misled into thinking that, strictly speaking, different speakers have different idiolects in which “Aristotle” and other names mean different things. And I guess my readers must have been unaware of Black’s translation also, or at least they failed to look it up.

As against all this let me say the following: I do not remember why I quoted this particular translation. I may simply have grabbed it before the lecture, which was

75 “On Sense and Nominatum”, trans. H. Feigl, in H. Feigl and W. Sellars (eds.), *Readings in Philosophical Analysis* (New York, Appleton-Century-Crofts, 1949).

orally delivered, or *perhaps* I thought that it makes the point more explicit. However, I doubt that the point would appear to be any different had I quoted Black's translation (which, as I said, is substantially the same as Burge's). I submit that if the translation I read had been "will attach a different sense", as in Black and Burge, a reader understanding this as ordinary English, and innocent of Burge's special exegesis, would understand the passage in exactly the same way as I intended, that is, that different speakers use the name "Aristotle" differently, though preserving the reference. I myself had taught the Geach–Black collection (Frege, 1952) in classes on Frege, including other papers, especially "Function and Concept" (Frege, 1891). As against any serious suggestion that I was unaware of the Black translation, note that I follow Black in my book in using "reference" rather than Feigl's "nominatum" or Russell's "denotation" (in contrast to Carnap, Russell, and Church. See footnote 2).

To get to the really substantive issue: Burge suggests that "the senses associated with proper names and other indexical constructions shift with context . . . In this respect Frege treats names and indexicals in the same way" (Burge, 2004, p. 217). However, we have seen that Frege does *not* hold that tensed sentences (and senses involving demonstratives and indexicals) shift their senses from time to time (context to context). Rather their senses are constant but incomplete, and must be completed by the time of utterance (or other relevant contextual factors). It is strange in any case that one must rely on "Der Gedanke", which was written more than a quarter of a century later than "Über Sinn und Bedeutung", to understand the former paper. Readers must have been greatly misled for a long time!⁷⁶

Having made this joke, I myself wish to cite a passage from "Der Gedanke" that conclusively shows that Frege thinks that different speakers, attaching different descriptions to the same name, strictly speaking have different idiolects.

Now if both Leo Peter and Rudolph Lingens understand by "Dr Gustav Lauben" the doctor who is the only doctor living in a house known to both of them, then they both understand the sentence "Dr Lauben was wounded" in the same way; they associate the same thought with it . . .

76 Really, an even longer time. Long after "Über Sinn und Bedeutung" was well-known to philosophers, the importance of "Der Gedanke" was not recognized. It was not included in the Geach–Black collection (Frege, 1952). The first translation of it into English was that of the Quintons, appearing only in 1956. The Geach–Stoothoff translation dates from 1977. My impression is that the contemporary philosophical community only gradually recognized the fundamental importance of this paper.

Burge does quote a sentence from "Über Sinn und Bedeutung" itself: "To every expression belonging to a complete totality of signs, there should certainly correspond a definite sense; but natural languages often do not satisfy this condition, and one must be content if the same word has the same sense in the same context" (Burge, 2004, p. 217). Without Burge's special exegetical apparatus, I would have understood the passage as saying that in natural language, unlike in a scientific *Begriffsschrift*, ambiguities occur and one must be content that an ambiguous term has a fixed sense in a given context. (And see my reference to this remark in footnote 30 above.)

Suppose further that Herbert Garner knows that Dr Gustav Lauben was born on 13 September 1875 in N.N. and this is not true of anyone else; suppose, however, that he does not know where Dr Lauben now lives nor indeed anything else about him. On the other hand, suppose Leo Peter does not know that Dr Lauben was born on 13 September 1875 in N.N. Then as far as the proper name “Dr Gustav Lauben” is concerned, Herbert Garner and Leo Peter do not speak the same language, although they do in fact designate the same man with this name; for they do not know that they are doing so. (Frege, 1918–1919, pp. 332–333)

The relevant original German, which I cite because of the suggestions that readers are relying on erroneous translations, is “*sprechen . . . nicht dieselbe Sprache*” (ibid., p. 65 in the original German). I cannot imagine a more explicit statement – in the very paper that Burge is relying on – of the view that Burge says that Frege has been misunderstood to hold; namely, that common natural languages are really unions of idiolects or dialects that differ from person to person according to what sense they associate with a given name, even when the reference is the same.

This is exactly in accordance with the usual and orthodox exegesis of the “Über Sinn und Bedeutung” footnote on different senses of “Aristotle”.⁷⁷ There is no reason to doubt the exegesis on the basis of suspicions of bad translation, or unfamiliarity with Frege’s theory of indexicals, or anything else.⁷⁸

77 It is unlikely that Frege is basing his point about “Dr Lauben” on the view, pressed by some philosophers, that proper names are not part of the language (German, English, etc.). Whatever plausibility this view may have with respect to “Dr Lauben”, plainly some proper names are parts of natural languages. I may wonder what Aristotle is called in Hebrew or Greek. A German may wonder what word we English speakers use for his country, and an English speaker may ask the converse question about the German word for “Germany”. In the case, for example, of the last question my knowledge of German has a gap if I do not know the answer. Yet the point that different descriptions might be associated with a name remains the same. If Frege thought “Dr Lauben” was a special case, he might have said so.

The issue raised in the previous paragraph is a brief and only partial treatment of views about proper names expressed by some philosophers. It deserves a fuller treatment elsewhere.

One must also admit that the situation supposed regarding Dr Lauben is rather peculiar. When Frege supposes that someone associates with the name “Aristotle” the sense “the pupil of Plato and teacher of Alexander the Great” (who may or may not have any idea where Aristotle was born), while someone else associates with the name “the teacher of Alexander the Great who was born in Stagira”, the situation is completely analogous to that of Dr Lauben. But would Frege have actually written that the two different speakers “do not know” that they are designating the same man? Surely this would be an embarrassment. His statement that such variations of sense are tolerable in natural language seems to go in a different direction. Perhaps the difference in attitude does indeed have something to do with the fact that “Aristotle” is the name of a well-known man, part of the common language. But theoretically the cases are the same.

If Frege’s view of names like “Aristotle” in natural language makes his view problematic, as I think it does, then, modifying a suggestion of Devitt and Sterelny (1999), I would call it “the problem of unwanted idiolects”.

78 Burge claims (2004, p. 217) that “Der Gedanke” confirms his theory that for Frege names are like indexicals, and so on. But I do not see how.

It might be mentioned that Burge himself (in Burge, 1973) holds that names are demonstratives followed by special predicates. But presumably he is not reading his view back into Frege.

I must admit that some passages in Burge’s paper make me wonder whether he is consistently disputing the point I am reiterating here. For example, in (2004), p. 232, he acknowledges that the Aristotle footnote

Let me go back to our current topic, indexicals. What about Frege's theory of the first person singular, of "I"? There is of course much current and past discussion of the first person point of view – Descartes, Wittgenstein, Castañeda, and many others.

"Now", Frege says, "everyone is presented to himself in a special and primitive way, in which he is presented to no one else" (Frege, 1918–1919, p. 333). Perry and, following him, Kaplan (who in one place calls the passage beginning with this sentence "tortured", while he commends Frege's remarks on "yesterday" and "today" criticized above),⁷⁹ seems to take Frege to be saying that each person must be presented to himself in a special, unique qualitative way, storable in the common language. It is easy to doubt, or indeed to reject, such a view. And, as Perry says, the analogue would be to interpret "now" in such a way that each instant must have its own qualitative character. We have seen that Frege's treatment of "now" involves no such thing. Let me continue the passage where Frege discusses tense, passing over some of the discussion (such as the remarks on "yesterday" and "today"):

In all such cases the mere wording, as it can be preserved in writing, is not the complete expression of the thought; the knowledge of certain conditions accompanying the utterance, which are used as means of expressing the thought, is needed for us to grasp the thought correctly. Pointing the finger, hand gestures, glances may belong here too. The same utterance containing the word "I" in the mouths of different men will express different thoughts of which some may be true, others false. (Frege, 1918–1919, p. 332)

We recall that Frege's theory is that the present tense and "now" involve an autonomous use of a time as a piece of language. In general, Frege thinks that such wording leaves an incomplete sense. Pointing, for example, is part of the expression of the thought. Its sense determines the referent as the object pointed to.

If one looks at the last sentence about "I" in isolation it might appear to suggest that first person sentences express complete thoughts, with different interpretations

implies that what may be a near logical truth in one speaker's mouth will be a factual assertion in that of another. On p. 218, first paragraph, perhaps Burge might be read as after all agreeing that according to Frege different speakers speak different idiolects in connection with names. These and other passages make me wonder sometimes whether on the points in question he really disputes my interpretation or rather disputes my claim that Frege's view, so interpreted, is implausible. But then the emphasis on indexicals and the dispute over the nature of *Sinn* would have little relevance.

79 Kaplan (1989), p. 501. Probably Kaplan is thinking of "yesterday" and "today" as directly referential demonstratives, picking out the same date in two different ways, and yielding the same "content", in Kaplan's terminology (see also my own distinction between fixing a reference and giving a meaning). However, I am discussing the passage from Frege's point of view, not alternative later points of view. It is possible that some of the remarks I have made against the view in Frege could be maintained against the later points of view, but we need not discuss the issue here.

Kaplan's emphatic rejection, under the influence of Perry, of the passage beginning with what I have quoted, seems to me simply to be wrong. (In fairness to Kaplan, I should add that in later communications with me about this issue, he could see my point and described his earlier writing as influenced by "irrational exuberance". See also Kaplan's later discussion of the passage from Frege on pp. 533–535, which is more nuanced than the earlier characterization, though, in my opinion, still not free of serious objections.)

in the mouths of different people. But if the analogy with tense is to be strict, just as the time used autonomously completes the expression of the thought, so the subject, also taken as an autonomous designator of himself, completes the expression of the first person thought. Thus, by analogy to what has been said before, a first person sentence (with the word “I”) can be represented as an ordered pair of the wording and the subject. The subject (not a name of the subject, but the subject him- or herself) is part of the sentence. The wording is an incomplete predicate, standing for a concept applying to people. “I” must denote a function, mapping each person to herself (himself), just as “now” functions for times. And the sense of the corresponding complete thought is one given by autonomous designation, just as in the tensed case. Only here it is the subject who is an autonomous designator.⁸⁰

It should be clear what the role in this is for the remark that “everyone is presented to himself in a special and primitive way, in which he is presented to no one else”. In this, as in other cases of autonomous designation, the use requires that the speaker or thinker be acquainted with the object. Just as the speaker is acquainted with the present time, so following the familiar Cartesian idea, each speaker or thinker is acquainted with him- or herself. The role of this acquaintance is strictly analogous to its role in the temporal case. And notice that here Frege *does not* think that the very same thought can be expressed by anyone else. The cases are analogous, and so should the corresponding doctrines be analogous.^{81,82}

Before discussing this further, let me make some remarks on Perry’s discussion, which influenced Kaplan. Perry (more or less followed by Kaplan) argues that “what is needed is a primitive aspect of me, which is not simply one that only I am aware of myself as having, but that I alone have” (Perry, 1977, p. 490).⁸³ If we did assume that “I” must be defined by a definite description in the common language,

80 Since most first person statements will be tensed, they should really be triples, in the obvious way, of verbal wording, speakers, and times. If they contain demonstratives (with pointing, gestures, etc.) the representation is even more complicated. In a portion of the passage that I have not quoted Frege also mentions “here” and “there”.

I should add that the important point about first person statements just stated in my text is not in the original transcript of my lecture. It is new to the present version.

81 Many contemporaries who think in terms of person-stages might think that there is really only one acquaintance here, with “I-now”. There would not be an analogy, but perhaps a single case. But there is little reason to ascribe this doctrine to Frege.

Of course Descartes would have granted that one can doubt whether one existed in the past or will exist in the future. But this is not the same thing as saying that the enduring self is simply a union of temporal stages.

I should add that one need not ascribe to Frege a doctrine that the object of acquaintance is some special evanescent entity, a “Cartesian ego”. What Frege says is that everyone is acquainted with himself in a special way, not that the entity with which one is acquainted in this way is different from the ordinary person.

82 I am indebted here to conversations with Romina Padró.

83 He also argues (p. 491) that analogous considerations would place the same requirement on “now”, making each time separately specifiable in a unique way associated with that word.

Perry's conclusion would indeed follow. But it is not in Frege's text at all, nor will it turn out to be needed. Certainly this plays little part in the philosophical tradition about the first person to which Perry himself alludes.⁸⁴

Second, Perry writes at the very beginning of his paper that "nothing could be more out of the spirit of Frege's account of sense and thought than an incommunicable, private thought" (Perry, 1977, p. 474). He thinks that Frege was driven to a doctrine of private, incommunicable thoughts by the pressures of his linguistic theory. Peter Geach goes further:

... certain ideas he [Frege] plays with in the essay [Der Gedanke] – private sensations with incommunicable qualities, a Cartesian I given in an incommunicable way – are really bogus ideas . . . For Frege affirms (1) that any thought is by its nature communicable, (2) that thoughts about private sensations and sense-qualities, and about the Cartesian *I*, are by their nature incommunicable. It is an immediate consequence that there can be no such thoughts. Frege never drew this conclusion, of course . . . But . . . Wittgenstein was to draw it. (Geach, preface to Frege, 1977, p. viii)

Would that the notoriously difficult and controversial "private language argument" of the later Wittgenstein were so easy! Frege would really have to be censured for his failure to see the obvious contradiction in his own remarks. In fact, although Frege distinguishes between thoughts, abstract entities, and ideas, events in particular minds, so that different people could have the same thought, and thoughts could be (and usually were) communicable, this in no way precludes the existence of thoughts that for special reasons might be intelligible to only one person.⁸⁵

The fact is that Frege always held that certain thoughts were incommunicable. See his example already in the *Grundlagen der Arithmetik* about two people whose inner perceptual spaces were of three-dimensional projective spaces, but one means by "point" what the other means by "plane", and vice versa. He concludes that the two persons could not detect the difference: "What is purely intuitable is not communicable" (Frege, 1884, p. 35).⁸⁶ A simpler geometric example would be that of two people whose inner spaces were three-dimensional Euclidean mirror images of each other. On the next page Frege says that "the word 'white' ordinarily makes us think of a certain sensation, which is, of course, entirely subjective; but even in ordinary every day speech it often bears, I think, an objective sense. When we call snow white, we mean to refer to an objective quality . . ." (ibid., p. 36). It is easy to conclude that the subjective usage is incommunicable. This, in fact, is Frege's view in "Der Gedanke" itself:

84 Little part, but perhaps it goes too far to say "no part". Perhaps some have argued that "I" denotes "the metaphysical subject", or even that these two phrases have the same sense. But if anyone really held this, his conclusion was surely some sort of metaphysical solipsism.

85 Gareth Evans elaborates on this point (1981, p. 313). I find myself in complete agreement with him here.

86 My thanks to Eva Picardi for calling my attention to this passage. The point is that in three-dimensional projective geometry any statement about "points" and "planes" retains its truth-value if the terms are interchanged.

My companion and I are convinced that we both see the same field; but each of us has a particular sense impression of green . . . For when the word “red” is meant not to state a property of things but to characterize sense impressions belonging to my consciousness, it is only applicable within the realm of my consciousness. For it is impossible to compare my sense impression with someone else’s. (Frege, 1918–1919, p. 334)⁸⁷

Here the view is adopted, not because of any semantic pressures, but simply because this is the way Frege himself sees things. Presumably any one of us can entertain thoughts about our color impressions.

These issues having been cleared away, what is the role of the special first person use of “I”? Simply as before, in the cases of direct quotation, indirect quotation, the present tense, and so on, a competent user of the language must be acquainted with the appropriate sense.⁸⁸ One need not be a rigid follower of Descartes to see that indeed each of us is acquainted with her/himself in a special first person way. There is nothing mysterious about this. I have taken longer about the matter than necessary, simply because I have had to deal with statements made by other writers.

Frege writes:

So, when Dr Lauben [the character who was mentioned before] has the thought that he was wounded, he will probably be basing it on this primitive way in which he is presented to himself. And only Dr Lauben himself can grasp thoughts specified in this way. (ibid., p. 333)

Here, Dr (Gustav) Lauben has said to himself “I was wounded”, or he can just be thinking this. In either case, he is using an acquaintance-sense, given by the first person view point.

However, Frege goes on to say that:

. . . he [Dr Lauben] may want to communicate with others. He cannot communicate a thought he alone can grasp. Therefore, if he now says “I was wounded”, he must use “I” in a sense which can be grasped by others, perhaps in the sense of “he who is speaking to you at this moment” . . . (ibid., p. 333)

87 The switch from “green” to “red” becomes clear when the omitted material, also involving color blindness, is read.

88 Here I will take the opportunity to say something about how Church’s system, criticized above for its unexplained hierarchies (say of material conditionals), each of which denotes the sense of the previous one, should be recast. We saw that Church has no doctrine of “privileged” senses. But on our interpretation of Frege, there are such privileged senses. Every term in the infinite sequence of conditionals, etc., ought to be given by our introspective awareness of the way the previous one determines its referent (the “backward road”).

Each level might be called the sense given by acquaintance of the previous one, and indicated by an explicit operator. One might even suppose that this is what Church really had in mind, even though it is not part of his official doctrine. See also footnote 16 above, where I cite Church’s remarks that his translation argument is only a way of bringing out the arbitrariness of the connection of a given piece of language and what it means. The point must be that the “that clause” designates the proposition meant more directly than any metalinguistic paraphrase. (Church also uses the argument to show that propositions are not dispensable in favor of sentences.) And see also the accompanying example in my text. C. Anthony Anderson tells me he has a transcript of a lecture where Church does say that terms have preferred senses. So there seems to be some ambiguity and tension in Church on this point.

It is easy to see why this remark might encourage others to think that Frege has gone wrong in his analysis of "I". Is it really plausible that everyone uses "I" in two senses, one when he is speaking to himself, and one when he is speaking to others? The tentative proposal Frege makes is beset by difficulties. Perhaps more than one person is speaking to the other at the moment, so the description is not uniquely specified. Or perhaps Dr Lauben suffers from a temporary attack of hoarseness or muteness, so that the description in question is vacuous, or if at the same time exactly one other person is speaking to Dr Lauben's intended hearer, the description denotes someone else. But even if Dr Lauben cannot speak, there was an intended referent of his use of "I", though he failed to produce the sound, and this must be Dr Lauben himself. David Kaplan, both in "Demonstratives" (1989) and in "What is Meaning? Explorations in the Theory of *Meaning as Use*" (unpublished), wittily ridicules various analyses of "I" of this kind. If we ask for a volunteer to do something, and someone in the crowd raises her hand and says, "I volunteer", just imagine it replaced by "The person who is speaking volunteers". Maybe the point would still come across, but it would be oddly put.

Frege's implausible moves are quite unnecessary. A speaker who uses the word "I" is part of the expression of the thought, autonymously designating himself. The sense of this designation is given by acquaintance. Everyone knows what this type of acquaintance is by analogy with his own case. So the hearer who hears Dr Lauben knows what type of thought is being expressed, even though, strictly speaking, he cannot have the thought. It is like the case of the reader of the old newspaper.⁸⁹

In indirect discourse we use the type of expression emphasized by Castañeda and others. Dr Lauben said (thought) that he himself was wounded. Here what follows the that clause is plainly not a literal repetition of Dr Lauben's thought, but rather our own description of it.⁹⁰

Let me restate our main points. First, there is in a sense a "backward road" from references to senses. For everyone who specifies a reference must do so in some way. Then, by her awareness of how she has specified the reference, she is aware of the way the reference is fixed, and hence is aware of the sense. Frege's most explicit use of this known to me is in the beginning of the *Grundgesetze* (1893), where, after concluding that every term has a unique referent, and every sentence a truth-value, he concludes that every sentence of the system expresses a thought given by the

89 The late Wittgenstein might object to the suggestion that hearers can grasp the subjective first person use of "I" by analogy to their own case, but there is no reason to suppose that Frege would have so objected.

90 I have made several corrections of Frege's formulations, trying to make his view consistent according to his own lights. Naturally it is something in favor of an exegesis that it makes the author studied correct in terms of his own system, but people do make mistakes even in terms of their own view. I have not been forced to go nearly as far as Perry in claiming that various pressures have led Frege to abandon some of his own fundamental beliefs.

way the truth-conditions are specified.⁹¹ Linguistic rules, and the Fregean thoughts involved, can normally be given by general directions exemplified by (α) and (β). [(β) makes sense as a recursive specification of indirect senses because of the backward road, and the requirements about being revelatory are satisfied.]

But to apply these rules, and indeed to understand them, a user of the language or a thinker must have something very like Russellian acquaintance with directly or indirectly quoted material, senses, times, subjects, and inner mental states. Despite their differences over the analysis of descriptions, Frege and Russell are basically more similar than is usually thought.⁹² The doctrine of acquaintance is much less explicit in Frege than in Russell, but I have long believed that it is needed for a proper understanding of him. Let me hope that I am right.

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91 Frege (1893), sections 31 and 32, pp. 87–90.

92 One might think that my doctrine of acquaintance implies that phrases with the same sense will automatically have the same indirect sense. In a later seminar on Frege, I came to think that this may not necessarily follow, but a discussion would be beyond the scope of the present paper.

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