

## Objects of Thought

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### **Abstract:**

In his book *The Things We Mean*, Stephen Schiffer advances a subtle defence of what he calls the ‘face-value’ analysis of attributions of belief and reports of speech. Under this analysis, ‘Harold believes that there is life on Venus’ expresses a relation between Harold and a certain abstract object, the proposition that there is life on Venus. The present essay first proposes an improvement to Schiffer’s ‘pleonastic’ theory of propositions. It then challenges the face-value analysis. There will be such things as propositions only if they possess conditions of identity and distinctness. By analyzing Frege’s theory of propositions (*Gedanken*), I argue that such conditions may be found for the special case of beliefs and sayings advanced as premises and conclusions of deductive arguments. These conditions, however, are not applicable to most ordinary beliefs and sayings. Ordinary attributions and reports, then, do not place thinkers and speakers in relations to propositions. A bonus is exposure of the fallacy in the Putnam-Taschek objection to Frege’s theory of sense and reference.

### **Keywords:**

Stephen Schiffer, Gottlob Frege, propositions, Fregean thoughts, sense and reference, pleonastic entities

## Chapter 3

### Objects of Thought

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So mußte es kommen, ich hab' es gewollt;  
Ich hasse ein Leben behaglich entrollt;  
Und schlängen die Wellen den ächzenden Kahn,  
Ich preise doch immer die eigene Bahn.

from Johann Mayrhofer (1787-1836), *Der Schiffer*

#### 1.

The particular road that Stephen Schiffer has taken has led him to think as hard as any living philosopher about the content of our thoughts and utterances, and about the sentences we use to ascribe that content. Much of his thinking in this area elaborates competing accounts of the intuitive validity of such simple inferences as “Harold believes that there is life on Venus, and so does Fiona; so, there is something that they both believe—to wit, that there is life on Venus” (see Schiffer 2003: 12). In *Remnants of Meaning* (1987), Schiffer took a Priorean line on inferences of this kind. Our sample inference is formally valid, being an instance of existential generalization, but “the existential quantification in the conclusion is a kind of *non-objectual* quantification” (2003: 90), and the ‘that’-clause which the quantifier replaces is not a singular term. I call

this approach ‘Priorean’ for it was first systematically expounded in Arthur Prior’s posthumously published monograph, *Objects of Thought*.<sup>1</sup> According to Prior,

phrases such as ‘fears that’ and ‘thinks that’ are predicates at the left and connectives at the right, in the quite precise sense that if the right-hand gap is filled by an actual sentence what remains with a left-hand gap is simply a one-place predicate (e.g. ‘—fears that there will be a nuclear war’), while if the left-hand gap is filled with an actual name what remains with a right-hand gap is precisely a one-place connective (to employ a reasonable logical barbarism), e.g. ‘X believes that—’. This expression is of the same logical type as ‘It is not the case that—’. (Prior 1971: 19)

The parsing ‘Harold / believes that / there is life on Venus’ promises to liberate us from “the whole idea that <‘X believes that P’> has to express a relation between X and anything whatever” (Prior 1971: 16) and hence from the idea that the quantifier in ‘There is something Harold and Fiona both believe’ ranges over objects (propositions) that can stand as *relata* in ascriptions of content. On Prior’s view, the sort of quantification expressed here could more perspicuously be rendered using the non-nominal quantificational forms ‘however things may be’ and ‘there is a way things may be’ and the corresponding variables or pro-sentences ‘things are so’ or ‘things are that way.’<sup>2</sup> Thus the conclusion of our inference might be expressed less misleadingly as ‘There is a way things may be—to wit, as they are when there is life on Venus—such that both Harold and Fiona believe that things are that way.’

In *The Things We Mean* (2003), his most recent attempt to grapple with these issues, Schiffer abandons the Priorean line for a more familiar view according to which expressions in the form ‘that *P*’ are singular terms, and quantification into the position they occupy is objectual quantification. In the passage which explains and justifies his change of mind, Schiffer focuses on the parallel problem for properties, and leaves the reader to reconstruct the corresponding explanation for the case of propositions. But a sympathetic reconstruction would, I think, run as follows:

Imagine a dispute between my old [Priorean] self and a realist about propositions. She and I agree that the proposition that Fido is a dog is true, and that there are many propositions that she and I both believe. We disagree on just one thing: she affirms while I deny that propositions exist. What came to unsettle me were two related things. The first was that I couldn’t see either how that dispute could have a determinate resolution or what the cash-value of the dispute really amounted to. Relative to all the agreement, what could the further question about existence amount to such that it could be answered? I didn’t see that this could have a happy answer, and it even seemed to me that the only concept of existence I had any grip on made it pretty difficult to deny the existence of propositions given all I wanted to say about them. The second thing to move me was the realization that whatever established the truth of statements ostensibly about propositions, and whatever allowed us to know the truths those statements expressed, would establish the existence and nature of propositions, and would explain our ability to have knowledge of those things, if those statements really were about the abstract

entities they're ostensibly about. Putting all this together yields the pleonastic conception of propositions. (Schiffer 2003: 91, with alterations)

This 'pleonastic' conception is the theory of propositions which Schiffer now recommends.

Unlike Schiffer, I do discern a substantial issue which separates the parties here: namely, whether our way of ascribing beliefs is disciplined enough to sustain judgements of identity and distinctness about their contents. Objectual quantification is quantification over objects, and the mark of objects is that it makes sense to ask whether object *a* is identical with object *b*. So we shall be able to quantify objectually over propositions only if it makes sense to ask whether the proposition that *P* is identical with the proposition that *Q*. Such questions will make sense only if we have some idea how to answer them in favourable cases. With non-objectual quantification, by contrast, the corresponding question makes no sense, as our rendering nicely brings out: the result of concatenating two variables or pro-sentences with the sign of identity is not even well formed (\*'Things are so is identical with things are that way').<sup>3</sup>

In this essay, I want to explore this issue by elaborating Schiffer's account (§§2-3) and then arguing for three theses. First, that Schiffer's theory of pleonastic propositions does not by itself give us the resources to make sense of the question of propositional identity (§4). Second, that making sense of that question involves constructing at least a rudimentary philosophical theory: the resources to ground judgements of identity and distinctness among propositions are not latent or implicit in our ordinary practices of ascribing beliefs, but will come (if they come at all) from an attempt to regiment those

practices for certain theoretical purposes (§4). I then examine in some detail the regimentation that Frege proposed for his, specifically logical, purposes (§§5-6). If it is to sustain the claim that propositions (what Frege called *Gedanken*) are objects, a regimentation must ensure that identity between propositions is reflexive, symmetric, transitive, and a congruence relation. My third thesis is that Frege's theory achieves this in certain special circumstances which were of interest to him (§7), but that his account does not extend to provide for propositional identity more generally (§8). I conclude that it is an open question whether the sort of theory Schiffer now espouses is as widely applicable as he wants it to be.

## 2.

Schiffer recommends his pleonastic conception of propositions as the best way—perhaps the only way—of sustaining “a theory of belief reports which appears at face value to be correct; it's the default theory that must be defeated if it's not to be accepted” (11). (Henceforward, unadorned page references are to Schiffer 2003.) According to this ‘face-value theory,’ a simple belief report in the form ‘A believes that *P*’ is “true just in case the referent of the ‘A’ term stands in the belief relation to the proposition to which the ‘that *P*’ term refers” (12). Thus a simple report “consists of a two-place transitive verb flanked by slots for two singular argument terms” (12). This way of parsing simple reports is precisely the one Prior had rejected.

Prior notwithstanding, I think that Schiffer is right to accord to this parsing ‘default’ status. There are certainly some sentences in which ‘believes’ functions as a transitive verb—for example, ‘John believes the rumour about Ted,’ ‘the jury disbelieved

the witness's testimony'—so we shall get a simpler account of the verb's valency if we can also classify its occurrences in simple reports as transitive. By itself, this consideration is far from being decisive in favour of the face-value theory. The theory takes the second *relatum* in a simple report to be a proposition: an abstract object with no spatial location (14) nor, presumably, any temporal duration. By contrast, the rumour about Ted might be rife in Oxford but yet to reach London, and the witness's testimony might have taken up all of Tuesday afternoon. There are, however, a few sentences in which 'believes' is not only incontestably transitive, but appears to relate to a proposition. Thus in 'Fred believes Einstein's Law,' 'believes' is grammatically transitive, and 'Einstein's Law' appears to be a singular term standing for a certain proposition. Moreover, the inference 'Fred believes Einstein's Law; Einstein's Law is that  $E = mc^2$ ; so Fred believes that  $E = mc^2$ ' seems to be an instance of the substitution of identicals.

All the same, it is worth noting that there are other forms of belief report than 'A believes that  $P$ ,' forms which do not even appear to be relational. One can say with Schiffer 'Harold believes that there is life on Venus.' But one can get the same message across by saying simply 'Harold believes there is life on Venus' or 'There is, Harold believes, life on Venus,' or even 'There is life on Venus, Harold believes.' In the last two cases especially, there is no temptation to parse the sentence as placing Harold in relation to a proposition, or to anything else. Rather, the final or parenthetical 'Harold believes' serves to indicate that the sentence 'There is life on Venus' is not an assertion on the speaker's own account, but is an utterance telling the hearer how (in this respect) Harold believes things to be. The reporter puts himself in Harold's shoes and speaks as Harold would speak, were he to speak his mind (in English) about the question of life on Venus. By themselves, these *coordinate* forms of belief ascriptions (as a linguist would call them)

do not threaten Schiffer's analysis of reports in the form 'A believes that  $P$ .' Different forms of report have to be analysed on their merits, and there is no reason why one analysis should fit all of them. But the coordinate ascriptions are ubiquitous, and just as common in everyday speech as the form on which Schiffer focuses, so we shall in the end want an account of the relation between 'Harold believes that there is life on Venus' (which purportedly places Harold in relation to a proposition) and 'There is, Harold believes, life on Venus,' which apparently does not. This Schiffer does not provide.

With this lacuna in mind, we may turn to Schiffer's own way of vindicating the face-value theory, which invokes his conception of propositions as pleonastic entities. A pleonastic entity is an entity that falls under a pleonastic concept; and a pleonastic concept is the concept of an  $F$  which implies true something-from-nothing  $F$ -entailment claims (57). As for this last notion,

Where ' $\Rightarrow$ ' expresses metaphysical entailment,  $S \Rightarrow \exists xFx$  is a *something-from-nothing  $F$ -entailment claim* iff (i) its antecedent is metaphysically possible but doesn't *logically* entail either its consequent or any statement of the form ' $\exists x (x=\alpha)$ ', where ' $\alpha$ ' refers to an  $F$ , and (ii) the concept of an  $F$  is such that if there are  $F$ s, then  $S \Rightarrow \exists xFx$ . (16-17)

So far, this is merely definitional: Schiffer's substantial claim is that many philosophically perplexing items are pleonastic entities that arise from appropriate something-from-nothing entailment claims. Thus fictional characters are pleonastic entities because it is a conceptual truth that, if there are fictional characters, then 'Joyce



wrote a novel in which he used the name “Buck Mulligan” in the pretending way characteristic of fiction’ entails ‘Joyce created the fictional character Buck Mulligan’ and hence ‘There is at least one fictional character’ (51). Properties are pleonastic entities because it is a conceptual truth that, if there are properties, then ‘Lassie is a dog’ entails ‘Lassie has the property of being a dog’ and hence ‘There is at least one property’ (61). And propositions are pleonastic entities because it is a conceptual truth that, if there are propositions, then ‘Lassie is a dog’ entails ‘That Lassie is a dog is true’ (sc., ‘The proposition that Lassie is a dog is true’) and hence ‘There is at least one proposition’ (71).

I think that Schiffer makes a slip in taking the something-from-nothing entailment associated with propositions to be the trivial entailment from ‘ $P$ ’ to ‘the proposition that  $P$  is true.’<sup>4</sup> It seems fair to say that, for Schiffer, propositions are *essentially* contents of beliefs. Propositions may also be the contents of utterances (see for example 87-88), but they come into Schiffer’s philosophy *as* the contents of beliefs. Given that propositions are essentially contents of beliefs, one would expect someone who proposes a pleonastic treatment of them to select, as the associated something-from-nothing entailment, an inference that brings out their role as the contents of beliefs. The entailment that Schiffer chooses, however, signally fails to do this. An arbitrary sentence ‘ $P$ ’ will entail the corresponding sentence ‘The proposition that  $P$  is true’ if the words ‘the proposition that  $P$ ’ are taken to refer to the truth-value of ‘ $P$ ’, and if the predicate ‘is true’ is understood to apply to the truth-value True. (More exactly, there will be an entailment if the words ‘the proposition that  $P$ ’ are understood to refer, with respect to a possible world  $w$ , to the truth-value True if the sentence ‘ $P$ ’ is true with respect to  $w$ , and to the truth-value False otherwise.) No one, however, would imagine that truth-values could serve as contents of

belief. My beliefs that grass is green, and that Bismarck resigned as Chancellor of Germany in March 1890, share a truth-value, but they have utterly distinct contents.

This is, I think, merely a slip on Schiffer's part, which may be rectified by choosing a different something-from-nothing entailment. And we may make a choice which provides the sought-after account of the relationship between transitive belief reports, such as 'Harold believes (the proposition) that there is life on Venus,' and the corresponding coordinate form 'There is life on Venus, Harold believes.' As we have noted, the latter ascription does not even purport to refer to a proposition: it simply says (in one respect) how Harold believes things to be. I suggest, then, that we take the inference from which pleonastic propositions are generated to be that from '*P*, *A* believes' to '*A* believes the proposition that *P*.' This inference is a something-from-nothing entailment in Schiffer's sense. Because it does not even purport to refer to a proposition, an ascription in the form '*P*, *A* believes' carries no commitment to propositions. However, assuming that propositions exist, if the non-committal ascription '*P*, *A* believes' is true, then so must be the corresponding relational report '*A* believes the proposition that *P*.' But this entailment forces propositions to have a far finer grain than Schiffer's original choice, and thereby makes them more plausible candidates to be contents of beliefs. I hope Schiffer may accept this proposal as a friendly amendment to his theory.

### **3.**

Although he uses his theory of pleonastic propositions to sustain the face-value analysis of simple reports, Schiffer is clear that such reports differ in some fundamental ways from other sorts of relational statement. Perhaps the most important difference is this. In order

to assess whether an utterance of 'Henri admires Picasso' is true, we typically draw on our knowledge of whom the speaker is referring to by the names 'Henri' and 'Picasso,' as well as our knowledge of what it takes for a pair of things to satisfy the relational predicate 'admires' (73). Our identifying knowledge of the names' referents is in general prior to, and partly explains, our knowledge of the utterance's truth conditions. With reports, things are the other way around. "The referent of the belief report's 'that'-clause," Schiffer writes, "isn't a factor in determining the contextually determined criteria of evaluation for the belief report but is itself determined by those criteria" (75). So:

If we were evaluating an utterance of 'Ralph admires her' we would first determine the referent of 'her' and that would in turn complete the determination of the criteria for evaluating the statement. In evaluating the statement made in the utterance of ['Ralph believes that George Eliot was a woman'], however, we first implicitly fix the criteria for evaluating the statement, and that is what fixes the referent of the 'that'-clause. (75)

I agree that any acceptable account must respect this difference between belief reports and (for example) attributions of admiration. It is utterly implausible to suppose that assessing a report involves making a prior identification of the proposition to which the reporter is referring.

What, though, remains of the face-value theory once this point is granted? According to the theory, a simple report is a relational statement. But what is the 'cash value' of this claim once it has been admitted that reports are assessed in a quite different way from other relational statements? I raised this question when responding to an earlier

exposition of Schiffer's account, and he was kind enough to reply in *The Things We Mean* (79, n.27). Perplexity on this score will be allayed, he now suggests, once we recognize that, for many other statements involving reference to abstract objects, their assessment as true or false precedes the identification of the relevant object. The example he cites is the Fregean treatment of statements of number (*Zahlangaben*). In order to establish that there are four gospels, one does not need to identify an object as the cardinal number four: it suffices to show that there are gospels *a*, *b*, *c*, and *d* which are pairwise distinct and such that every gospel is one of them. All the same, the inference from 'There are *n* As' (where '*n*' is a numerical adjective and '*A*' is a count noun) to 'the number of As = the number *n*' (where 'the number *n*' is a singular term) is a something-from-nothing entailment in Schiffer's sense: given that there are cardinal numbers, 'there are four gospels' entails 'the number of gospels = the number four.' Against Dummett, Schiffer insists that the possibility of coming to know that the number of gospels is identical with the number four simply by counting the gospels, and without identifying any object as the number four, does not gainsay the Fregean thesis that 'the number of gospels = the number four' is a statement of identity. "Dummett is right that the criteria of evaluation for arithmetical sentences don't invoke numerical objects; his mistake is to think this entails that numerals aren't genuine singular terms whose referents are numbers" (79).

Although the matter is controversial and delicate, I think that Schiffer is right against Dummett here.<sup>5</sup> Accordingly, I find the analogy with statements of number helpful in understanding what the cash value of the claim that belief reports are relational is supposed to be. Closer examination of the analogy, though, reveals a large hole in Schiffer's defence of the face-value theory.

For what sustains Frege's thesis that 'the number of gospels = the number four' is a statement of identity? On Frege's theory, the (cardinal) number of *As* (the number 'belonging' to the *As*, as he puts it) will be identical with the number of *Bs* if and only if there are just as many *As* as there are *Bs*. There are just as many gospels as there are symphonies by Brahms; so the number of gospels is identical with the number of Brahms's symphonies. There are fewer gospels than there are platonic solids; so the number of gospels is distinct from (less than) the number of platonic solids. The principle on which Frege relies here is universally accepted, but it qualifies as a criterion of identity only because the relation that obtains when there are just as many *As* as there are *Bs* -- the relation of 'equinumerosity' between the relevant Fregean concepts -- is an equivalence relation. Only because this is so does the criterion cohere with the laws of identity, which require *it* to be an equivalence relation. Indeed, something stronger is required to sustain the Fregean claim that numbers are objects: equinumerosity must be a congruence relation for a whole range of mathematically interesting properties of concepts. Consider for example the second-level property that the *As* have (collectively) if they cannot be sorted without remainder into equal-sized sub-groups unless those sub-groups are singletons. Then, if there are just as many *As* as there are *Bs*, the *Bs* will (collectively) have the same property. Given Frege's criterion of numerical identity, the *As* will have this second-level property if and only if the number of *As* possesses the first-level property that we call 'being prime.' So by learning the techniques for calculating whether a given natural number is prime, we can discover whether any *As* to which that number belongs has the specified second-level property. Frege held that it was applicability alone which raised pure mathematics from a game to a science. By treating cardinal numbers as objects—that is, by taking at face value the grammatical similarities between numerals and ordinary

singular terms—we enable the construction of a simple theory in which properties of numbers are expressed by first-level predicates, but which is readily applicable to determine mathematically interesting higher level properties of ordinary empirical concepts. The resulting combination of theoretical simplicity and wide applicability is the best argument for treating numbers as objects.

#### 4.

What, though, is supposed to sustain the corresponding thesis about the contents of belief? Is there an equivalence relation among beliefs which ensures that the laws of identity will not be violated if we treat contents as objects? Our ordinary practices of ascribing beliefs do not immediately yield up such a relation. Let us call a non-defective<sup>6</sup> utterance of a declarative sentence a *saying*, and let us say that a saying  $v$  *R*-relates to a saying  $u$  ('*R*' for 'reports') if and only if there is a belief which  $u$  would be properly understood as expressing, and which  $v$  could truly report. A saying truly reports a belief if a simple report in which the saying follows the complementizing 'that' would be a true report of the belief in question. Thus a saying,  $v$ , that is my utterance of the English sentence 'The earth moves' *R*-relates to a saying,  $u$ , that is Galileo's utterance of the Italian sentence 'Si muove la terra.' There is a belief—Galileo's belief that the earth moves—which  $u$  is properly understood as expressing, and which  $v$  could truly report; for I could truly report this belief of Galileo's by saying 'Galileo believes that the earth moves.'

One might hope that this relation *R* would be an equivalence relation; abstraction on it would then yield up contents for beliefs (or at least, for those beliefs expressible by

sayings) somewhat as abstraction on equinumerosity yields up cardinal numbers for concepts.<sup>7</sup> But  $R$  is not an equivalence relation. Or at least, it is not an equivalence relation if we share Schiffer's Fregean intuitions about the truth of belief reports.<sup>8</sup> For suppose that, unknown to the Baron, Octavian is in fact identical with Mariandel. And then consider the following three sayings:  $u$ , which is an utterance by the Baron of 'Octavian lives in Vienna';  $v$ , which is an utterance by the Baron of 'Mariandel lives in Vienna'; and  $w$ , which is an utterance by Octavian (*alias* Mariandel) of 'I live in Vienna.' It is clear that  $w$  reports  $u$ : Octavian could truly report the belief that  $u$  would be taken to express by saying 'The Baron believes that I live in Vienna.' It is only marginally less clear that  $w$  reports  $v$ : since Octavian *is* Mariandel, he can also truly report the belief that  $v$  would be taken to express by saying 'The Baron believes that I live in Vienna.' On a Fregean view of the matter, however,  $v$  does not report  $u$ : the belief that the Baron expresses by saying 'Octavian lives in Vienna' is not his belief that Mariandel lives in Vienna, for although the names 'Octavian' and 'Mariandel' share a reference, the Baron associates them with distinct modes of presentation. These relations between  $u$ ,  $v$ , and  $w$ , however, preclude  $R$ 's being an equivalence relation. If it were an equivalence, then by symmetry ' $w$  reports  $v$ ' would entail ' $v$  reports  $w$ ,' which could combine with ' $w$  reports  $u$ ' to yield ' $v$  reports  $u$ ' by transitivity. As we have seen, though, a theorist with Schiffer's Fregean predilections is committed to denying that  $v$  reports  $u$ . So such a theorist is committed to denying that  $R$  is an equivalence relation.

Since I share those predilections, I take seriously the problem that this result poses for the hypothesis that contents of beliefs are abstract objects. By itself, the result does not preclude identifying a kind of objects that can serve as the contents of beliefs: given a relation that is not an equivalence relation, there are many ways of defining from it one

that is. The result shows, though, that in order to find such a relation we shall have to engage in more philosophical theorizing than Schiffer's discussion might lead one to expect. He rightly stresses that on any sane version of the face-value theory, the identification of propositions as the objects referred to by 'that'-clauses will depend on the criteria for assessing simple belief reports as true or false. But what the case brings out is that our ordinary criteria for making those assessments will need to be refined and tightened if they are to yield an equivalence relation that can serve as the basis for an abstraction. I have nothing against the project of refining and tightening our ordinary criteria, but there is no reason to suppose that there is a uniquely favoured way of doing this: different equivalence relations will correspond to different ways of determining the notion of a belief's content, ways that serve different purposes.<sup>9</sup> Furthermore, if the enterprise of defining a suitable equivalence relation is to be more than an intellectual parlour game, we must start with some indication of the purpose that a particular determination of content is intended to serve, and then seek an equivalence relation that ensures the resulting class of propositions really does serve it.

## 5.

Frege's own writings provide a striking illustration of the interest and difficulty of this enterprise.

Many Fregean texts indicate a necessary condition for two sayings to share a content (to 'express one thought'). In 'Über Sinn und Bedeutung,' for example, Frege grounds his claim that the thought in the saying 'The Morning Star is a body illuminated by the Sun' differs from that in 'The Evening Star is a body illuminated by the Sun' by



saying simply “anybody who did not know that the Evening Star is the Morning Star might hold the one thought to be true, the other false” (Frege 1892: 32). Presumably, somebody holds the thought ‘in’ a saying to be true when he both grasps the thought in the saying and takes that saying to be true. So we may recast the condition here so that truth applies to sayings rather than thoughts:

If somebody can ‘grasp’ two sayings even though, for all he knows, one is true and the other false, then the sayings do not express a single thought.

Contraposing, we reach the following necessary condition for two sayings to express one thought:

(N) If two sayings express one thought, then nobody can ‘grasp’ both sayings without being in a position to know that they share a truth-value.

It is easy to see why a logician should wish to employ a notion of content that respects condition (N). Logical deduction is important primarily because it is a way of gaining knowledge: given knowledge of an argument’s premises, a thinker who reasons in accordance with logical rules can come to attain knowledge of its conclusion.

Philosophical discussions of how such gain in knowledge is possible typically invoke the metaphor of a thinker taking inferential ‘steps’ from one thought to the next. If we can find a criterion for the identity of thoughts that respects (N), we may hope to cash out this metaphor.

Before we can cash out that metaphor, though, we need a sufficient condition for sameness of thought. Can the condition in (N) also serve as such? I think not. We want a

sufficient condition that can serve as a criterion for sameness of content: that is, we want something that can (at least in favourable cases) be applied to yield knowledge that two sayings express one thought. The condition in (N) cannot so serve: knowledge that two sayings express one thought grounds knowledge that no one can grasp both sayings without knowing that they share a truth-value, not *vice versa*. It is not possible to run through all the possible circumstances in which people who grasp both sayings might find themselves, and check that in each case they will know that the sayings share a truth-value. Treating the condition in (N) as a criterion for the identity of thoughts would be as absurd as taking Leibniz's law to be the criterion for the identity of planets. Since the planet Hesperus *is* the planet Phosphorus, Hesperus and Phosphorus will share all their properties. But one cannot come to know the identity by running through all the properties of Hesperus, and Phosphorus, and noting at the end that the properties are the same. Rather, one comes to know that Hesperus is identical with Phosphorus by applying the specific, substantial criterion for planetary identity; one may then infer from what one has come to know that Hesperus and Phosphorus share all their properties.

Frege himself never contemplated using the condition in (N) as a criterion for sameness of thought expressed. His clearest attempt to state such a criterion is found in his letter to Husserl of 9 December 1906. Earlier in their correspondence, Husserl had appealed to a notion of 'congruence' between sentences, which prompted Frege to complain that without a definition the congruence of two sentences could be debated without resolution "for a hundred years." Frege now claims

that the only possible means of deciding whether sentence *A* expresses the same thought as sentence *B* is the following, in which I assume that neither of the two

sentences contains a logically evident component in its sense. If both the assumption that the content of *A* is false and that of *B* is true, and the assumption that the content of *A* is true and that of *B* false, lead to a logical contradiction, and if this can be established without needing to know whether the content of *A* or *B* is true or false, and without needing to appeal to anything other than purely logical laws, then nothing can belong to the content of *A*, as far as it is capable of being judged true or false, which does not also belong to the content of *B*. For there would be no reason for any such surplus in the content of  $\langle A \rangle$  and according to the presupposition above, such a surplus would not be logically evident either. In the same way, given our assumption, nothing can belong to the content of *B*, as far as it is capable of being judged true or false, except what also belongs to the content of *A*. Thus what is capable of being judged true or false in the contents of *A* and *B* is identical, and this alone is of concern to logic, and this is what I call the thought expressed by both *A* and *B*. (Frege 1976: 105-6 = Frege 1980: 70-1)

In other words, logically interdeducible sentences—or, better, sayings—that contain no logically evident components will express a single thought.

Clear as it may be, the criterion offered to Husserl faces a serious problem as a sufficient condition for the identity of Fregean thoughts: it is inconsistent with the necessary condition (*N*). For let us consider a saying, *u*, of the words ‘Nothing is both a man and immortal’ and a saying, *v*, of the words ‘Everything is either not a man or is mortal.’ Since either one of these sayings may be derived from the other, and since neither contains any logically evident component, they will express the same thought by the criterion proposed to Husserl. Yet somebody could surely ‘grasp’ the sayings without

seeing that they are interderivable, and thus might ‘hold the one thought to be true and the other to be false.’ According to condition (N), however, this entails that they express distinct thoughts, contrary to the result delivered by the criterion.

Earlier in 1906, Frege had formulated a sufficient condition for sameness of thought expressed which, while it belongs to the same family as that given to Husserl, differs precisely in trying to accommodate considerations of cognitive value:

Two sentences *A* and *B* can stand in such a relation that anyone who recognises the content of *A* as true must also recognise the content of *B* as true without further ado (*ohne weiteres*), and conversely that anyone who accepts the content of *B* must immediately (*unmittelbar*) accept that of *A* (*equipollence*). It is assumed here that there is no difficulty in grasping the contents of *A* and *B*. The sentences need not be equivalent in every respect. For example, one may possess what we call a poetic air, while the other may lack this . . . One has to separate off from the content of a sentence the part that alone can be accepted as true or rejected as false. I call this part the thought expressed in the sentence. It is the same in equipollent sentences of the kind given above. (Frege 1969: 213-4 = Frege 1979: 197-8)

How are we to understand the adverbial phrases “without more ado” and “immediately” as they are used in this passage? The answer is implicit in the *reductio* Frege attempts of the supposition that a sentence’s ‘poetic aura’ belongs to the part of its content that may be evaluated as true or as false. The argument starts from the assumption that of two equipollent sentences, *A* and *B*, one (*A*) may possess a poetic aura that the other lacks, and

that this aura is a feature or part of the sentence's 'content' on some generous understanding of that term. If, though, the hypothesized aura of *A* belonged to what was proclaimed to be true in an assertion of *A*, "then it could not be an immediate consequence of anyone's accepting the content of *B* that he should accept that of *A*" (Frege 1969: 213 = Frege 1979: 197). This is clearly intended to contradict the initial assumption that *A* and *B* are equipollent, but it does so only if its being an immediate consequence of anyone's accepting the content of *B* that he should accept that of *A* is a necessary condition for their equipollence. This determines the requisite gloss on Frege's criterion: two sentences will be equipollent just in case each is an immediate consequence of the other.

Equipollence, when so defined, may appear to offer a solution to our problem about the identification of thoughts. Somebody may accept 'Nothing is both a man and immortal' without *immediately* accepting 'Everything is either not a man or is mortal.' Thus sayings *u* and *v* above are not equipollent, so the passage does not entail the problematical conclusion that they express the same thought. More generally, one might hope to reconcile the criterion with (N) by arguing that, when each of two sayings is an immediate consequence of the other, nobody will be able to hold one to be true and the other to be false. But even if this claim could be defended, a fatal problem looms. The definition of equipollence is supposed to legitimate Frege's talk of *the* thought expressed by a saying; that thought, he tells us, may be identified as that which "is the same in equipollent sentences of the kind given above." But to do this, equipollence must be an equivalence relation: if it is not, then there is no reason to suppose that there is a category of abstract objects precisely one of which will attach to all the members of a class of equipollent sayings. Now equipollence as it has been explained here is certainly

symmetrical; we may hope also to ensure reflexivity by specifying a sense in which each saying is an immediate consequence of itself. But however the notion of immediacy may be precisely determined, equipollence is not transitive. If  $B$  is an immediate consequence of  $A$ , and  $C$  is an immediate consequence of  $B$ ,  $C$  need not be an immediate consequence of  $A$ . For while  $C$  will surely be a consequence of  $A$ , that consequence might be mediated by  $B$ . Equipollence, then, is not an equivalence relation, and cannot provide the basis for Frege's talk of *the* thought (in the singular) that is expressed by a saying.

## 6.

Transitivity fails because “immediately” was glossed in terms of immediate consequence. But the formula “somebody who recognizes the content of  $A$  as true must also recognize the content of  $B$  as true without further ado” suggests a rather different idea. The test for equipollence, it may be suggested, should not be that one can infer  $B$  from  $A$  (and conversely) in a single step, but rather that grasping the contents of utterances of these sentences *already* requires knowing that they share a truth value. This is a different idea, for when grasp of content already requires such knowledge, there will be no room for an inference (even by a single step) from  $A$  to  $B$  or conversely. For the knowledge must be attained before one is in a position to make inferences whose contents could be expressed using the sentences  $A$  or  $B$ .

How might this alternative elucidation of the equipollence relation be spelled out? Let us say that two sayings are *manifestly isomorphic* if anybody who grasps both will recognize that one can be got from the other by substituting one or more simple component expressions for others. Thus the sayings ‘The Morning Star is a body

illuminated by the Sun' and 'The Evening Star is a body illuminated by the Sun' form a manifestly isomorphic pair, as do 'Some Greek is cultured' and 'Some Hellene is brave.' Where the sayings  $u$  and  $v$  are manifestly isomorphic, let us also say that a simple part  $w$  of  $u$  *corresponds* to a simple part  $y$  of  $v$  if these parts occupy the same place in the structure that is common to  $u$  and  $v$ . Thus, among the component utterances of the examples just given, 'the Morning Star' corresponds to 'the Evening Star,' as do 'Greek' to 'Hellene' and 'ξ is cultured' to 'ξ is brave.' Now, at least to a first approximation, 'grasping' a simple utterance may be taken to consist in knowing what its speaker expects a hearer to know about what (in the relevant sentential context) the utterance refers to.<sup>10</sup> Let us say, then, that two simple components of sayings are *equipollent* if anyone who knows what he is expected to know about their references (in the relevant contexts) will know that they coincide in reference. On this definition, the mark of equipollent simple utterances is that knowledge that they coincide in reference is required in order to grasp them.

With these preliminaries in place, let us deem two complete sayings to be *equipollent* if and only if (a) they are manifestly isomorphic and (b) their corresponding simple components are equipollent. Since a saying's truth-value is left undisturbed by a substitution in which a component is replaced by an expression which shares its reference, anyone who grasps two equipollent sayings is in a position simply to *see* that they coincide in truth-value. No inference is needed to establish that coincidence. When so defined, then, equipollence captures the idea of sayings so related that all who grasp them are in a position to know "without further ado" that they coincide in truth-value. The hypothesis for which I now wish to argue is that it is this relationship of equipollence

which underpins most of Frege's judgements as to the identity or distinctness of the thoughts which sayings express.<sup>11</sup>

In the first place, the hypothesis explains why Frege held that "the construction of the sentence out of parts of sentences corresponds to the construction of a thought out of parts of thoughts" so that "the structure of the sentence can serve as a picture of the structure of the thought" (Frege 1969, 243 = Frege 1979, 225; compare Frege 1969: 262 = Frege 1979: 243). If the structure of a sentence (or, better, of a saying) reflects the structure of the thought that it expresses, then two sayings which express the same thought must be alike in structure. So under this doctrine, a necessary condition for two sayings to express one thought is that they should be isomorphic. We can now explain why Frege should have imposed this condition. If one is to *see*, without inference, that sayings match each other in truth-value, then they must be manifestly isomorphic. But if two sayings are manifestly isomorphic, they must certainly be isomorphic.

In the second place, the hypothesis explains why Frege should have taken (*N*) to be a necessary condition for sayings to express one thought. As we have seen, anyone who grasps the content of two equipollent sayings is, just on that account, in a position to know that they coincide in truth-value. So if we can truly say of someone who grasps two sayings that, for all he knows, one may be true while the other is false, then the sayings in question will not be equipollent. On the hypothesis, then, Frege is right to conclude in such a case that they express distinct thoughts.

Third, our explanation of equipollence, as it obtains between simple parts of sayings, fits those passages where Frege adjudicates questions of sameness of sense between sub-sentential utterances. Most of these passages concern utterances of proper names, and a typical (but unusually fully described) case is presented in 'Der Gedanke':



Suppose... that Herbert Garner knows that Dr Gustav Lauben was born on 13 September 1875 in NN 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 NN. 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 refer to the same man with this name; for they do not know that they are doing so. Therefore Herbert Garner does not associate the same thought with the sentence 'Dr Gustav Lauben has been wounded' as Leo Peter wants to express with it. (Frege 1918, 65)

Frege's talk of Garner and Peter "not speaking the same language so far as the name 'Dr Lauben' is concerned" is florid, but the last sentence quoted shows how we are to understand it. Utterances of this name that come from Garner's mouth, and utterances that issue from Peter's mouth, contribute differently to the exchange of thoughts between them because "although they do in fact refer to the same man with this name, they do not know that they are doing so." Since they do not know that they use the name 'Dr Lauben' to refer to the same man, Garner cannot expect any listener to know that his (Garner's) uses of the name share their reference with Peter's uses of it. (Neither can Peter expect any of his listeners to know that his (Peter's) uses of the name share their reference with Garner's uses.) Accordingly, an utterance of the name by one of them will fail our test for equipollence with an equiform utterance by the other. Our hypothesis, then, explains why

Frege is right to conclude that these utterances contribute differently to an exchange of thoughts.

It also accounts for the rather simpler example Frege gave when explaining the distinction between the sense and reference of a proper name to Peano:

I say that the two names ['Morning Star' and 'Evening Star'] have the same reference but not the same sense, and that is shown by this, that a speaker need not know anything about the coincidence in reference, as most people ignorant of astronomy will not, in fact, know anything about it; but the speaker will have to connect a sense with the names if he is not to be babbling senselessly. (Frege 1976: 196 = Frege 1980: 127).

If Frege's speaker is not to be babbling senselessly when he uses the names 'Morning Star' and 'Evening Star,' then he must know what he is talking about when he uses them. In other words, he must know, of the planet Venus, that the name 'Morning Star' designates it and that the name 'Evening Star' does. Moreover, if in using these names a speaker intends to convey his thought to an audience, he must expect that audience to know what he is using the names to refer to. Frege observes, though, that the speaker may nevertheless not know that the two coincide in reference, and in such a case he will hardly expect his audience to know this. In such a case, the speaker's uses of the name 'Morning Star' will fail our test for equipollence with his uses of the name 'Evening Star.' Our hypothesis can explain, then, why Frege concludes that in such a case the utterances are not equipollent, even though they share a reference.

Some may still look askance at the suggested account of equipollence as a reconstruction of Frege's criterion for sayings to express one thought. Whether a speaker expects a hearer to know that one utterance coincides in reference with another will be highly sensitive to what the parties know about each other's state of knowledge. So whether two sayings are equipollent will be correspondingly sensitive to fine features of the conversational context in which the sayings occur. But while this may disturb some of the applications which other philosophers have hoped to make of Fregean thoughts, it is no objection to the proposed interpretation, for Frege recognizes that the identity of thoughts exhibits exactly this sensitivity. At another point in 'Der Gedanke,' he invites his readers to

consider the following case. Dr Gustav Lauben says 'I have been wounded.' Leo Peter hears this and remarks some days later, 'Dr Gustav Lauben has been wounded.' Does this sentence express the same thought that Dr Lauben himself uttered? [ $\alpha$ ] Suppose that Rudolph Lingens was present when Dr Lauben spoke and now hears what Leo Peter has to say. If the same thought is uttered by Dr Lauben and by Leo Peter, then Rudolph Lingens, who is fully master of the English language and remembers what Dr Lauben said in his presence, must now know at once from Leo Peter's report that he is speaking of the very same thing. But knowledge of the language is a special thing when proper names are involved. It can easily be that only a few people associate a determinate thought with the sentence 'Dr Lauben was wounded.' For a complete understanding in the case described, one will need to know the expression 'Dr Gustav Lauben.' Now if both Leo Peter and Rudolph Lingens understand by 'Dr Gustav Lauben' the doctor who

is the only doctor who lives in a house known to both of them, then they both understand the sentence in the same way; they associate the same thought with it. [β] But it is also possible that Rudolph Lingens does not know Dr Lauben personally and does not know that it was Dr Lauben who recently said ‘I have been wounded.’ In this case Rudolph Lingens cannot know that the same thing is in question. For this reason, I say in this latter case: the thought which Leo Peter publicly expresses is not the same as that which Dr Lauben uttered. (Frege 1918: 65, with Greek letters interpolated)

In discussing case ( $\alpha$ ), Frege does not directly answer the question that he raises about it—namely, whether Lauben’s utterance of ‘I have been wounded’ expresses the same thought as Peter’s utterance of ‘Dr Gustav Lauben has been wounded.’ However, the implied contrast between cases ( $\alpha$ ) and ( $\beta$ ) suggests forcibly that the intended answer in the former case is ‘yes,’ and this interpretation is confirmed by a passage in the unpublished ‘Logik’ of 1897. Discussing there the type sentence ‘ich friere’ (‘I am cold’), Frege remarks that

it is not necessary that the person who feels cold should himself give voice to the thought that he feels cold [as he may do by uttering ‘ich friere,’ ‘I am cold’]. Another person can also do this, by designating the person who feels cold by name.<sup>12</sup>

Comparing the two passages, it is natural to understand case ( $\alpha$ ) as describing one possible circumstance in which this happens, i.e., as describing a case in which Lauben's utterance of 'I have been wounded' expresses the same thought as Peter's utterance of 'Lauben has been wounded'.

The proposed reconstruction explains why this description is right. We are plainly intended to envisage case ( $\alpha$ ) as one where Lingens knows to whom Peter is referring using the name 'Dr Gustav Lauben' only by virtue of knowing that Peter is referring to the man whom they had both heard say 'I have been wounded'. We are to suppose, in other words, that Lingens must bring his memory of the previous conversation to bear if he is to know to whom Peter is referring when he uses the name 'Dr Gustav Lauben'. If Lingens must confess that, for all he knows, Peter may have been referring to someone other than the man whom they both heard say 'I have been wounded', then in the circumstances described he will not know of whom Peter is speaking in using 'Dr Lauben'. But in that case, Lingens will not know what he is expected to know about the reference of Peter's use of the name 'Dr Lauben' unless he knows that this utterance shares a reference with Dr Lauben's own utterance of the pronoun 'I'. Accordingly, these utterances pass our test for being equipollent. Moreover, Lauben's saying is manifestly isomorphic to Peter's, so the complete sayings will qualify as equipollent too. Hence, if equipollence (as defined here) is the criterion for sameness of thought, Frege is right to conclude—as the passage forcibly suggests that he did conclude—that in case ( $\alpha$ ) Lauben's saying expresses the same thought as Peter's.

Things are quite different in case ( $\beta$ ). Frege does not specify the knowledge that underpins Lingens's understanding of the name 'Dr Lauben' in the latter case. But since

Lingens “does not know Dr Lauben personally and does not know that it was Dr Lauben who recently said ‘I have been wounded,’” he will not be expected to know that Peter’s utterance of ‘Dr Lauben’ shares a reference with Lauben’s utterance of the pronoun ‘I’. By our test, then, the expressions contribute differently to an exchange of thoughts between Peter and Lingens, and Frege is quite right to “say in this latter case [that] the thought which Leo Peter publicly expresses is not the same as that which Dr Lauben uttered.”

The contrast between the two cases shows how the identity of thoughts exchanged can depend on what a speaker and his audience know about each other. Leo Peter’s words ‘Dr Lauben has been wounded’ have the same reference and the same conventional linguistic meaning in Frege’s case ( $\alpha$ ) as they have in case ( $\beta$ ). All the same, different thoughts are expressed in the two cases. The difference results from the differences in the common knowledge, concerning the reference of the name ‘Dr Lauben,’ that Peter and Lingens are imagined to have in the two cases. Frege’s own discussion makes it clear, then, that the identity of thoughts is not determined solely by the combination of conventional linguistic meaning and the contextual determination of references.<sup>13</sup>

## 7.

Well-grounded in the texts as it may be, the proposed explanation of equipollence will vindicate Frege’s talk of “the thought in a saying,” and thereby unlock the gates to his third realm, only if it yields an equivalence relation. Since two sayings are equipollent when anybody who grasps both is thereby in a position to know that they coincide in

truth-value, the relation is patently reflexive and symmetric. The question is whether it is transitive.

When equipollence is a relation on domains of a special kind—a kind of special interest to Frege—it is, I now argue, transitive, and hence an equivalence relation. For suppose the relevant domain comprises the sayings that are the premises and conclusion of an argument that is being assessed for deductive validity; or suppose that the domain comprises sayings that are being tested for logical consistency. A characteristic of sayings in such domains is that some of their simple parts will be equipollent in the sense specified in §6. Someone who grasps the argument ‘Hesperus is bright; Hesperus is Phosphorus; therefore Phosphorus is bright’ is expected to know that the two occurrences of the name ‘Hesperus’ share a reference, and similarly for the two occurrences of ‘Phosphorus.’ (Indeed, as Kit Fine [has argued](#),<sup>14</sup> logic would be crippled if we could not take it for granted that some occurrences of proper names (say) share a reference. Any attempt to prove that they do would lead to an infinite regress.) Since some of the sayings in the domains we are considering will be manifestly isomorphic, some complete sayings in those domains will also be equipollent.

The important point for the present, however, is that in the particular domains we are considering, equipollent utterances may be assumed to form chains: where we have, say, three occurrences of the name ‘Hesperus’ in an argument, a hearer will be expected to know not merely that the first occurrence is equipollent with the second and the second is equipollent with the third, but also that all three occurrences share a reference. So long as each equipollent pair is part of such a chain, the relation will be transitive. So in the special domains with which we are concerned, equipollence may be assumed to be an equivalence relation.

Even when they formulate arguments in a natural language, logicians habitually try to render these equipollence chains perspicuous by ensuring that simple utterances are equiform when and only when they are equipollent. Thus logicians eschew ‘elegant variation,’ in which a speaker uses different words while expecting his hearers to know that the reference is shared. Moreover, they do not balk at using neologisms to replace equiform words that are not equipollent. In discussing Kripke’s ‘puzzle about belief,’ for instance, a case where it is not assumed to be known whether different occurrences of ‘Paderewski’ share a reference, they may express the crucial point of ignorance as whether Paderewski-the-pianist is identical with Paderewski-the-statesman.

This very mild regimentation of argumentative discourse is the first step towards the construction of fully formalized languages, of which Frege’s *Begriffsschrift* was the earliest example. As he stressed from the start, that symbolism was intended to be a means for expressing content, and not merely a calculus for evaluating the validity of inferences. At least within the confines of a single use of it, equiform inscriptions in the formalism are assumed to have a constant reference. If I render a vernacular argument as the sequent ‘ $Fa; Gb; \text{ so } Fa \wedge Gb$ ’ it is simply assumed—it is taken for granted—that the occurrences of the singular term ‘ $a$ ’ stand for the same object, that the two occurrences of the predicate letter ‘ $F$ ’ are true of the same objects, and so forth. Within the formalized language itself, there is no way of raising the question whether (for example) one occurrence of the letter ‘ $a$ ’ stands for the same object as another.

This means that there will be a precise relationship between equipollence in the domains we are now concerned with, and the use of equiform expressions in a formalized language. In rendering an argument into such a language, one will translate simple utterances using the same simple symbol just when they are equipollent in the specified



sense. For suppose first that two simple utterances are equipollent. Then anybody who ‘grasps’ them will be assumed to know that they share a reference, so it would be erroneous to employ distinct formal symbols (the letters ‘*a*’ and ‘*b*’ as it might be) in translating the two utterances. Why? Well, since knowledge of the coincidence in reference is taken for granted, the vernacular argument being translated will fail to justify it, even though coincidence in reference may be required for the argument’s soundness. Under a translation in which distinct symbols replace equipollent utterances, then, the argument may be made to appear to be incomplete or lacunose when in fact it is not. For any piece of reasoning rests on some presuppositions, and an argument should not be faulted for failing to justify what it presupposes.

Conversely, when the two vernacular utterances are not equipollent, a hearer may grasp the sayings in which they figure without knowing that they share a reference. Accordingly, he can—without betraying any lack of grasp of the utterances—sensibly raise the question of whether they share a reference. (Even if he knows that they do in fact share a reference, he can still question whether the argument’s proponent has shown that they do.) The raising of that question, however, is precluded if the utterances are rendered using the same symbolic letter. For in a formalized language of the familiar type, there is and can be no issue of whether  $a = a$ .

When arguments are rendered in a formalized language in such a way that formal equiformity matches vernacular equipollence, the rendering comes to depict the way simple vernacular utterances contribute to an exchange of thoughts. The translator shows that two such utterances are equipollent by rendering them using the same symbol, and he shows that they are not by using different symbols. Trite as it may be, this point is the key to exposing the flaw in a famous objection to one of Frege’s arguments for his claim that

names which share a reference might yet contribute differently to an exchange of thoughts.

The argument that I have in mind emerges clearly in a draft of a letter to Jourdain that Frege wrote in January 1914. He there presents a case in which a single mountain is called ‘Aphla’ by those who live to its south, and is called ‘Ateb’ by those who live to its north; it is not common knowledge that these names share a bearer. By applying his condition (*N*), Frege is able to show that “what is said in the sentence ‘Ateb is Aphla’ is certainly not the same thing as the content of the sentence ‘Ateb is Ateb’” (Frege 1976: 128 = Frege 1980: 80). He goes on:

Now if what corresponded to the name ‘Aphla’ as part of the thought were the reference of the name, i.e. the mountain itself, then this would be the same in both thoughts. The thought expressed in the sentence ‘Ateb is Aphla’ would have to coincide with the one in ‘Ateb is Ateb,’ which is not at all the case. What corresponds to the name ‘Ateb’ as part of the thought must therefore be different from what corresponds to the name ‘Aphla’ as part of the thought. (Frege 1976: 128 = Frege 1980: 80)

Like Schiffer (27-30), I am suspicious of Frege’s doctrine that thoughts have parts. But the argument just quoted really needs only two much weaker claims. First, that the non-equipollence of two manifestly isomorphic sayings, both of which predicate a single attribute of a single thing, calls for explanation. Second, that the best explanation will advert to the lack of a suitable semantic relation between corresponding parts of the two sayings.

It was against this second claim that Hilary Putnam once mounted an interesting attack. The sayings ‘Ateb is Aphla’ and ‘Ateb is Ateb’ meet our condition for manifest isomorphism. But there is another respect in which they differ in structure and, Putnam suggested, this difference can explain their not being equipollent without any need to posit any difference in sense between the component names:

Consider, for the moment, a simpler example (a variant of the famous ‘paradox of analysis’): ‘Greek’ and ‘Hellene’ are synonymous. But ‘All Greeks are Greeks’ and ‘All Greeks are Hellenes’ do not *feel* quite like synonyms. But what has changed? Did we not obtain the second sentence from the first by ‘putting equals for equals’? The answer is that the *logical structure* has changed. The first sentence has the form ‘All  $F$  are  $F$ ,’ while the second has the form ‘All  $F$  are  $G$ ’—and these are wholly distinct . . . This suggests the following revision of the [compositional] principle:

The sense of sentence is a function of the sense of its parts *and of its logical structure*. (Putnam 1954: 118; emphasis in original)

We may account, in other words, for the fact that a saying  $s$  of ‘Ateb is identical with Aphla’ is not equipollent with a saying  $t$  of ‘Ateb is identical with Ateb’ by citing the fact that  $t$  is an instance of the schema ‘ $\alpha$  is identical with  $\alpha$ ,’ while  $s$  is not.

Putnam’s objection to Frege cuts little ice as it stands, for even if it is cogent, its force can be evaded simply by changing the example. Condition (N) also establishes that a saying,  $u$ , of ‘Aphla is at least 5000 metres high’ is not equipollent with a saying,  $v$ , of

‘Ateb is at least 5000 metres high.’ These sayings, however, instantiate the same logical schemata, so Putnam’s explanation cannot account for their not being equipollent. The complaint against Frege will be merely that, in focusing on statements of identity, he chose an unfortunate sort of example. In an interesting paper, however, William Taschek has proposed a way of extending Putnam’s explanation so that it covers these cases (Taschek 1995). Because  $u$  and  $v$  instantiate the same schemata, they are alike in what Taschek calls their *local* logical structure. However, an argument’s validity may depend upon the way in which expressions recur in *different* sentences. Accordingly, we shall need in any case a more sensitive notion of logical structure defined, not in terms of a single sentence’s being, or not being, an instance of a schema, but in terms of a plurality of sentences’ being corresponding instances of a number of schemata. Taschek captures such a notion by stipulating that the sentences  $S$  and  $S'$  will have the same *global* logical structure

just in case for all logical schemata  $X$  and  $Z$  and any sentence  $S^*$ ,  $S$  and  $S^*$  are corresponding instances of  $X$  and  $Z$  (respectively) if and only if  $S'$  and  $S^*$  are corresponding instances of  $X$  and  $Z$  (respectively). (Taschek 1995: 84)

Sentences differing in local structure will differ in global structure, so Putnam’s explanation of the difference between  $s$  and  $t$  is preserved. However, sentences alike in local structure may differ in global structure, so differences in global logical structure can account for differences in cognitive value which Putnam’s theory is unable to explain. Thus,  $u$  and  $v$ , although alike in local structure, differ in global structure, because  $u$  and  $a$

saying  $w$  of ‘Aphla is snow-capped’ are corresponding instances of the schemata ‘ $\alpha$  is  $\varphi$ ’ and ‘ $\alpha$  is  $\psi$ ’ while  $v$  and  $w$  are not. The idea, then, is that the disturbance in global logical structure consequent upon replacing the name ‘Aphla’ with the name ‘Ateb’ accounts for the non-equipollence of  $u$  and  $v$ . There is no need to postulate different senses for the two names. We are able, Taschek concludes, “to respect the powerful theoretical considerations that support the direct reference thesis [sc., the claim that simple referring expressions that share a reference will also share a sense] without having to offend [the] deeply entrenched pre-theoretical intuitions” that led Frege himself to deny that thesis (Taschek 1995: 92).

This is, perhaps, a seductive line of argument, but we are now well placed to resist its blandishments. The fact that two vernacular sayings are not equipollent, we are told, may sometimes be explained by their differing in global logical structure. But how is it determined what the global logical structure of a vernacular saying is? How are we to determine of which logical schemata utterances are instances, or corresponding instances? A plausible answer is: by inspecting their renderings in a formalized language, for such languages are designed to render logical forms ‘perspicuous’. But if my previous remarks are right about the principles of translating from a natural language into a formalized one, we can see that logical structure, whether local or global, cannot explain a failure of equipollence *independently* of such a failure on the part of sub-sentential components. If it is taken for granted in a conversation that the words ‘Greek’ and ‘Hellene’ apply to the same things, then the translator should render these words by a single predicate letter, and ‘All Greeks are Hellenes’ will emerge as having the same logical structure as ‘All Greeks are Greeks.’ The first utterance will just be a misleading way of saying that all Greeks are

Greeks, so that an unmisleading translation into a formalized language will be an instance of the schema ‘All  $x (Fx; Fx)$ ’. If on the other hand the identity of Greeks and Hellenes is not taken for granted, then the translator will use distinct symbols. At this point, however, we see the futility of trying to invoke logical schemata as a source of explanation that is *alternative* to Frege’s. The schemata instantiated by the symbolic renderings of vernacular sayings will show which of their components contribute in the same way to an exchange of thoughts and which do not. But before making the translations, we shall need to find out of which pairs of components a coincidence in reference is presupposed. And to find that out is precisely to find out which pairs of components make the same contribution to the relevant exchange of thoughts.

## 8.

I argued in the previous section that equipollence, explained as in §6, is an equivalence relation across domains that comprise the sayings produced in the course of a particular deductive argument. Rather few actual sayings, however, are so produced. So we need to ask whether equipollence is an equivalence relation over sayings generally.

I claim that it is not. This can be shown in a number of ways, but perhaps the simplest way is to elaborate the case I labelled ( $\alpha$ ) when quoting from ‘Der Gedanke’ in §6 above. In the circumstances described there, in which both Peter and Lingens heard Lauben complaining ‘I have been wounded’, Peter’s later utterance  $v$  of ‘Dr Lauben has been wounded’ is equipollent with Lauben’s original complaint  $u$ . Let us suppose in addition, however, that quite unbeknownst to Peter and Lingens a second pair—let us call them Bunsen and Kirchhof—also overheard Lauben’s complaint. They have never met

Lauben before, and do not know his proper name, but the situation inspires them to dub him with the nickname 'Fritz.' Some days later, Bunsen says to Kirchhof, 'Fritz has been wounded', a saying we shall label  $w$ . Now the reasoning which applied in Frege's case ( $\alpha$ ) to show that  $v$  is equipollent with  $u$  also shows that  $w$  is equipollent with  $u$ . For in this case too, we can suppose that Kirchhof will not know what he is expected to know about the reference of the name 'Fritz' unless he appreciates that it is used to refer to the man whom he and Bunsen heard say 'I have been wounded'. However,  $w$  is not equipollent with  $v$ . In order to grasp the use of the name 'Fritz' in  $w$ , a hearer must know that it shares its reference with a use of the pronoun 'I' which Bunsen and Kirchhof heard together. And in order to grasp the use of the name 'Dr Lauben' in  $v$ , a hearer must know that it shares its reference with a use of the pronoun 'I' which Peter and Lingens heard together. But in order to grasp both  $v$  and  $w$ , it is not necessary to know that the use of the pronoun 'I' which Peter and Lingens heard together is the very same use which Bunsen and Kirchhof heard together. For none of the speakers in either of the two conversations expects anyone to know this. Indeed, they do not know it themselves. Accordingly, in order to grasp both  $v$  and  $w$ , it is not necessary to know that the use of name 'Dr Lauben' in  $v$  shares a reference with the use of the nickname 'Fritz' in  $w$ . We have, then, a situation in which  $v$  is equipollent with  $u$  and in which  $w$  is equipollent with  $u$  (so that  $u$  is equipollent with  $w$  by symmetry), but in which  $v$  is not equipollent with  $w$ . That is to say, transitivity fails, and equipollence is not an equivalence relation.

Where does this leave the face-value theory? I should sum up as follows. There is a relation—that of equipollence, as defined in §6—which is an equivalence relation over certain special, restricted domains of sayings—viz. those that form a single passage of deductive argument. Since those domains are the focus of a logician's interest, and since

the Fregean thought 'in' a saying is above all else its logical content (see again Frege 1969: 213-4 = Frege 1979: 197-8), this vindicates Frege's treatment of thoughts as abstract objects. It does not, though, vindicate the face-value theory, which posits objects as the contents of ordinary sayings and beliefs. Equipollence is not an equivalence relation over the domain of all sayings, yet the face-value theory associates propositions with sayings and beliefs quite generally, not merely those advanced in the course of deductive arguments. If there is a way of refining the definition of equipollence so that it is an equivalence relation over the wider domain, I am afraid I have missed it.

Of course, this rather inconclusive conclusion does not refute Schiffer. There may be a way of eking an equivalence relation out of our relation of equipollence. Or again, there may be a quite distinct equivalence relation that preserves the Fregean intuitions about sameness of content that Schiffer and I share. All we can really say is that the vindication of the face-value theory is incomplete, and faces a large unsolved problem. In those respects, it is like any interesting philosophical theory. As with all the best philosophy, Schiffer's work in this area directs our attention to the right unsolved problems.



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<sup>1</sup> Prior (1971). Oddly, Schiffer does not cite this work in either *Remnants of Meaning* or *The Things We Mean*.

<sup>2</sup> These forms are inspired by Wittgenstein's suggestion that the English expression 'this is how things are' can be used similarly to the propositional variables of a formal language. See *Philosophical Investigations*, Part I §134. Prior rendered propositional quantification in English using 'anywhether' and 'somewhether' as quantifiers and forms of 'thether' as the attendant variables. (See Prior 1971: 37-39.) But this way of talking has won few imitators, and I prefer to revert to Wittgenstein's original suggestion.

<sup>3</sup> I fully agree with Schiffer (2003: 90) that non-objectual quantification need not be substitutional. Again, the rendering shows how: we need not assume that, however things may be, there is a sentence which says that they are that way.

<sup>4</sup> 'Trivial,' I should say, if we ignore the wholly non-trivial problem of solving the semantic paradoxes. But, like Schiffer, I bracket that issue.

<sup>5</sup> The best treatment of these matters that I know is Hodes (1990).

<sup>6</sup> By which I mean, *inter alia*, that appropriate references are secured for any names and demonstrative expressions occurring in the sentence.

<sup>7</sup> I say 'somewhat' for the relations abstracted over would belong to different logical levels.

<sup>8</sup> Although Schiffer rejects Frege's theory of propositions (*Gedanken*), he describes the Fregeans' assessment of belief reports that provide the data for the theory as "commonsense intuitions" (38).

<sup>9</sup> For an illuminating discussion of the way different theories of propositions correspond to different (and equally legitimate) determinations of the notion of a belief's content, see Moore (1999).

<sup>10</sup> NB: both occurrences of the word 'what' in this sentence are interrogative pronouns.

<sup>11</sup> There are some exceptions to this generalization. In particular, it does not at all fit Frege's notorious claim (1891: 10-11) that the universally quantified statement 'For all  $x$ ,  $x^2 - 4x = x(x - 4)$ ' expresses the same thought as an identity statement between value ranges. However, since that claim underpinned the fatal Basic Law V, we should not expect a rational reconstruction of Frege's criteria for sameness of sense to find house room for it.

<sup>12</sup> Frege (1969: 146) = Frege (1979: 134-35). Michael Dummett regards this passage as an aberration. He deems the claim that *NN*'s utterance of 'I am *F*' can express the same thought as another's utterance of '*NN* is *F*' to be indefensible "on any view save that a name contributes to a thought only in virtue of its reference" (Dummett 1981: 119). The 'Logik' of 1897 does not adopt this view. The view contradicts the claim made there that "even though the tale of William Tell is a legend and not history and the name 'William Tell' is an apparent singular term, we cannot deny to it a sense" (Frege 1969: 141) = (Frege 1979: 130). *Contra* Dummett, however, I do not see that we need to attribute any confusion to Frege on this score. The doctrine that a name contributes something other than its reference to a thought is not threatened by the claim that there are certain rather special conversational circumstances in which the utterance of a proper name may share its sense with an utterance of the pronoun 'I'.

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<sup>13</sup> This conclusion has also been reached, in a different way, by Tyler Burge. See his 1990.

| <sup>14</sup> In the John Locke lectures he gave at Oxford in 2003, [published as Fine \(2007\)](#).