

THE INVARIANCE OF SENSE

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I. THE SENSES OF A PROPER NAME

How many senses can a given name have, with its reference held fixed? One, more than one? One answer that most would agree to is that sense is unique for each utterance of a name, that is, that a name can have no more than one sense on any given occasion. But is sense unique in any stronger sense than this? The answer that is typically attributed to Frege is that there is not, that, as Tyler Burge puts it, Frege “treats proper names as having different senses while applying to the same person.”¹ There are a number of possibilities for the locus of this multiplicity of sense; the following remark by Ruth Marcus indicates the possibilities: “the sense of a term is whatever is grasped or understood by a speaker on a particular occasion of use and may vary from occasion to occasion as well as from speaker to speaker.”² Of the views canvassed by Marcus, we can draw out a more conservative one, and one more extreme. On the more conservative view, Frege is holding that sense may vary from speaker to speaker; on the more extreme view, Frege holds not only this, but that sense may vary from context to context. Endorsements of the two views are not hard to find. For example, typical sorts of endorsement of the conservative view are found in Harold Noonan’s remark that “different senses [are] associated with the name ‘Aristotle’ by different users,”³ and Graeme Forbes’ comment “that the sense of a proper name can vary from

¹Tyler Burge, “Sinning Against Frege,” *The Philosophical Review*, 88, (1979), 398-432, at p. 402.

²Ruth Barcan Marcus, “Review of Leonard Linsky *Names and Descriptions*,” *The Philosophical Review*, 87, (1978), 497-504, at p. 503. This is not an interpretation of Frege that Marcus herself endorses; see her remark cited below.

³Harold Noonan, *Frege: A Critical Introduction*, (Cambridge: Polity Press, 2001), p. 179.

person to person.”⁴ John Perry chimes in with the claim that “In the case of proper names, Frege supposes that different persons attach different senses to the same proper name.”⁵ Saul Kripke is another booster; in his view, Frege “concluded that, strictly speaking, different speakers of English (or German) ordinarily use a name such as ‘Aristotle’ in different senses (though with the same reference).”⁶ Advocacy of the more extreme view is to be found in Burge’s assertion that “Frege makes . . . remarks emphasizing the variability of the sense of a proper name for different users and in different contexts.”⁷ On such views, even though sense is not shared, communicability between speakers need not suffer so long as speakers merely grasp that the senses they grasp determine the same reference; given the sense/reference distinction, the onus for accounting for the efficacy of language as a medium of communication shifts from shared sense to common reference. Let us call the sort of view being described the *variability view* of sense.

It seems to me, common wisdom notwithstanding, that nearly as one can make out, the variability view of sense is unquestionably incorrect as a reading of Frege. Frege’s view, I believe, is quite clear: a proper name has a unique sense, not only *qua* utterance, but also in that sense cannot vary from

⁴Graeme Forbes, “Indexicals and Intensionality: A Fregean Perspective,” *The Philosophical Review*, 96, (1987), 3-31, at p. 5.

⁵John Perry, “Frege on Demonstratives,” *The Philosophical Review*, 86, (1977), 494-97, at p. 485.

⁶Saul Kripke, “A Puzzle About Belief,” in Avishai Margalit, ed., *Meaning and Use* (Dordrecht: Reidel, 1979), pp. 239-83 at p. 240. Kripke also attributes this view to Russell. This attribution is closer to correct; he held that different speakers may take a given name to abbreviate different descriptions. In “Knowledge by Acquaintance and Knowledge by Description,” (in Bertrand Russell, *Mysticism and Logic*, (New York: Norton, 1929)), he remarks that “the thought in the mind of a person using a proper name can generally only be expressed explicitly if we replace the proper name by a description. Moreover, the description required to express the thought will vary for different people, or for the same person at different times. The only thing constant (so long as the name is rightly used) is the object to which the name applies. But so long as this remains constant, the particular description involved usually makes no difference to the truth or falsehood of the proposition in which the name appears.” (p 216) Russell’s view is rooted in his epistemology; the description by which a speaker abbreviates a proper name characterizes knowledge the speaker has of the object denoted. Part of my argument to follow is that it is incorrect to assimilate Frege’s views to Russell’s, in part because Frege’s view of the relation of sense and knowledge is not directly comparable to Russell’s notion of knowledge by description.

⁷Burge, *op. cit.*, p. 403.

speaker to speaker, from utterance to utterance, nor from context to context, and no speaker can associate more than one sense with a given proper name. That is, Frege held an *invariance* view of sense. To be somewhat more precise, I will argue that Frege's view is that *if* speakers speak the same language, then they associate the same sense with any given proper name; thus, if they did not associate the same sense, they would not speak the same language. Indeed, if sense varied from context to context, or even worse, from utterance to utterance, then there would be no stable notion of shared language at all, or at least not one that would be sustained by any notion of speakers sharing a common stock of thoughts, and this would cut deep for Frege, given his conception of language, logic and thought. As Marcus observes, following up on the comment above, "such a view, if taken as . . . the only account of meaning in Frege, would be indefensible."⁸

My object in this paper will be to show that Frege holds that the sense of a proper name is both unique and invariant, and that the sense of a name does not vary in any way. This is fundamentally a linguistic fact for Frege; it is not merely a reflection of speakers deference to shared social or communicative practices. It is not that sense is constant from speaker to speaker by convention.⁹ But if Frege's view is conditionalized to language, the notion of language appealed to is a peculiarly Fregean one, and so we will first examine Frege's view of language. We will then consider the passages from Frege's writings that have largely animated the discussion, drawn from "The Thought," and from "On Sense and Reference." Both of these, in my view, have been subject to rather strained interpretations, and have glossed over important comments by Frege. In the passage from "The Thought" we will see that Frege

⁸Marcus, *loc. cit.*.

⁹This view is most commonly associated with Michael Dummett; see Chapter Five of *Frege: Philosophy of Language* (London: Duckworth, 1973).

clearly enunciates the invariance view, and we will see how this view is compatible with remarks from the famous “Aristotle” footnote in “On Sense and Reference” that have been taken as Frege’s endorsement of the variability view. From this will emerge two issues - the relation of sense and modes of presentation to descriptive conditions, and Frege’s views of the cognitive relation in which speakers may stand to senses.

Lest one think that the issue of concern here is merely one of the Fregean exegesis, we note that the variability view has been taken, especially in its more radical form by Burge and Perry, to underlie far-reaching claims about the significance of the doctrine of sense and reference. This is in large part because it appears to be at odds with Frege’s view of the universality of meaning. If meaning is something that is shared by speakers of a language, and so invariant from speaker to speaker, then if sense is not necessarily constant from speaker to speaker, or even utterance to utterance, it would appear that sense is not a suitable candidate for the meaning of a proper name. But if this holds for proper names, then, given Frege’s view of the ubiquity of naming, in general sense cannot be identified with meaning. A main consequence of what I will be arguing is that this dramatic conclusion is unwarranted, given its dependence on a view that Frege does not hold about how many senses a proper name can have.¹⁰

¹⁰In this paper, I focus exclusively on the senses expressed by proper names. In the sequel, “Frege on Indexicals,” (forthcoming in *The Philosophical Review*), I discuss this issue as it arises with indexicals and demonstratives. Reflection on the putative sense variance of these latter expressions has led to the development of replacement notions argued to capture the insights for which Frege postulated senses, but which satisfy criteria for having the status of linguistic meanings; we have in mind here Perry’s notion of *role* and Kaplan’s concept of *character*; see Perry, *op. cit.*, and David Kaplan, “Demonstratives,” in J. Almog, J. Perry and H. Wettstein, eds., *Themes from Kaplan*, (New York and Oxford: Oxford University Press, 1989), pp. 481-563.

II. FREGEAN LANGUAGES

As standardly conceived, a language is a set of *sentences*, where sentences are concatenated strings of *symbols*. As such, languages are characterized in a purely formal manner, sentences and their constituent symbols being formal marks. Languages are defined through a rule-system that specifies the well-formed concatenations of symbols, the standard procedure being to categorize the symbols, (the vocabulary of the language), and then state the rules in terms of these categories. Languages so conceived are the same if and only if they are the same set of sentences; otherwise, languages are distinct, even if they overlap in membership.¹¹ Thus, languages can differ either because they contain different symbols, or, with the same symbols, because the symbols are concatenated in different ways. Understanding language in this way has been particularly important in those areas of inquiry, in linguistics, logic, philosophy, mathematics and computer science, where computation is of central concern. In all of these areas computation is understood, roughly, as symbol matching; a computational procedure mapping strings of symbols onto strings of symbols can be executed insofar as some formal criterion is satisfied. We have accrued substantial knowledge of language so conceived, including, especially since the seminal work of Chomsky,¹² of its combinatoric and computational properties.

It is a fundamental attribute of languages as sets of sentences that they are inherently *uninterpreted* systems; that is, whatever properties such systems have, they are strictly formal properties, and languages are individuated in terms of these formal properties. However, such languages may be assigned

¹¹It is standard to distinguish between languages, *qua* sets of sentences, being weakly and strongly equivalent, that is, whether they are the same set of concatenated strings of symbols, or are the same set of structural descriptions of those strings. Although the term *sentence* is commonly used to cover either of these notions, for our purposes here we can gloss over this distinction.

¹²I have in mind here the Chomsky-hierarchy that categorizes languages in terms of their (weak) generative capacity. See Noam Chomsky, "Formal Properties of Grammars," in R. D. Luce, R. R. Bush, and E. Galanter, eds., *Handbook of Mathematical Psychology*, Vol II, (New York: Wiley, 1963), pp. 323-418.

an interpretation, again by standardly known procedures: a model, including a stipulation of a universe of values, is specified, and an interpretation is defined on that model that maps from (non-logical) expressions of the language to values in the model. On this method, the interpretation of symbols of the language is not fixed, but may vary, given the model; the language itself, however, remains unchanged under this variance of interpretation. This model-theoretic approach to interpretation has proved to be extraordinarily fruitful, especially in the characterization of meta-logical properties of languages used as logistic systems. To take one example from an extensive catalogue, one of the earliest illustrations of this method was by Hilbert, who showed the independence of the parallel postulate from the other axioms of Euclidian geometry by providing a model in which the former is false and the latter are true.¹³

While there are aspects of this view of language and interpretation that arguably originate with Frege, (for example, the notion of computation described above derives from Frege's view of the proper conduct of proof), I have gone to pains to describe it in order to place it in relief to Frege's very different perspective, since as a whole this is *not* the way that Frege conceives of a language.¹⁴

For Frege, a language is not a system of marks or symbols (individuated solely by their shapes, what Frege calls a *figure*¹⁵), but rather as a system of *signs*. A sign is a pairing of a symbol and a sense, and as such it can be used, unlike a symbol *simpliciter*, for the purpose of reference. Concatenations of

¹³Note that we can investigate the semantic structure of a given language with respect to a fixed model, that is, one with a specified interpretation relative to a given universe; this is what is standardly done in model-theoretic explorations into the semantics of natural languages. For current purposes bear in mind however that the notion of an interpreted language that emerges in this manner is distinct from that we find with Frege's conception of language that we discuss below.

¹⁴The remarks in the following paragraphs develop the discussion in Aldo Antonelli and Robert May, "Frege's New Science," *Notre Dame Journal of Formal Logic*, 41 (2000), 242-270, in section 2.

¹⁵In his critique of formalism found in "On Formal Theories of Arithmetic" (1885), translated by Eike-Henner W. Kluge in Eike-Henner W. Kluge, ed., *On the Foundations of Geometry and Formal Theories of Arithmetic*, (New Haven and London: Yale University Press, 1971). especially in the discussion on pp. 114 -116.

signs labeled by Frege *propositions* are themselves complex signs, one component of which is a thought, itself a concatenation of senses. A language for Frege is thus a set of propositions, not sentences; as such, it is a set of correlations between concrete things - symbols - and abstract things - senses. Knowing a language is thus knowing such a system of correlations, where we come to know the senses via our grasp of them.

Because a Fregean language is composed of signs, observe that it follows that it is an *interpreted* system. Sense uniquely determines reference, so that difference of reference entails difference of sense; consequently, it is impossible in a *given* language, for a sign to have a reference different than what it has. This holds for all expressions of a language, including propositions. Their reference, to the True or the False, is determined by their thought components, and so each proposition comes immutably equipped with one and only one truth value. It makes no sense, on Frege's view, to consider a true thought (i.e. a thought whose reference is the True) to be false, for to do so would not be to consider that thought, but another. Thus, it is a consequence of the doctrine of sense and reference that a language is an inherently and uniquely interpreted system. To Frege, it would be non-sensical to speak of an interpreted language in the sense of an interpretation being *assigned* to a language, for this presupposes something that Frege rejects, that a language itself is a system of meaningless marks or symbols.¹⁶ To emphasize again the point here: a change in the system of signs is not for Frege just a different interpretation of the language, but gives a different *language* altogether.

¹⁶Put in contemporary parlance, Fregean languages do not contain any non-logical constants; there can be no schematization in Fregean languages, universality can only be expressed through generalization. This point is due to William Demopoulos in his "Frege, Hilbert, and the conceptual structure of model theory," *History and Philosophy of Logic*, 15, (1994), 211-225; see also Antonelli and May, *loc. cit.*, and the discussion in footnote 13.

For Fregean languages, the criteria for the individuation of languages turns on whether there is the same set of propositions. Thus, *qua* language as a system of signs, any alteration to the pairing of symbols and senses would be an alteration of the signs, and that would constitute a different system of signs, and so a different language altogether.¹⁷ If there is a change of signs, then there is a change of language. Given that a sign is a complex, signs can differ because one or the other of their coordinates differ; the case that interests us is where the symbols remain the same yet there is a difference of signs because the senses with which those symbols are paired are different. Thus, we could have two Fregean languages that are the same with respect to strings of symbols, but yet are different languages because those symbols are associated with different senses. Such languages would differ as sets of propositions. Note that this would be so even if the *references* of the symbols in the two languages were exactly the same; whether reference varies with difference of sense is not material to whether we have distinct languages or not.

Our description of Fregean languages as constituted as sets of propositions is meant to characterize language in its most general sense, so that falling under this characterization of language is any system, either natural or designed, used for the expression of thoughts. It thus includes English and German as well as the *begriffsschrift*, Frege's conceptual notation language. On Frege's conception, nested within the class of languages generally conceived there is a more circumscribed class of languages that Frege referred to as logically perfect. These are languages that given their design are properly fit to use for reasoning, that is, languages in which proofs can be rigorously carried out. For Frege, a proof is an

¹⁷As discussed in Antonelli and May, *loc. cit.*, while the symbols of a language are an arbitrary characteristic of a particular language, there is a universality inherent in language in that senses are equi-expressible with respect to any language whatsoever. Against this, the standard way that languages will differ is because they incorporate different symbols, although we can still have different languages even if the symbols and senses are invariant, if the mappings between the symbols and senses were different in the languages. In that case, we would have distinct sets of propositions. .

ordered sequence of propositions; what a proof shows is how true thoughts follow from other true thoughts. Establishing that a sequence of propositions *is* a proof, however, is something that is determined strictly in virtue of the symbolic forms of the propositions; to specify the rules by which proofs may legitimately proceed from step to step, we need only take into account propositions *qua* sentences, i.e. concatenations of symbols. Signs are logically manipulated in terms of their symbolic structure; one proposition follows from another because their *forms* stand in some specified relation.¹⁸ The contents they express, which is what is proven, is not directly material to whether it can *be* proven.

Given this conception, we can be certain of the reliability of proofs to the extent that each sentential string of symbols expresses one and only one proposition; a language will qualify as logically perfect to the extent that it satisfies this condition. In the design of a language, this can be facilitated if all the signs are pair-wise disjoint from each other, so as to insure that they differ from each other in both their symbol and sense coordinates. In that case, since any two distinct symbols (*qua* their formal shape) are distinct signs, we can be assured that each symbol - that part of the sign open to inspection - will express a unique sense. Not all languages measure up to this design standard, for they will have distinct signs that differ in only one of the coordinates. Natural languages are notorious offenders. Unlike logically perfect languages, such as the *begriffsschrift*, they will contain homonyms, signs whose symbols agree, but whose senses do not.¹⁹

¹⁸For Frege, this relation is governed by Modus Ponens, which is the only rule of inference, in that the transitions from propositions to propositions on the right-hand side of proofs in the *Begriffsschrift* notation are always Modus Ponens steps, (or are reducible to Modus Ponens steps). For discussion of rules of inference in Frege's logic, see my notes "Notes on Frege on Rules of Inference" at <http://kleene.ss.uci.edu/~rmay/Inference.pdf>.

¹⁹Natural languages will also contain synonyms, signs which differ as symbols, but not as senses, which are also ruled out by the condition, and hence also will not occur in logically perfect languages. From the point of view of proof, this exclusion would amount to saying that a thought could be proven in the guise of one and only one proposition. In at least one sense, this is too strong, given Frege's understanding of explicit definition as identifying the sense of the definiendum with that of the definiens. Thus, our intention is to exclude from logically perfect languages signs which differ only in their symbols, but not in their senses. (continued...)

Nested within the logically perfect languages, we must recognize yet one other sort of language that Frege isolates. These are logistic systems, languages in which reasoning, i.e. proofs, are actually carried out. They are distinguished from a logically perfect language *simpliciter* in that certain propositions formulable in the language are designated as basic, and other propositions are proven from them, by the specified rules of inference (always modus ponens) as theorems. Among the logistic systems, the narrowest is pure logic, in which we only require the logical vocabulary (the logical connectives, quantifiers and variables of appropriate levels, etc.) to state the stipulated, unproven propositions, what Frege called the Basic Laws.²⁰ In addition, there are broader systems of applied logic, which in addition to the Basic Laws, contain other basic propositions that Frege labels axioms. These differ from Basic Laws in that their statement involves non-logical vocabulary, so that they will have application specific content that is lacking from any Basic Law. So, consider geometrical axioms, whose statement will include, (along with logical vocabulary), terms referring to points, lines, etc.

In what follows, we will be considering a number of remarks by Frege about language, and when doing so it will be important, if we are to properly understand their import, to bear in mind the distinctions we have drawn out among languages, as Frege in his remarks often shifts among the various notions, sometimes intending his comments to apply to language in general, other times to some narrower conception. In general, Frege's custom is that when he makes a positive point with illustrations from natural language, he means to be saying something about language in general. A typical example would be Frege's discussion in "On Sense and Reference" of the sense/reference distinction, which is clearly

¹⁹(...continued)

perfect languages only synonyms that are not definitionally related; this can be achieved by limiting the condition stated to just atomic signs.

²⁰Frege held that one sort of object was nameable in terms of pure logic, *viz.* value-ranges, the purely logical objects. This assumption was of course highly problematic, given the inconsistency of Basic Law V, the identity condition for value-ranges.

meant to apply to all languages. When Frege wishes to make a point about language that applies with less generality, his custom is to make this explicit. Consider for instance Frege's discussion of the referential failure of proper names in natural language; propositions that contain them can only express "mock," not real, thoughts.²¹ This is, Frege is explicit to point out, a linguistic *imperfection*, and not an aspect of a logically perfect language. On the other hand, when Frege is laying out the characteristics of a logically perfect language, for instance, in the opening sections of *Begriffsschrift* or *Grundgesetze*, he uses explicit formalism, and carefully explicates the intended meaning of the terms introduced. Without such provisos, however, Frege's intention is normally to speak without restriction about language, perfect or imperfect, even if his examples are drawn from languages that are within the latter class.

Although there is much more to say about Frege's views, as well as their genesis, this completes our review of the Fregean conception of language, understood as a set of propositions, rather than sentences.²² We are however now in a position to give a somewhat more precise rendering of the thesis that we will be arguing *against*: A symbol can change its associated sense, and still remain the same sign, presumably in virtue of the determined reference remaining the same. This is the thesis that underlies the variance view. Frege's explicit view, however, is to the contrary; his view is that any such change in sense would give rise to a different sign, and indeed, to a different language.

²¹See in particular the discussion in "On Sense and Reference" (1892), translated by Max Black, in Peter Geach and Max Black, eds., *Translations from the Philosophical Writings of Gottlob Frege* (Oxford: Basil Blackwell, 1952), pp. 62-63; the terminology of "mock thoughts" is to be found in "Logic" (1897), translated by Peter Long and Roger White, in H. Hermes, F. Kambartel and F. Kaulbach, eds., *Posthumous Writings*, (Chicago: The University of Chicago Press, 1979) p. 130. We turn to the significance of such terms in section VII.

²²For discussion of the central role Frege's conception of language plays in his debate with Hilbert over independence proofs, see Antonelli and May, *loc. cit.*, and the remarks in footnote 17.

III. THOUGHTS AND PROOF

As came up in the discussion in the previous section, Frege's had a peculiar view of proof. For him, what is shown in a proof is how a given true thought follows from other true thoughts. While Frege is justly celebrated for his innovation of insisting on the rigor of proof, this was a claim about how proofs are properly conducted, and not about what is proven. We can only determine that a thought follows from other thoughts in virtue of formal aspects of the symbolic part of the signs by which the thoughts in question are expressed. Frege summarizes this view of proof in the following remark:²³

What can be interpreted is perhaps a symbol or a group of symbols, although the univocity of the symbols - which we must retain at all cost - excludes different interpretations. But an inference does not consist of symbols. We can only say that in the transition from one group of symbols to a new group of symbols, it may look now and then as though we are presented with an inference. An inference simply does not belong to the realm of symbols; rather, it is the pronouncement of a judgment made in accordance with logical laws on the basis of previously passed judgments. Each of the premises is a determinate thought recognized as true; and in the conclusion, too, a determinate thought is recognized as true. There is here no room for different interpretations.

Now it should be clear what Frege is saying. What is proven is a *particular, determinate thought*, although this thought is accessible to us only through its symbolic form; that some set of transitions from propositions to propositions constitutes a proof of this thought depends upon this form. Now suppose, in accordance with the variance view of sense, that the sense associated with a sign could change. It might be thought that any such change would leave proofs unaffected, for there would be no change in the reference of any sign, and thus there could be no change in the truth-value of any proposition. But to think that such change of sense would be innocent would be to misunderstand a central aspect of Frege's

²³“On the Foundations of Geometry II,” (1906), translated by Eike-Henner W. Kluge in Eike-Henner W. Kluge, ed., *On the Foundations of Geometry and Formal Theories of Arithmetic*, (New Haven and London: Yale University Press, 1971), p. 82. In this passage I have altered the translation of the German *zeichen*, which Kluge translates as “sign,” to “symbol,” so that it accords with the usage we have established in the previous section.

conception of logic. This is because if some constituent sense of a thought were to change, then what we would have would be a different thought altogether. But if a sentence that expresses a thought T can also express a distinct thought T^* , then if that sentence stands formally as the conclusion of a proof, how can we say whether it was the thought T or T^* that was proven? Proof would not be determinate; there would be no one definite *thought* that was proven. In such a language there could be no proofs in Frege's view; there would be no logic. Frege makes this point quite explicitly in the following passage:²⁴

As if it were permissible to have different propositions with the same wording! This contradicts the rule of unambiguousness, the most important rule that logic must impose on written or spoken language. If propositions having the same wording differ, they can do so only in their thought-content. Just how could there be a single proof of different thoughts?

Note carefully the second sentence: "This contradicts the rule of unambiguousness, the most important rule that logic must impose on written or spoken language." Here Frege gives a ringing endorsement of the invariance view, for it is this view that accords with fundamental tenets of logical reasoning; to suppose that a symbol could be associated with more than one sense would violate these tenets.

In the continuation of the last remark, Frege provides a diagnosis of the source of the view he is repudiating:

This looks as though what is proved is the wording alone, without the thought-content; and as though afterwards different thoughts were then supposed to be correlated with this wording in the different disciplines. Rubbish! A mere wording without a thought-content can never be proved.

The context of this remark is Frege's dispute with Hilbert as found in Frege's essays *Über der Grundlagen der Geometrie*. In it, Frege accuses Hilbert of a mistaken conception of logic, one that does not recognize that it is thoughts that are subject to proof. It is a conception of logic, according to Frege, that ulti-

²⁴*ibid.*, p. 79.

mately effaces the sense/reference distinction. It is also a conception of logic that has a distinctively contemporary ring; indeed, in this regard modern logic has followed Hilbert's, not Frege's, lead; a "merewording" *can* be proved, with the words open to various interpretations. Perhaps the tendency to attribute the variance view of sense to Frege arises from an inclination to read aspects of the modern conception back into Frege's. But this would be a mistake, and a misreading of Frege's views.

IV. DR. GUSTAV LAUBEN

In "The Thought," Frege makes the following remark:²⁵

. . . for every proper name there shall be just one associated manner of presentation of the object so designated.

Given, as Frege says in "On Sense and Reference," that the sense is wherein the manner of presentation is contained, this appears to be a clear endorsement of the invariance view.

This remark is drawn from Frege's well-known, if not notorious, discussion of Dr. Gustav Lauben and associates. It is of importance in this context because, Frege's pronouncements notwithstanding, it might be maintained that the argument in the previous section for the invariance view finds its application solely within logically perfect languages. In "The Thought," however, Frege couches the discussion in terms of natural languages, and so we can be more comfortable with the claim that it is meant

²⁵"The Thought," (1918) translated by P. T. Geach and R. H. Stoothof (as "Thoughts") in P. T. Geach, ed., *Logical Investigations*, (Oxford: Basil Blackwell, 1977), p. 12. p. 12. The German is as follows:

Es muß also eigentlich gefordert werden, daß mit jedem Eigennamen eine einzige Weise verknüpft sei, wie der, die oder das durch ihn Bezeichnete gegeben sei. Daß diese Forderung erfüllt werde, ist oft unerheblich, aber nicht immer.

While in what follows translations are drawn from the Geach and Stoothof version, their translation of the ellipsis in the cited passage, which reads "So we must really stipulate that," does not capture as well Frege's intention as A. and M. Quinton's translation in *Mind*, 65, (1956), 289-311, at p. 298: "So it must really be demanded that. . ." The remainder of the Quinton's translation of this passage is however rather convoluted: "a single way in which whatever is referred to is presented be associated with every proper name."

to apply to languages in general. But before we delve into the text itself, we need to clarify somewhat more the identity criteria that apply to Fregean languages.

The criterion of identity for Fregean languages, as we observed in section 2, is that languages are the same if and only if they are the same set of propositions, and that they can be the same set of propositions only if their vocabularies of signs are the same. Now suppose that we have the Fregean languages L_1 and L_2 such that the *symbols* of L_1 and L_2 are the same and they have the same syntax, so that as sets of *sentences* L_1 and L_2 are indistinguishable; that is, they are *formally identical* languages. Nevertheless, L_1 and L_2 are distinct as *Fregean* languages because, we assume, they differ in the pairing of symbols with senses; the signs they contain are not the same, and so L_1 and L_2 are not the same set of propositions. In this circumstance, since L_1 and L_2 are identical as sets of sentences, it is appropriate, for some sentence S , that we can speak of the *same* sentence in both languages, although not of the same proposition. In this case, we will say that L_1 and L_2 are *S-equivalent*, but not *P-equivalent*, languages.

Consider now a circumstance, unlike that of the previous section, in which we have two speakers, S_1 and S_2 , such that S_1 speaks L_1 and S_2 speaks L_2 . And, let us assume that L_1 and L_2 are, as described, *S-equivalent*, but not *P-equivalent*. Then, it follows that S_1 and S_2 do not speak the same language. They could only be said to speak the same language if they associate the same senses with the symbols that the languages they speak share; that is, if the languages they speak are *P-equivalent*. If S_1 and S_2 associate different senses with some symbol, then they do not speak the same language, even if the languages are *S-equivalent*.

Now suppose something further, that L_1 and L_2 have the additional characteristic that not only do they agree in their symbols, but that they also agree in their references; that is, each symbol-identical

pairing of signs from L_1 and L_2 have the same reference, (although not the same sense). That is, L_1 and L_2 are not only S -equivalent but are also, in the sense just described, R -equivalent, (but not P -equivalent.) Question: Can S_1 and S_2 speak intelligibly to each other? Can they communicate, even though strictly they speak different languages? The answer is that for practical purposes, yes. So long as speakers use the same symbols to refer to the same things, communication can proceed apace. It will not be of the moment how those references are presented to each of the speakers. All that is of relevance is what is being spoken about, i.e. the reference, and not that speakers of L_1 and L_2 will have different beliefs about that reference.²⁶ Thus, all we require from this point of view for L_1 and L_2 to be identical is that they are S -equivalent and R -equivalent. This criterion will of course be satisfied if L_1 and L_2 are P -equivalent, since then they truly are one and the same language. But it may also be satisfied when they are not P -equivalent, in which case that they are in fact different languages may be effaced.

Notice that it may be opaque to S_1 and S_2 that they are speaking different languages. They may very well think they are speaking the same (Fregean) language, since given what is accessible to them - the symbols and perhaps their references - the languages they speak are non-distinct, since they are S - and R -equivalent. But then, given that they believe the languages they speak conform to principles of proper language design, in particular, the bi-unique relation of symbols and senses, they will think, in the absence of evidence to the contrary, that their languages are made up of the same signs. This assumption of identity of language, though false, thus will be innocent in most communicative contexts, so long as the references determined by the symbol-identical signs are the same.

²⁶Because the customary sense is the indirect reference, if speakers associate different senses with a given sense, they will have different beliefs about that reference.

The view we have just presented is just, with some elaboration, that which Frege presents in the passage from “The Thought” from which the remark cited at the beginning of the section is drawn. The passage begins with Frege telling us that Herbert Garner and Leo Peter associate different senses with the proper name “Dr Gustav Lauben.” He argues to this conclusion by stipulating that Garner and Peter *know* different and disjoint things about Lauben; then if all information characteristic of the object “presented” attained by the grasp of sense is knowledge of that object, it follows that Garner and Peter must grasp different senses. The consequence of this is to linguistically divide Garner and Peter:²⁷

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 they are doing so.

What Garner and Peter do not know is that they are not speaking the same language, (they may know that they are referring to the same person). Frege continues:

Therefore Herbert Garner does not associate the same thought with the sentence ‘Dr Gustav Lauben was wounded’ as Leo Peter wants to express with it.

Indeed he could not, given the postulated difference in the languages they speak. Frege now suggests a workaround, in order to “avoid the awkwardness that Herbert Garner and Leo Peter do not speak the same language.” After all, it appears to the untutored that Garner and Peter are both speaking German.

This is to be accomplished by supposing:

that Leo Peter uses the proper name ‘Dr Lauben’ and Herbert Garner uses the proper name ‘Gustav Lauben’.

The workaround brings the relevant signs in Garner’s and Peter’s languages into conformity with proper linguistic design principles by making them distinct not only as senses, but also as signs; they are now,

²⁷The following passages are drawn from Frege, “The Thought,” *op. cit.*, p. 12.

we can say, *properly* distinct, and so both may be signs in a single language.²⁸ Now there is no bar to Garner and Peter speaking the same language, one which contains the names “Dr Lauben” and “Gustav Lauben,” (but not “Dr Gustav Lauben”), each of which expresses a different sense.²⁹ Garner, Frege proceeds to tell us, may take:

the sense of the sentence ‘Dr Lauben was wounded’ to be true but is misled by false information into taking the sense of the sentence ‘Gustav Lauben was wounded’ to be false.

“So,” Frege says, “given our assumptions these thoughts are different,” since only if the thoughts expressed by the two sentences are different could Garner misjudge one, something he could not do if they expressed the same thought.

Frege has used the artifice of symbolic revision in order to make a point about distinctness of thoughts in languages, such as those we use in everyday life, that depart from logical perfection in that they are, as we have put it, only *S*- and *R*-equivalent. With respect to such identity of languages, with proper names, for every “way that the object so designated is presented . . . there corresponds a special sense of a sentence containing the proper name.” All of the distinct thoughts into which these senses will enter will have the same truth-value, since the languages in question are *R*-equivalent. But even so we must not lose sight of the fact that they are indeed different languages; we must not lose sight that “for every proper name there shall be just one associated manner of presentation of the object so desig-

²⁸Frege discussion of this case anticipates aspects of the Paderewski puzzle introduced by Kripke, *op. cit.*; see Robert Fiengo and Robert May, *De Lingua Belief* (Cambridge: MIT Press, forthcoming), chapters 3 and 4, where the relation of these case is explicitly brought out.

²⁹A subtlety here. To say that Garner and Peter speak the same language is not to say that what they grasp is the same, for it may be that Garner has the name “Gustav Lauben” in his language, but not “Dr Lauben,” while Peter conversely has “Dr Lauben,” but not “Gustav Lauben. This would be no bar, however, to saying that they partake of the same language.

nated.” We should not, Frege tells us, lose sight of this, that is, the invariance thesis, even though for certain purposes of communication, “it is unimportant that this demand be fulfilled”.³⁰

To summarize, we can do little better than Frege’s remark from “The Thought”:³¹

To be sure the same words, on account of the variability of language with time, may take on another sense, express another thought; this change, however, relates only to the linguistic realm.

To the extent that we find variance of sign, in that different senses are associated with a single symbol, it is because there are different languages. This variance can arise, as Frege points out in this remark, because of the diachronic change of language, but it can also obtain between speakers synchronically, as in the circumstances we have been discussing. But these are matters, as Frege rightly says, of language, of how languages are individuated. In any given language, however, there is one, and only one sense associated with each symbol; anyone who speaks this language grasps that association, and no other.³²

³⁰Burge, *op. cit.*, p. 403, says that “In “The Thought” (pp. 516-518), Frege makes similar remarks emphasizing the variability of the sense of a proper name for different users and in different contexts.” (The “similar” here refers to remarks from “On Sense and Reference” that we turn to in the next section.) The pages Burge cites, (from the Quinton’s translation, *op. cit.*), include the material discussed above; however, Burge does not develop any textual analysis of these passages in support of his claim about proper names; in particular, he does not discuss Frege’s apparent direct assertion to the contrary. As it stands, Burge’s claim is little more than an unsupported claim regarding Frege’s views of proper names, one which there is very little reason, if any, to believe.

³¹Frege, “The Thought,” *op. cit.*, p. 28.

³²Frege makes much the same point in “On Sense and Reference.” He says there that “To every expression belonging to a complete totality of signs, there should certainly correspond one and only one [*bestimmt*] 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, *op. cit.*, p. 58) The point Frege is making here is that in a properly designed language, there is sense invariance across contexts, and so such languages can be defined globally; in contrast, the definition of natural languages is inherently local, as they do not show this sort of stability, and in this regard depart from proper design. While it is not altogether clear what Frege means here by context, (historical linguistic epoch, as in the citation from “The Thought” in the text, or something more like context of utterance), we should nevertheless bear in mind the critical point emphasized in the text - natural languages do not depart from proper design in the sense that, *in any particular context, everyone who speaks a given language utilizes the same system of signs*. That is, within a context, for *any* language, sense invariance holds. Burge, for one, misses the point here; he observes that “The implication is clearly that the senses associated with proper names and other indexical constructions shifts with context,” (*op. cit.*, p. 403), and takes this as an endorsement by Frege of the variance thesis. What he misses is that shift of sense with context in turn implies shift to a different language, and that for each of these languages, it is the invariance thesis that obtains.

V. "ON SENSE AND REFERENCE," FOOTNOTE 2

One way of thinking about what Frege is trying to do in the discussion in "The Thought" is to demarcate a line between what constitutes knowing a language and what is needed to use a language. If we ask, according to Frege, whether Garner and Peter know and speak the same language, then the answer is that they do not. But for the purposes of communication, weaker criteria may be sufficient, and, as long as we are careful, we can say that in this realm, Garner and Peter do speak the same language. In "On Sense and Reference," in the famous second footnote, Frege makes much the same points, although there is a more subtle argument being presented because Frege here brings to the discussion an explicitly cognitive dimension as to what speakers *think* the sense of a proper name is, (even when they speak the same language).

After opening "On Sense and Reference" with his discussion of identity statements, Frege spends the next number of paragraphs elucidating what he means by the sense of an expression. In the course of doing so, he says that "The sense of a proper name is grasped by everybody who is sufficiently familiar with the language or totality of designations to which it belongs". Given his use of the definite description, implying that there is one and only one sense of a given proper name, Frege apparently felt that some clarification was needed at this point, which he provides in the following footnote:

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 the 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 occur in a perfect language.

What Frege is saying here seems little different than what he says in "The Thought." If our gaze is limited to *sentences*, and hence just to *S*-equivalent languages, then different speakers may associate different

senses with the proper name “Aristotle,” (although they in fact speak different languages), and this may be “tolerated” so long as all of these senses determine the same reference. But in circumstances in which what is paramount is not the exigencies of communication but rather the structure of the language, such as in a demonstrative science such as mathematics, we must meet a more stringent criterion of uniqueness of sense for proper names. We cannot, so to speak, play along as if there were just one language; rather we must insure that there *is* only one language in question, and that it meets the relevant standards of sense invariance.

Glossing the argument in this way presents it as a somewhat less articulated rendering of the argument presented in “The Thought.” In particular, Frege does not draw out the consequence here that speakers who associate different senses with “Aristotle” speak different languages. There are, however, aspects of the argument that we find here that do not resonate in the presentation in “The Thought,” and which perhaps give us a somewhat different and perhaps fuller sense of Frege’s views on the senses of proper names. These devolve on Frege’s comment that what differs in regard to the sense of “Aristotle” are people’s *opinions*.

To see this, consider a speaker S who speaks language L . In order for S to know L , it must be the case that S grasps the senses associated with the symbols of L , and correlates them as signs. This will be true of any speaker of L , so that if S and S' are both speakers of L they grasp the same senses, and associate them with the same symbols. If S and S' are both speakers of L , that is, of the same language, and “Aristotle” is a proper name in L , then S and S' associate the same sense with “Aristotle.” It should be clear from our discussion thus far that this obtains not only for their knowledge of L , but also for their use of L ; on any occasion of use by S and S' in any context, “Aristotle” expresses the same sense.

Now suppose that we were to inquire of *S* and *S'* what they thought the sense of "Aristotle" is, to give their *opinions* on the matter. *S* says he thinks the sense of "Aristotle" is the pupil of Plato and teacher of Alexander the Great; *S'* says that in his view it is the teacher of Alexander the Great who was born in Stagira. Given that *S* and *S'* have these divergent opinions, perhaps even adamantly so, they will accordingly take it that the sentence "Aristotle was born in Stagira" expresses different thoughts. That they believe that different thoughts are expressed - something that they are wrong about - will often be tolerable in everyday life, so long as they agree that the senses determine the same reference, as this delimits how much people can disagree in their opinions about the sense they attach to the name without breakdown in communication.

Note that on this way of viewing the "On Sense and Reference" footnote, since *S* and *S'* speak the same language, they have opinions about one and the same thing; in that both have the name "Aristotle" in their language, they have each grasped the same sense. They merely *think* what they have grasped is different. How could this be? Consider an analogy. Suppose that two people see an object, although under very disparate perceptual circumstances, and are asked what they have seen. They each provide a distinct description that properly describes the object they have seen, reflecting their different perspectives of the object perceived. It may turn out that these descriptions are so different that neither would think that they are describing the same object. But while each would think that the other had perceived a different object, it would of course be absurd to conclude that there *are* different objects.

With senses, the situation is quite parallel, once we recall that for Frege senses are objects, albeit abstract. So, whereas perception is the cognitive relation in which we stand with respect to concrete objects, the comparable cognitive relation in which we stand to abstract objects is grasping, and what we

have just said for concrete objects can be repeated for senses, *qua* abstract objects, with grasping replacing perceiving. Thus, suppose that *S* and *S'* have grasped the sense of "Aristotle," but that they may have done so under disparate contextual circumstances. Upon inquiry as to what the sense of "Aristotle," is, they each describe what they think it is. Their views, their opinions, may turn out to be rather different - the pupil of Plato and teacher of Alexander the Great on the one hand, the teacher of Alexander the Great who was born in Stagira on the other. These are sufficiently different that it might be thought that *S* and *S'* had grasped different senses. But, comparably to perception, it would be a fallacy to conclude from *S* and *S'* thinking they had grasped different senses that there *are* different senses.

As we are reconstructing the footnote from "On Sense and Reference," it is an affirmation of the invariance view of the sense of a proper name. For a given language *L* that contains a proper name, e.g. "Aristotle," there is associated one and only sense that it expresses, and any speaker of *L* who has "Aristotle" in their language grasps this sense. Speakers who so grasp this sense have, on this view, opinions that they can express as to what they have grasped; they can say what they think *the* sense is, but nothing requires that they think it is the same. Now in order for speakers to have different opinions, they must have conscious access to the information that is characteristic of the mode of presentation of the sense they have grasped. It cannot be, however, that mere grasp of sense is sufficient for having a sense in mind *in toto*, for then we would not expect speakers to differ in what they think the sense is; if all grasp a given sense in this way, they would all make the same report of what they think the sense is. Access to sense thus may be only partial. But if so, it could then be that speakers differ in what they take the sense to be; the reason that speakers' views as to the sense may differ is that they may access different aspects of the sense. Speakers, as we have it, may bring senses to mind, in the sense of having

consciousness of them, although this consciousness may be partial relative to the sense grasped, and divergent from speaker to speaker. The differing descriptions that speakers provide are expressions of this consciousness.

While Frege makes few remarks about the relation we have in consciousness to the senses we grasp, where he does, in his notes of 1914 on “Logic in Mathematics,” he seems to eliminate the possibility that we can have senses in mind at all:³³

a thought . . . is in no way to be identified with a content of my consciousness.

If this is Frege’s take on the relation of sense and consciousness, it would seem to put the scotch on the reading we have been pursuing. Examination of how Frege reached this conclusion, however, leads to just the opposite conclusion, that Frege is in fact endorsing the view we are espousing. To see how this is, let’s consider Frege’s line of reasoning.

Frege’s discussion is placed in the context of making clear that the logical status of thoughts, though related, is to be distinguished from our intuitive notion of thinking; what must be kept clear is the way in which thoughts have “logical significance” as opposed to their “psychological significance.” Frege begins explicating this by the following introspection:

When we examine what actually goes on in our mind when we are doing intellectual work, we find that it is by no means always the case that a thought is present to our consciousness which is clear in all its parts.

“When we use the word ‘integral,’” Frege continues, “are we always conscious of everything appertaining to it sense?” His answer is negative: “I believe,” he says, “that this is only very seldom the case.” We are limited in our conscious access to sense because our minds are too puny:

³³All quotations from “Logic in Mathematics” (1914), translated by Peter Long and Roger White, in H. Hermes, F. Kambartel and F. Kaulbach, eds., *Posthumous Writings*, (Chicago: The University of Chicago Press, 1979), p. 209.

If we tried to call to mind everything appertaining to the sense of this word, we should make no headway. Our minds are simply not comprehensive enough.

Frege then draws the conclusion given above, that “a thought . . . is in no way to be identified with a content of my consciousness.” Given that logical reasoning applies to thoughts, logic cannot be a theory of our conscious thinking. But “nevertheless,” Frege tells us, considerations of how we consciously entertain senses is of “great importance for thinking as this actually takes place in human beings.”

In reflecting upon Frege’s conjectures about thinking in human beings, the key observation is that Frege is not saying that sense *per se* cannot be identified with the content of our consciousness, but only that in general sense *in toto* cannot be. What we cannot reliably bring to mind is a sense in whole. But what is not excluded on Frege’s view is that some *part* of the sense may be brought to mind. While we may not be able to get our heads completely around a sense, we might be able to get it around partially. To extend our analogy, just as with perception we will have conscious access to some of the aspects of the object perceived, but not others, with the grasp of sense, we will have conscious access to some of the aspects of the sense, but not others. These aspects will be *proper* parts of senses; they must, as far as a speaker is concerned, uniquely identify a reference, since otherwise the speaker would not believe that they have grasped a sense. But if our conscious access to senses is partial in this way, then what one speaker accesses need not be the same as what another accesses. What one person gets his head around may not be what another person does. Individuals can come to characterize what is grasped in highly disparate ways, depending upon various personal contingencies of grasping, (just as with perception). But what this means is that different speakers may come to have differing opinions about the sense they grasped, the very same sense, invariably expressed by a particular sign, and accordingly may believe that different thoughts are expressed. This is just as Frege tells us in the second footnote of

“On Sense and Reference.” Otherwise, we have no recourse but to conclude that these speakers speak different languages, for their opinions would be of different senses.³⁴

VI. SENSES ARE NOT DESCRIPTIONS

As we are characterizing Frege’s view, it can be summarized as follows: we - those who have grasped a sense - can consciously characterize that sense via a description that is uniquely satisfied by the object presented by that sense, although at best the description provided may characterize the sense only partially. More precisely, the aspect of sense that is given (in part) by the speaker’s description is its mode of presentation, and it is about this that speakers may have divergent opinions, as described above.

There is an important implication of Frege’s conception that needs emphasis: the descriptions provided by speakers are *not* to be identified with the senses they grasp. This is because *senses are not descriptions*. If they were, an immediate problem would arise, since the descriptions by which senses are given are themselves part of a language. Consequently, they would have to express a sense, which itself, by hypothesis, would also be given by a description, and it too would express a sense, which would be a description. And so on. One might think that this vicious regress could be broken if the sense-giving descriptions had some sort of privileged cognitive status, so that we need ask only what object is (uniquely) presented, that is, what is their reference, and not what sense they express. But then if our

³⁴I take it that it is Frege’s view that we *can* have consciousness of senses that we have grasped; this is all that is required for his purposes. Yet we may pose a further question that Frege does not consider: is our consciousness of sense either constitutive or exhaustive of our cognitive experience of grasping a sense? If the answer to either is negative, this would imply that there is a further cognitive reality to grasping a sense that is independent of consciousness, some form of tacit knowledge of sense. And although we might hold that this knowledge of sense is inherently partial, we might hold otherwise, that it constitutes knowledge of a sense in its entirety. If so, limitations on our consciousness of sense could be held to reflect how we bring to mind aspects to this knowledge, rather than how we bring to mind directly aspects of the sense itself. But regardless of the inherent interest of this issue, the point remains that grasp of sense, regardless of whether it immediately results in a conscious or tacit state, results in partial consciousness, and this is the important point for the matters at hand.

analysis of sense-giving descriptions does not allow us to appeal to sense to fix reference, it would seem that the alternative would be to say that such descriptions determine what objects satisfy them by being analyzed in accordance with the theory of descriptions.³⁵ But reading Russell into Frege in this way would be to give the game away; there is no evidence in Frege's writings to support the view that senses, including those of proper names, are to be given as descriptions that in turn are to be analyzed in accordance with anything like the theory of descriptions.

So far I have considered only the view that the senses of proper names *are* descriptions. A temporizing move might be to hold that proper names do not strictly speaking have senses at all, but gain one by being associated with some definite description, (with this association perhaps varying from speaker to speaker, or even utterance to utterance). The sense of the description would then be given in the standard way by the composition of the senses of the constituent concept-words to give a sense whose reference is an object, (not a concept). This sort of quasi-Russellian analysis, (in the sense that names are "eliminated" in favor of descriptions), would be a way to analyze the senses of names as those of descriptions. The problem is that as a reading of Frege, there is again no textual support that Frege held anything like this view. What he does hold is rather that proper names express a sense *without* any intermediation of descriptions.

If, for Frege, senses are not descriptions, and hence not linguistic nor subject to further analysis, then, one might be curious to know, what are they? Frege himself is quite clear about this: senses are *objects*, albeit abstract objects, that exist independently of any speaker's grasp of them. This is certainly the conclusion we would draw from tracking Frege's linguistic usage, as was observed early on in Frege

³⁵Thus, on Russell's analysis, we do stand in a privileged cognitive relation with the components of descriptions; they are universals with which we are directly acquainted.

scholarship.³⁶ Thus, it was Frege's practice throughout his writings to use a type of locution - "the sense" - whose reference is to an object; as Frege says in "On Concept and Object," "the singular definite article always indicates an object."³⁷ In "On Sense and Reference," Frege makes this usage explicit. "In order to speak of the sense of an expression 'A'", he remarks, "one may simply use the phrase 'the sense of the expression "A"'.³⁸ The clear conclusion to draw is that made by Charles Caton,³⁹ to whom the point here is due: "it follows from the fact that such an expression involves the singular definite article that the sense of any expression is an object."

It is worth noting that Frege allows for the locution "The sense of the expression "A"" without any of the qualifications that attach to his usage of "the concept *horse*" surveyed in "On Concept and Object." There the issue was that the language requires us to refer to an object, although what we wish to speak of is really something other than an object; hence we may conclude from Frege's unrestricted usage that senses are objects *sui generis*, and do not stand proxy for anything else. In particular, this would indicate that Frege did not take the reference of "The sense of the expression "A"" to be a proxy-object for any sort of function, as value-ranges, the references of expressions like "the concept *horse*," are for concepts. (It would be curious if he did. Tempting though it might be to formalize Frege's talk of

³⁶An early reference in the English commentary on Frege in which this is observed is Howard Jackson in his "Frege's Ontology," *The Philosophical Review*, 69, (1960), 394-395.

³⁷"On Concept and Object" (1892), translated by P. T. Geach, in Peter Geach and Max Black, eds., *Translations from the Philosophical Writings of Gottlob Frege* (Oxford: Basil Blackwell, 1952), p. 45.

³⁸Frege, "On Sense and Reference," *op. cit.*, p. 59. It is this claim that Russell takes exception to in the Gray's Elogy argument, in which he questions the coherence of the notion of reference being presupposed. Russell argument is that the normal mechanisms of reference, by which it is senses that refer, does not work for referring to senses; rather, what we need for this is an *abnormal* mechanism, in which reference is explicated in some other way than that sense determines reference. But what way this is "remains wholly mysterious" according to Russell, the explication "an inextricable tangle," so much so that the distinction of sense and reference has been "wrongly conceived" and "the point of view in question must be abandoned." (Bertrand Russell, "On Denoting," *Mind*, 14, (1905), 479-493, at p. 487-8.)

³⁹"An Apparent Difficulty in Frege's Ontology," *The Philosophical Review*, 71, (1962), 462-475, at p. 464.

senses as “determining” or “presenting” as functional mapping onto references, it is hard to see what this mapping would be *from* other than linguistic expressions, so making the existence of senses depend upon that of language.) Thus, given Frege’s doctrine that anything that can be referred to is either a function or an object, if senses are not the former, then given that *sinn* can stand as *bedeutung*, not only directly but also indirectly as in propositional attitude contexts, in which signs have references to their customary senses, it follows that senses are objects.⁴⁰

That this was Frege’s view is buttressed by a further observation. For Frege, identity criteria are given via abstraction principles, statements of the form $[\alpha = \beta \text{ iff } C]$, where the left-hand side is an identity statement and the right-hand side is a condition over the terms of the identity. Such conditions can only be given for objects; indeed, this follows in the logic of *Grundgesetze*, in which there is only one identity relation and that is objectual identity, so what stands on either side of an identity sign can only

⁴⁰This argument raises the issue of whether *all* senses are objects, that is, not only senses that have objects as their references, but also senses that have concepts (more generally functions), as references. By the first argument given, since we can speak of “the sense of the concept-word ‘horse’,” it follows that the latter sort of senses are objects too. But note that this implies that the concatenation of thoughts would be composed of atomic elements, somehow strung together, and would be unlike the concatenation of sentences, which reflects the relation of the references of their constituents, between an unsaturated concept, and a saturated object. Frege does explicit remark to the contrary, for instance, as the end of “On Concept and Object,” and in the opening paragraph of “Compound Thoughts,” where he says that we can “distinguish parts in the thought corresponding to the parts of a sentence, so that the structure of the sentence serves as an image of the structure of the thought.” (“Compound Thoughts” (1923), translated by P. T. Geach and R. H. Stoothof, in P. T. Geach, ed., *Logical Investigations*, (Oxford: Basil Blackwell, 1977), p. 55) This would appear to imply that concept-senses, as well as concepts, are unsaturated, and so cannot be objects. One way of understanding this would be to take concept-senses as functions from object-senses to thoughts, a view suggested by Peter Geach in his “Critical Notice: *Frege: Philosophy of Language* by Michael Dummett,” *Mind*, new series, 85, (1976), 436-449, and criticized by Dummett in Chapter 13 of his *The Interpretation of Frege’s Philosophy*, (Cambridge: Harvard University Press, 1981). The view is also considered in Richard Heck and Robert May in our “Frege’s Contribution to Philosophy of Language,” in E. Lepore and B. Smith, eds., *Oxford Handbook of Philosophy of Language*, (Oxford: Oxford University Press, 2006); we observe there that this view would not be sufficient to explain why “Cicero is a Roman” and “Tully is a Roman” express different thoughts, unless it were stipulated that the functions in question always map distinct arguments onto distinct thoughts. This leaves us with a quandary. If the senses of predicates are not functions, then given that Frege’s ontological distinction is absolute and exhaustive, they must be objects. This is fine, as we would now have a reference for “the sense of the concept-word ‘horse’,” and we would be able to assert the identity of senses of concept-words, (cf. the discussion of identity criteria immediately below). But it would leave us at something of a loss to say what “unsaturated” means when applied to the senses of predicates.

be signs for objects. Frege formulates an identity condition for the special case of thoughts, the senses of sentences, in a letter to Husserl from December, 1906:⁴¹

Now it seems to me that the only possible means of deciding whether proposition *A* expresses the same thought as proposition *B* is . . . If *both* the assumption that the content of *A* is false and that of *B* 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 knowing whether the content of *A* or *B* is true or false, and without requiring other than purely logical laws for this purpose, 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*, [and vice versa].

While there are matters of interest about the way that Frege formulates this condition,⁴² what is more of the moment is that Frege feels that a condition *could* be given at all, for this presupposes that thoughts, and hence the senses of which they are composed, are objects, the only sorts of things for which identity-criteria can be given to start with.

Frege's reason, first and foremost, for adhering to the doctrine that senses are objects was his view that this bestowed upon senses their *objective* status. This is brought out in Frege's well-known remarks in the latter part of "The Thought" and elsewhere, including in "On Sense and Reference." In

⁴¹Letter to Husserl, 12 December 1906, translated by H. Kaal, in G. Gabriel, H. Hermes, F. Kambartel, C. Thiel and A. Veraart, eds., *Philosophical and Mathematical Correspondence* (Chicago: The University of Chicago Press, 1980), p. 70.

⁴²Note Frege's emphasis that it is the "only possible means." One often hears it said that an identity criterion for senses can be specified such that senses are identical if and only if they can be substituted *salva veritate* in oblique contexts. Since in such contexts the customary sense is the indirect reference, given Leibniz's Law, if substitutivity in such contexts preserves truth, then the substitutends have the same customary sense. Note, however, that this condition is not a *logical* condition; given the mention of oblique contexts, the conditions cannot be stated within the vocabulary of (pure) logic. In this regard, as an identity criterion on senses it differs from, say, Hume's Principle, Frege's criterion for identity of numbers, which can be stated in this manner. (This is not to say that Hume's Principle is a logical principle, an issue that has been a matter of some considerable debate; cf. George Boolos "Is Hume's Principle Analytic," in George Boolos, *Logic, Logic and Logic*, (Cambridge: Harvard University Press, 1998) and Crispin Wright "Is Hume's Principle Analytic," *Notre Dame Journal of Formal Logic*, 40, (1999), 6-30. All we are saying is that given that Hume's Principle can be stated using only the resources of pure logic it is a *candidate* for being a logical principle, something in which a statement that cannot be so given is not.) It is notable that the identity criterion that Frege himself proposes does not explicitly give an identity criterion that presupposes a language with terms for propositional attitudes, and so, unlike that based on substitution in oblique contexts, is a logical condition; if it is satisfied, then, Frege says, "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*."

these passages, Frege compares ideas and concrete objects with thoughts, arguing that while thoughts, *qua* sense, share certain properties with ideas and concrete objects, they are not to be identified with either; “a thought,” Frege tells us, “belongs neither to my inner world as an idea, nor yet to the external world, the world of things perceptible to the senses.”⁴³ For senses, therefore:⁴⁴

A third realm must be recognized. Anything belonging to this realm has it in common with ideas that it cannot be perceived by the senses, but has in common with things that it does not need an owner so as to belong to the content of his consciousness.

While this realm is not populated by “the sort of thing to which is usual to apply the term ‘actual’”, they are nevertheless things with which we have cognitive relations, so that:⁴⁵

Outside our inner world we should have to distinguish the external world proper of sensible, perceptible things and the realm of what is non-sensibly perceptible.

To “non-sensibly perceive” an object is just to grasp it; “by grasping a thought,” Frege tells us, “I come into a relation with it, and it to me.”⁴⁶ Entering into such relations with senses is open to all; since thoughts are “independent of me; other men can grasp them as much as I.” But this universality just follows from the objectivity of senses, a consequence, Frege thought, of objects, concrete or abstract, being cognitively accessible to all, something that is so regardless of the language anyone speaks.⁴⁷

⁴³Frege, “The Thought,” *op. cit.*, p. 26.

⁴⁴*ibid.*, p. 17.

⁴⁵*ibid.*, p. 27.

⁴⁶*ibid.*, p. 28.

⁴⁷Although Frege distinguishes abstract from concrete objects, both are nevertheless “ordinary” objects, in that they can be determined by modes of presentation; thus, numerals express senses that have numbers as their references. But what Frege leaves open about senses is whether they too are ordinary objects, although perhaps it is just that his answer is overdetermined. If he were to abjure from senses, *qua* objects, having modes of presentation, then there could be no appeal to the semantics of sense and reference to explain how we comprehend “the sense of the expression ‘A’.” But if this expression has no sense, and so no reference, then whence the support to start with for the inference that senses are objects? Yet abjure we might, especially when we consider senses in a more cognitive light. We may think of modes of presentation as the cognitive states we enter into upon grasp of a sense, that characterize our cognitive perspectives on objects. But while we have perspectives on things, we do not on our perspectives of those things; there is a certain absurdity to having perspectives on our

(continued...)

For Frege, then, the claim that senses are objects amounts to the claim that senses have properties that are characteristic of objects, in particular their independence from speakers and the languages they speak, and their concomitant universal accessibility. Given these properties, in the ontological space Frege assumes - his inclusive ontology of functions and objects - he had little option other than to slot senses into the theory as objects; in this regard, Frege's claim is perhaps best understood as more theoretical than metaphysical. What other answer could Frege give to the question of what senses *are*, given their properties? But to ask this is not the same as asking what senses *do*, or how they are situated cognitively. In answering these questions, descriptions, though to be kept distinct from senses themselves, do have a notable and important role to play. We can take Frege as saying as much in the following remark:⁴⁸

Although the thought does not belong with the contents of the thinker's consciousness, there must be something in his consciousness that is aimed at the thought . . . not to be confused with the thought itself.

Here, Frege clearly distinguishes our cognitive awareness of sense from sense itself, and it is natural to think that the descriptions speakers provide express their conscious reflections on the content of the

⁴⁷(...continued)

perspectives. Observing this, Akeel Bilgrami and Carol Rovane, in their "Mind, Language and the Limits of Inquiry," James McGilvery, ed., *The Cambridge Companion to Logic*, (Cambridge: Cambridge University Press, 2005), draw out as a corollary that modes of presentation are cognitively *transparent*; we know them, as it were, whole, no part can be masked from us, (although it may be from our consciousness; cf. fn. 34). We can be short of knowledge of objects, for if we were not we could not be unaware of identity, that, for instance, that Hesperus is Phosphorus. But how could senses ever be presented to us in such a way that we would not know immediately of their identity, whether the sense of "A" is the same as the sense of "B"? But if we have no identity puzzles for senses because modes of presentation are transparent to us - "The sense of "A" is the same as the sense of "B"" would be analytic - then it will also be the case that someone who believes that Cicero is a Roman, but that Tully is not, is in no way uninformed about her beliefs; it cannot be that she has contradictory beliefs but just does not realize it. What she is un- (or mis-) informed about is something about the world, not her beliefs. If we are to conclude from these considerations that senses are not objects, or at least not ordinary objects, it cannot be, however, at the expense of the objectivity and accessibility of senses, or at least of the sort of information that senses are intended to carry; we do not want to give up on the reasons that drew Frege to claim that senses are objects. Arguably, Bilgrami and Rovane maintain, we have the epistemological wherewithall to make good on this, even if Frege did not.

⁴⁸Frege, *op. cit.*, p. 26.

senses they have grasped. So, although the descriptions and the senses are not, as Frege says, to be confused, the former is nonetheless “aimed” at the latter by representing our conscious experience of what has been grasped. Given that a sense is something whose nature is to determine a reference, by giving a description of that reference, of the object presented, we are thereby giving a characterization (albeit partial, yet proper) of a sense. To the extent that we have conscious access to the senses we grasp, how else other than by a description of reference are we to put into words what these senses are? But from this, it would be an obvious fallacy to conclude that senses *are* descriptions; indeed, to be clear, we must be careful not to confuse, according to Frege, senses as objects, and the descriptions by which we, *qua* graspers, characterize their conscious embodiment.⁴⁹

VII. PSYCHOLOGISM *vs.* PSYCHOLOGY

In bringing our discussion to a close, we may ask what ultimately underlies Frege’s allegiance to the invariance thesis; why at heart is it of such importance to Frege, (as opposed for instance to Russell), that there be only one sense always associated with each expression. Conversely, we may ask what leads Frege to reject the variance thesis in all its forms. The answer is apparent when we consider the context in which Frege discusses the matter. To take an example, in “On Sense and Reference” Frege tells us that “. . . one need have no scruples in speaking simply of *the* sense.”⁵⁰ He makes this endorsement of the invariance thesis in the context of contrasting senses, more specifically thoughts, with ideas. Ideas are subjective and variant, essentially so; “in the case of an idea,” Frege carries on the remark above, “one

⁴⁹I am indebted to Akeel Bilgrami for illuminating discussion of the issues discussed in this section.

⁵⁰Frege, “On Sense and Reference,” *op. cit.*, p. 60.

must, strictly speaking, add to whom it belongs and at what time.” Because of their privacy, ideas cannot be shared, even ideas of the same thing. Senses have just the opposite properties; they are objective and public, they “may be the common property of many and therefore . . . not a part or a mode of the individual mind.”⁵¹ By embracing the invariance thesis, and the concomitant rejection of the variance thesis, Frege is thus resisting the descent of thought into ideas, for it is a mark of ideas, as opposed to thoughts, that they vary from speaker to speaker; variance is a property of ideas, invariance, with respect to their linguistic expression, a property of senses. “The proper means of expression for a thought,” Frege tells us, “is a sentence. But a sentence is hardly an appropriate vehicle for conveying an idea.” In this regard, “Thoughts, are fundamentally different from ideas (in the psychological sense).”⁵²

To be sure, Frege continues the comments cited at the beginning of the previous paragraph with a remark that on the face of it might be thought to temporize, if not wholly disown, his allegiance to the invariance thesis. What he says is:

It might perhaps be said: Just as one man connects this idea, and another that idea, with the same word, so also one man can associate this sense and another that sense.

But there is no intention with this remark to repudiate the invariance thesis. Rather, Frege means here to allow that *even if* one were to think that thoughts and ideas do not differ in this way, nevertheless it would still be a mistake to identify them. This can be seen from Frege’s next remark:

But there still remains a difference in the mode of connexion. They are not prevented from grasping the same sense; but they cannot have the same idea.

So while it might be conceivable, *counterfactually*, that thoughts and ideas are not differentiated with respect to (in)variance, nevertheless there remains a residual difference between them, in that thoughts are

⁵¹*ibid.*, p. 59.

⁵²Frege, “Logic,” *op.cit.*, p. 131.,

omni-accessible, and ideas are not. Thus, at most with these remarks Frege allows that vis-a-vis ideas, the invariance of thoughts may not be on an equal footing with their accessibility; but this hardly rates as a condemnation of the invariance thesis, or as a sanctioning of its inverse.

For Frege, the objectivity and publicity of senses is directly tied to their status as objects. But in saying this we nevertheless must be mindful that *qua* objects they are rather queer. This is not because they are abstract.⁵³ Rather, the peculiarity of senses arises from their being defined relative to other things distinct from themselves, *viz.* their references, (whether they be, given Frege's ontology, functions, including the special case of concepts, of *n*-ary order, or objects, both abstract and concrete, including the True and the False as the references of thoughts, as well as senses themselves, when the references of indirect senses). This characteristic of senses, moreover, extends to the very heart of Frege's conception of logic, since for Frege inferential relations hold not merely between thoughts, but rather only between *true* thoughts, that is, thoughts that have the True as their reference. But peculiar in this regard as senses may be, it is nevertheless essential to them, for that they have this characteristic allows them to play the role that they do as linguistic meanings; grasped as expressed by terms of a language, senses connect symbols to the things signified by those terms.

This aspect of senses, however, raises a persistent worry. If senses are to present objects, then they must do so in virtue of *information* about the objects so presented. But how is this information, which by hypothesis is encapsulated as an objective mode of presentation, ultimately to be kept distinct from our subjective conception of objects? If these cannot be kept distinct, then it would appear that

⁵³For an illuminating discussion of the role of abstracta in Frege's thought see Teri Merrick *Frege's Distinction between Concepts and Objects: A Descendant of Kant's Distinction between Concepts and Intuitions* (Doctoral dissertation, University of California, Irvine). Merrick makes the point that Frege's commitment is not to abstract objects *per se*, but rather reflects deeper commitments to scientific theories that incorporate such objects as aspects of their conceptual and empirical structure. Frege's embrace of abstracta is thus relative to the role they play in scientific explanation.

inevitably the former would collapse into the latter, and one would have to admit that senses, in their inherent subjectivity, could vary from speaker to speaker. (So consider the following remark of Graeme Forbes: “I do not deny that the sense of a proper name can vary from person to person, for the sense of the name will express something like a *conception* of its bearer which the subject associates with the name.”⁵⁴) To admit this would thus place Frege on a slippery slope to a sort of psychologism about senses, while perhaps not as a thesis about the foundations of logic, to wit that the personal, subjective psychological states of individuals are the objects of reasoning, but as a thesis that such states are the meanings of linguistic expressions. If the descent into psychologism were inevitable, it would minimally create a tension in Frege’s thinking, ultimately an unstable one, between the role of thoughts as the objects of reasoning, and their role as objects of judgement.

That such descent is inevitable would seem to follow from the following argument. Suppose that we have (senses with) objective modes of presentation: can they fail to have a reference? If, as we said above, senses are *defined* relative to the objects that are their references, then it would follow that there are no senses without references. From this it would follow that all thoughts would be complete *definite* thoughts - i.e. either true thoughts or false thoughts - and this would be so for all languages, logically perfect or not. Continuing the line of reasoning, it follows that the only way that we could have a term in a language that does not have a reference is if it does not express a sense; “Pegasus,” on this view, would express no sense, and sentences containing such a term would not express any thought. Since such sentences express no thought, they could neither be involved in logical reasoning nor would they have judgeable content, (there would be no grounds for establishing their truth or falsity), and

⁵⁴Forbes, *loc. cit.*

indeed these are, according to Frege, just the properties of sentences containing non-referential terms. But we are left then with a yawning question: why is “Pegasus flies” even *intelligible*? Not because it expresses a thought; that is, not because of our grasp of objective senses. The alternative is that we can understand such sentences because subjective conditions are satisfied, where we take such conditions as “modes of presentation” that are conceptual in nature, and therefore need not map onto existent objects, (we presumably can have a conception of Santa Claus without there being any such thing). But given their subjectivity, such modes of presentation would be private and variable from speaker to speaker, and as such would be indistinguishable, from a cognitive perspective, from ideas. And so, we will have started the slide into the morass of a psychologism of sense, especially so since once the role of subjective modes of presentation is granted, it will become difficult to distinguish cognitively such ersatz conceptual representations from real ones, that is, those that arise from the grasp of sense, and so represent actual references.⁵⁵

⁵⁵The argument just surveyed adapts an argument presented by Michael Kremer in his “Sense and Meaning: The Origins and Development of the Distinction,” (ms., University of Chicago); cf. Section IX. Kremer develops his argument starting with an observation initially due to Michael Dummett, in his paper “Truth,” (reprinted in *Truth and Other Enigmas* (Cambridge: Harvard University Press, 1978)). Frege maintains that a truth-predicate is eliminable because the statements “*p* is true” and “The thought that *p* is true” express nothing more than what is expressed by “*p*” itself. This is not so, however, if “*p*” contains a term whose sense does not determine a reference, since then “*p*”, “*p* is true” and “The thought that *p* is true” do not express the same thought; “*p*” in this circumstance is neither true nor false, but both “*p* is true” and “The thought that *p* is true” are false. Insofar as this is an issue about inference, Frege has a ready dodge, in that logically perfect languages contain no terms without reference. Kremer, however, sees a different problem looming; in languages in which truth is ineliminable as a property of thoughts, Frege’s conception of judgement, based on a relation between thoughts and a designated object, will be jeopardized. (There is much to be said about this claim, which we leave for another occasion.) Kremer’s response, as per the argument in the text, is that terms without reference are also terms without sense; on this assumption all three of the statements above return to being on par, as being neither true nor false. Kremer then draws out the consequences that modes of presentation, necessary in order to link thoughts to what they are about, and hence to facilitate their judgement, are inherently “private, subjective, and can vary from speaker to speaker,” thus committing Frege to a psychologism of senses. Frege’s remarks on the variance of sense are to be understood as indicating Frege’s acceptance of this characteristic of senses. This creates, according to Kremer, a fundamental underlying tension in Frege’s conception of senses with his claims that they are objective and omni-accessible: “The idea of a “common store of thoughts” is threatened when the sense of our words is reduced to the interpretation placed on them by each individual speaker.” Kremer is correct in pointing out that this is the consequence of the view he describes; where I think Kremer errs is in holding that Frege held that senses, including their modes of presentation, *ever* have the characteristic subjective privacy of ideas. There is no tension in Frege’s views precisely because of his care in distinguishing senses from ideas.

The significance of this argument, were we to accept it, should not be underestimated, for it extends beyond a claim about the psychologism of sense, implying that sense is not to be identified with meaning. Presumably, if a sentence is intelligible to a speaker, so that the speaker can be said to understand that sentence, it is because the speaker knows the meaning of the sentence in question. Given the intelligibility of sentences containing terms without reference, it follows that the speaker knows the meaning of such sentences. But such sentences do not express thoughts; hence grasping the thought expressed by a sentence is not the same as knowing its meaning. Consequently, the characteristically Fregean thesis that it is the grasp of thought that allows a speaker to attain the sort of cognitive state that constitutes understanding a sentence, so that it is the thought that constitutes the meaning of that sentence, is undermined, at least as a general thesis about language.⁵⁶

It seems to me that the argument we have been reviewing should be understood in a rather different light than leading to these conclusions. The more compelling way to understand its significance is as a sort of indefinability result; that is, if senses, inclusive of their modes of presentation, are objective, then they are not definable. Definability for Frege, we should note, is not a requirement for objectivity; for some objects, we can at best just elucidate their character by describing how they work and the roles they play. Senses are like this; we can characterize their function in language and thought, but we cannot define them. (Senses, in this regard, are more like chairs than numbers.)⁵⁷ If we take this to be

⁵⁶That is, it could still be maintained that in logically perfect languages, in which there are no terms without reference, that thoughts are the meanings of sentences. But now such languages would no longer be continuous with the general conception of language, for we would have at least two sorts of languages, those in which thoughts are meanings, and those in which they are not. This would conflict, however, with Frege's view of language; see discussion in section II.

⁵⁷While senses cannot be defined, they can be references (of terms that occur in oblique contexts), and this is sufficient, in Fregean terms, to establish their objectual status. (For discussion of the relation of objectivity and reference, see May, *loc. cit.*, and Crispin Wright, *Frege's Conception of Numbers as Objects* (Aberdeen: Aberdeen University Press, 1983), chapter I.) Lack of definability, however, may be a bar to a logic of senses; so, for Frege, it is the definability of numbers, *qua* abstract objects, that brings them within the purview of logic. Note that by
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the import of the argument, then it does not support the dire conclusions about psychologism and meaning, as there is nothing compelling us to hold that terms without reference are also terms without sense. The elucidation of sense is such that it can be, as Frege puts it, both proper and mock; to terms without reference “we cannot deny . . . a sense,” even though it will not be a “definite sense,” nor can we deny sense to sentences that contain such terms, although the thoughts they express will be “mock thoughts,” to be contrasted with “thoughts proper, thoughts that are either true or false.”⁵⁸ Such mock thoughts are sufficient, according to Frege, for understanding a sentence, although it will be understood in a special way, as fictitious. Thus, understood as an indefinability result, the argument can be brought into alignment with what Frege explicitly says about such terms, rather than being at odds with it.

Although we should recognize that nowhere in Frege’s writings does it surface that there can be intelligible sentences of a language that do not express a thought, if we were to hold that there can be terms without sense, but that nevertheless have associated (subjective) modes of presentation, we would be committed to holding that modes of presentation are distinct from senses in a way that the question can arise of their objectivity independently of the question of the objectivity of sense itself. (Thus, one who accepted the argument above would distinguish senses as the objects of reasoning and judgement from subjective modes of presentation as the grounds for comprehension and communication.) I do not think, however, that this is correct, as it is based a faulty understanding of the relation of sense and modes of presentation, even though there is an ambiguity in the way their relation is understood. On

⁵⁷(...continued)

indefinability we mean lack of explicit definition, the only sort of definition that Frege countenances. Although we might be able to give identity criteria for senses, (see footnote 42), this would not be sufficient as a definition, given Frege’s rejection in *Grundlagen* of identity criteria as contextual definitions in the face of the Caesar problem.

⁵⁸Frege, *op. cit.*, p. 130, except the term “definite sense,” which Frege employs in “On Sense and Reference,” *op. cit.*, p. 58.

one way of understanding the notion of mode of presentation, it is employed as part of the elucidation of sense. It describes (at least one way) that sense can be related to reference; it is how we describe, as Frege would have put it in an early terminology, an aspect of the judgeable content of a thought. So understood, modes of presentation are as objective as senses, as they also are on the other way of thinking of modes of presentation, which arises when we consider them cognitively. On this way of seeing things, a mode of presentation is what we get, *qua* cognitive state, when we bring a sense to consciousness. When a sense is brought to consciousness, and thus we gain (partial) access to the content of that sense, we do so in terms of a mode of presentation of the object that is the reference of that sense. Understood this way, a mode of presentation is our conscious experience of a sense; it is the reflection in consciousness of sense. So while with respect to a given expression of a language, all speakers grasp the same sense, nevertheless their modes of presentation, as figments of each individual consciousness', may differ.

On this latter understanding of modes of presentation, it is implied that if there were not a sense grasped, there would be no conscious experience, no mode of presentation; without the grasp of sense, there would not be anything, *qua* language, to have conscious experience of. It follows from this that if a sentence is consciously intelligible, i.e. understandable, then it *must* express a thought. This is true in the most general sense, in that it applies to all sentences of all languages. In particular, it includes sentences that contain terms without reference, for if we were to deny them senses, we would also have to deny their intelligibility. From the perspective of our conscious experience, then, there will be no difference in the relation of the sense of "Secretariat" to consciousness than the relation of the sense of "Pegasus." The grasp of the sense expressed by one does not give rise to any different sort of state

of mind than grasp of the other. But saying that cognitively that there *is* a mode of presentation associated with “Pegasus,” is not thereby to claim that its sense contributes to judgeable content; whether this is so is not relevant to whether we can have conscious experience of a sense. It is relevant however, to whether a thought gives grounds for judgement, and so is a definite thought, one that is true or false, and not a “mock” thought. In this regard, non-denoting expressions do not have modes of presentation, in the first sense described above. But this is not something that necessarily reveals itself to our consciousness; we may think that our cognitive modes of presentation are fulfilled, but we may be mistaken in taking fiction to be fact, (or vice versa).

Frege was well aware of the danger of the collapse of thoughts into ideas, and it is something against which he inveighed in no uncertain terms, notably in “The Thought” and “On Sense and Reference,” as well as elsewhere. His arguments centered around ideas, in their very subjectivity, not having the correct properties to be either the objects of reasoning or the meanings of linguistic expressions, and as such Frege was constructing a bulwark against a descent into psychologism. The invariance thesis is part of this *rejection* of psychologism; but it is a thesis that has appended an associated *psychology*. The psychological issues become most acute when thoughts are considered not so much in their role as objects of reasoning, but rather in their role as facilitators of communication. Thoughts, for Frege, is what makes communication possible; *all* languages, from natural languages to the *begriffsschrift*, are useable because they consist of propositions, because their sentences express thoughts that are universally cognitively accessible. In this regard, all languages are of a piece. But given this role - that is, senses grasped as the meanings of linguistic expressions - we must consider the psychology of grasping and communicating thoughts. What we have proposed is that Frege’s remarks regarding the putative variances of

senses are meant to be understood as constructive parts of this psychology; it is this psychology that takes on the burden of showing how something that is commonly grasped by all can appear to be interpreted differently by different speakers. As such, Frege's remarks are intended in defense of the invariance of sense and thought, and hence of their status, (as opposed to our consciousness of them), as the objective meanings of linguistic expressions.

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