The Epistemology of Meaning[1]

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The externalist is obliged to accompany claims about the ontology of meaning with a plausible *epistemology* of adequacy for empirical concepts. She must construct an epistemology of meaning to support her claims in the philosophy of mind. (Millikan 2005: 72)

Introduction

Ever since Hilary Putnam proclaimed that 'meanings ain't in the head', philosophers have worried about how it could be, if semantic externalism were true, that we know what it is that we mean by our words when we speak. Traditionally it has been assumed that linguistic meaning must be transparent to speakers of a language, so that whatever one's words mean, one must, in the normal case, know what they mean.[2] This claim is even more attractive, and seems more obviously true, when applied to thoughts: whatever the contents of one's attitudes are, one must, in the normal case, know what they are. Both semantic and psychological content externalism pose a challenge to these claims. If linguistic meaning and psychological content are individuation-dependent on empirical factors beyond one's mind about which one may know nothing, then a conclusion appears inevitable: one may not, in the

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[1] This paper continues a conversation on this topic with Ruth Millikan which began after she delivered 'On Knowing the Meaning' (Millikan, forthcoming) at Queen's University Belfast in 2007. We are grateful to Ruth for many such conversations, and for her friendship over the years.

[2] For a recent defence of this view see Jackson 2006.

normal case - the case in which one's sayings and thinkings are world-involving - know what one is saying or thinking, since one may be ignorant of the empirically discoverable external factors that determine the contents of one's sayings and thinkings to be what they are.

Some regard the traditional claim as so incontestable, and the externalist conclusion so ineluctable, that they are driven to reject externalism. Others find the arguments for externalism to be so persuasive that they reject the traditional claim. Ruth Millikan has, in our view, presented one of the most powerful cases for the rejection of the traditional position and for the acceptance of a radical externalism. In a number of groundbreaking works she has articulated a detailed vision of how mind and language work. One aspect of her view is a rejection of neo-Fregean orthodoxy in the philosophy of language, a rejection of anything like a Fregean sense, *Sinn,* in her account of the meaning of linguistic items. The radical externalism Millikan advocates requires, she thinks, that for the most part,

> …the public meaning of a simple referential term typically includes only its stabilizing function and its reference, since the stabilizing function depends almost entirely on sentential context, the public meaning is essentially *just* reference. (Millikan 2005: 66)

A corollary of this is the downplaying of the importance to meaning of the contents of speakers' or hearers' psychological states. Here Millikan stands in stark contrast to two important traditions in the philosophy of language, the Gricean approach to meaning, and Davidsonian truth-conditional semantics. Both of these ways of theorising about meaning make essential reference to the contents of psychological states of the users of language, though they do this in very different ways.

Millikan has discussed at length the Gricean programme in several of her works (see 2005, ch. 10, for example). She has spent less time discussing the Davidsonian one. In this paper we want to compare her anti-psychologistic theory of meaning with an externalist programme in the Davidsonian tradition, that of John McDowell. There are two reasons why we think that this comparison is worth pursuing. First, the programmes of both Millikan and McDowell are similar in being radically externalist with respect to meaning. But second, they are markedly dissimilar in the way in which an appeal is made, or not made, to the intentional contents of the psychological states of users of the language. Of particular interest to us here is Millikan's view that her externalism is incompatible with the postulation of Fregean senses.

In what follows, we first adumbrate Millikan's approach, highlighting what we consider to be the essential difference between the Millikanian and Fregean before going on to identify the source of dispute (Section 1). We then argue that McDowell's notion of a *de re* sense can both serve the Fregean purpose of rationalising speech and satisfy Millikan's externalist requirements, one that is capable of reconciling Fregean sense with teleosemantics (Section 2). A consequence will be that users of a language can, consistently with a radical externalism, be said to know what they mean by their words. We conclude by mentioning some of the theoretical advantages of the appeal to Fregean senses.

<u>Section 1.</u>

Millikan thinks that the public meaning of a referential term can be specified in terms of its reference alone; there is no need, on her account, to postulate a realm of senses. Frege, she says, "made a mistake in positing something common beyond *Bedeutung* that is grasped by the mind of every competent speaker using the same unambiguous linguistic form" (Millikan

2005: 66). Note, however, that the rejection of Fregean-style senses does not involve a behaviouristic rejection of *any*thing in the mind accompanying talking and listening: what is at stake is whether there is necessarily anything in common in the minds of the speaker and hearer, beyond grasp of a term's reference, such a common element bearing some relation to Fregean senses (a 'grasping' of the sense).[3] In order to appreciate how Millikan deals with the interaction between meaning and mind, we need briefly to identify those features of her overall theory of meaning that are essential to understanding her epistemology of meaning.

Millikan organises the domain of linguistic meaning into three types:

(1) Conventional linguistic cooperative functions (stabilizing functions),

(2) Conventional semantic-mapping functions (in the mathematical sense of 'function')
      which determine truth and other satisfaction conditions,

and (crucially)

(3) Conceptions and conceptual components: "methods of identifying…that govern
      individual speakers' grasp of referents and of truth and satisfaction conditions, hence
      help to determine their dispositions to use and understand various conventional language
      forms" (Millikan 2005: 54).

Before elaborating on what is involved in (1) and (2), it is worth pointing out that the conceptions of Millikan's theory mentioned in (3) can in at least some respects play the role of concepts in the neo-Fregean tradition: the disavowal of a concept *common* to all users of a name (say) is compatible with their being *different* conceptions available to individual speakers. Given that there is no need for these conceptions to be common across a linguistic

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[3] The cautious way of putting this is due to Frege's rejection of psychologised senses.

community, there is no requirement that the sense I associate with 'Mark Twain' be the same as the one you associate with that same term. Equally, the conception I have that accompanies my use of 'Mark Twain' may be different from that accompanying *my* use of 'Samuel Clemens'. In this case the difference in conceptions may be sufficient to explain my otherwise peculiar linguistic behaviour. If, for example, I know that 'Mark Twain wrote *Huckleberry Finn*' is true but do not know that 'Samuel Clemens wrote *Huckleberry Finn*' is true, then I am liable to ask questions about the identity of Samuel Clemens, ones that would be difficult to make sense of if I knew the relevant identity (such as, for example, 'Was Samuel Clemens a writer?') What explains this ignorance? The Fregean answer is that because the names have different meanings, the speaker does not know that they co-refer. To put it as neutrally as possible, the psychological profile of the speaker must include different 'markers' for the names 'Mark Twain' and 'Samuel Clemens'. Crucially, the Fregean finds it theoretically fruitful to treat these markers as meanings, or senses. The Millikanian appeals to conceptions to explain this ignorance.

Turn, then, to (1). If the coordination brought about by a convention is important and obvious, it will proliferate without the need for speakers/hearers to think about each others' thoughts. The conventional functions of a linguistic form will remain stable only if it continues to serve the interests of speaker and hearer. The function has to be performed only enough times to avoid extinction.

For the purposes of semantics two tokens are of the same linguistic type "only if they have been copied from the same pool of tokens reproducing in the same language community. They must be segments from the same historical lineage." (Millikan 2005: 61). New meanings can be created using the same forms when a new use is introduced which generates a new coordinating function, and a new stabilizing function.

Turn now to (2). Communicative forms work in part by mapping; "They correspond to states of affairs in accordance with semantic-mapping functions that have been determined by convention" (Millikan 2005: 63). Descriptive communicative forms are designed to produce in hearers true beliefs, "but a true belief will be formed by normal mechanisms only if the sentence corresponds to a world affair in accordance with its conventional mapping function" (Millikan 2005: 63). The semantic mapping function of a sentence determines the satisfaction condition, but not vice versa. ('It is raining' differs from 'There is rain here now' in its mapping functions, but not its satisfaction condition.) As we have noted, Millikan takes the consequence of (1) and (2) to be that public, or shared, meaning, amounts to reference alone. As a result, the conceptions mentioned in (3) cannot occupy the role of Fregean senses.

So the picture is this. We may, and often do, have different ways of identifying the referents of our terms, these different recognitional pathways being our conceptions. Conceptions bestow on us a recognitional ability, and provided that this ability is reasonably robust (i.e., that our identification is not a matter of chance), we have a concept. But the concept is just the ability, so we share a concept insofar as we have the ability to identify the same referent, even though these abilities may be grounded in different psychological capacities. Our psychologies are backgrounded, and as far as knowledge of public meaning is concerned (knowledge of the stabilising function of the terms), we need not have any such knowledge.

The contrast between Millikanian conceptions and Fregean senses seems stark. As we have depicted the contrast between the two, the Fregean is committed to the idea that we have knowledge of the meanings – senses - of our terms, and that only such knowledge can explain how it is that we understand one another when we communicate linguistically. Millikan

denies that that we have knowledge of Fregean meanings, and insists that they do no useful work in explaining either how language functions or how it is that we understand one another when we speak and listen. Instead, all that is needed to explain how language functions is an account of linguistic convention that is tied to (sufficiently) successful public performance, and all that is needed to explain what we are doing when we speak and listen is a notion of idiosyncratic conception, not a common Fregean sense. If Millikan is right, there is no useful work for Fregean senses to do, given that linguistic actions can be explained without them. What can the Fregean say in response to this?

The Fregean starts with an account of what it is that we understand a person to be doing when they utter a sentence. Given that the uttering is an action, it has an intentional description, and the claim is that this description will invoke semantic properties of the sentence: In uttering *s*, Mary said that *p*, where *p* provides the content of the sentence uttered and it is assumed that Mary intended to say that *p*. A hearer will, in the successful case, understand that that is what Mary said, and will assume that Mary intended to say that. The kind of understanding that is at stake here is *semantic* understanding, the kind of understanding that is concerned with truth. On this account, any rational explanation of Mary's uttering *s* will avert to Mary's intention to say that *p* and to her belief that in uttering *s* that is what she will be doing.

Now, Millikan is in agreement with us that this is what the Fregean notion of sense is meant to capture. However, she argues that Frege's senses cannot capture what is involved in semantic understanding and rationality. Let us see why.

According to Millikan, Frege's senses are intentional contents that have a number of fundamental characteristics. First, and perhaps most importantly for her purposes, they are

'intermediaries' between mind and world that are transparent to, because directly apprehended by, the mind:

> Frege's senses…are his "intermediaries", given our gloss, for beliefs about the world. Graspings of senses of the kind Frege calls "thoughts" are what stand between mind and world, making errors in thought possible when harnessed by mental acts of assertion. (Millikan 2000: 129)

> The fact of sameness or difference in content can be read off the sameness or difference of thoughts and vice versa. Thus for the rational thinker no misidentification of thought content should ever occur. Contradictions show up right on the surface of thought so that no inconsistencies should occur either. The relation between thought and its content is perfectly transparent, indeed, it entirely disappears. There is no vehicle moving the mind but the very content itself. (Millikan 2000: 131)

In Millikan's terminology, Frege not only externalizes sames (effectively, what the thesis that sameness of sense determines sameness of reference amounts to), but also externalizes same*ness*, with the consequence that "if senses are the same, then the corresponding referents are necessarily *conceptually visaged* as same or necessarily available to the rational mind *as* same" (2000: 130, our emphasis). This, says Millikan, is why, for Frege, a subject cannot take contradictory attitudes toward objects under the same mode of presentation.

A second important, and related, characteristic of senses is that they are what constitutes 'having a determinate object in mind'. A third, as the second quotation above

states, is that they are what "moves the mind" (2000:129). Finally, sameness of sense

determines sameness of reference (what Millikan calls 'externalizing sames'), although

difference in sense does not determine difference in reference. Millikan takes the first and

fourth of these characteristics of Frege's senses – specifically, that senses are transparent to

the mind and that sameness of sense determines sameness of reference - to lead immediately

to semantic internalism about thought contents, this being the view that such contents are

autonomous with regard to (i.e., are not individuation-dependent on) factors in the world

beyond the mind.   And it is this perceived commitment to semantic internalism, it seems,

that leads Millikan to conclude that Frege's senses cannot capture what is involved in

semantic understanding and rationality.

Fregeans such as McDowell and Sainsbury have objected to a number of Millikan's

claims about Frege's senses, mainly in the context of her discussion of "meaning rationalism"

(McDowell 2009, Sainsbury 1997/2002). Both remark, for example, that Frege's views

about senses first and foremost concern knowledge of ordinary objects in the world rather

than knowledge of the semantic features of senses or of what they constitute - thought

contents – themselves. That is, Frege's senses are invoked in order to explain, not knowledge

of the contents of one's own mental states, but knowledge of ordinary objects in the world.

To this extent, Sainsbury claims, the doctrine of "meaning rationalism" that Millikan ascribes

to Frege (Millikan 1993b), concerning as it does claims about subjects' knowledge of the

semantic features of their thoughts or language, is not one that he himself finds any basis for

in Frege's work. In a similar vein, while McDowell concedes that Frege did hold a version of

"meaning rationalism", he claims that it is much weaker than Millikan's version, importantly

in being restricted to transparency of sameness and difference in content elements present to

the mind *at the same time*. Both McDowell and Sainsbury insist that Frege's view that senses

are to be individuated in accordance with the requirement that the rational mind cannot take contradictory attitudes to a single object under the same mode of presentation specifically concerns attitudes taken toward that object *at the same time* and that the view has no clear implications for attitudes taken toward that object at *different* times. As a result, they argue, Frege is not guilty of supposing that one cannot make errors in thoughts about a single object over time, or have confused thoughts about that object, even to the extent of taking contradictory attitudes toward it under the same mode of presentation at different times.[4]

Our purpose in raising these objections is not to engage in a debate about Frege's claims about senses or what he himself took the commitment to senses to entail, nor is it to provide a justification of Fregean senses, since, like Sainsbury, we think that this project could not be carried out within the space of a single paper. Rather, we are interested in considering how a Fregean – someone who appeals to a notion of sense as what is grasped by rational creatures when they speak and understand language and what explains agreement in linguistic communication - might respond to Millikan's reasons for claiming that they can serve no useful explanatory role in helping to make intelligible the rational speaker's speech and understanding of language.

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[4] In this connection it is perhaps worth mentioning that Sainsbury explicitly takes senses to be properties of utterances, and accordingly of expression tokens, thereby allowing utterances of intuitively non-synonymous expression types to have the same sense, so that, for example, when Graham utters today ' The bank is closed today' and I utter tomorrow 'Graham said that the bank was closed yesterday', Graham's token of 'The bank is closed today' and my token of 'The bank was closed yesterday' can have the same sense. If sense is a property of token expressions, it is not hard to see how it might not be manifest to a subject that two of her utterances at different times about the same object, even when they present that object under the same type of mode of presentation, express different tokens of the *same* sense type. Similarly, McDowell's *de re* senses are first and foremost properties of token expressions, constancy of linguistic meaning amongst different tokens of the same expression type being determined by these.

Millikan's reason for thinking that Fregean senses cannot carry out the role that they are designed to carry out seems to be motivated largely if not exclusively by the view that Frege's senses commit him to semantic (and content) internalism. As we see it, however, commitment to Fregean senses is not incompatible with semantic externalism, since there is a way of viewing Fregean senses that stems from the work of McDowell which can help illuminate how a Fregean who is a semantic externalist can supply a useful explanatory role for the notion of sense. Allowing for that role to be played by Fregean senses (thus understood) need not be viewed as incompatible with the central core of a Millikan-type view of language use and understanding.

McDowell, like us, discerns in Millikan's arguments the assumption that Frege's senses require a commitment to semantic internalism - or at least a commitment to the rejection of semantic externalism. According to McDowell, semantic understanding and rationality, as Millikan rightly observes, while being something that Frege wants the notion of sense to help explain, is not something that one's 'intact mind' (Millikan 1993b) – the head that is in good mechanical working order, when nothing is wrong or broken – can do, since that mind cannot even think. As he sees it, however, Millikan argues that since this is not where semantic understanding and rationality can be located, and yet this is where Fregean sense is located, Fregean sense cannot do the kind of work it is meant to do, namely, explain what a rational thinker understands when they understand a sentence. The only alternative that she can see, the alternative that brings the world into the picture and with it semantic understanding, must be a system that goes beyond the 'intact mind', a 'head-world' system.

In supposing that Frege's senses are something that the intact mind - effectively the machinery within the head, devoid of semantic connections to factors in the world beyond it

– must have access to, Millikan interprets commitment to Frege's senses as entailing commitment to semantic internalism. It is not that Millikan supposes that the machinery of a mind in good working order does not require the presence of factors beyond the head – after all, brains, like kidneys, to be the kind of biological organs that they are, must be individuated in terms of causal-etiological factors in the world beyond the bodies in which they carry out their biological functions when in good working order, functioning biologically normally. So it is not that Millikan is assuming that the "internal mechanics of having one's mind on objects" (McDowell 2009b: 272) can occur in a world in which there exists nothing beyond the mind of a person. Millikan herself is an externalist – and a semantic externalist at that. What drives her rejection of Fregean senses, we suggest, is the radical transparency of sense that she attributes to the Fregean: she assumes that Frege's senses are items to which the mind – viewed in terms of its internal workings alone – must have infallible access, and so must be items that really do "stand between" mind and world. This makes the relation between senses and the items that they present seem to be contingent and merely causal, not essentially semantic.

There is, we believe, another concern at work in Millikan's rejection of Fregean senses. Millikan conceives of such senses as necessarily very finely individuated, so finely so that they could not be what is shared by, grasped by, speakers when they communicate linguistically. Fregean senses impose a requirement on speakers that they very often do not and cannot meet, namely, that they share a common 'pool' of information associated with an expression, when very often speakers know virtually nothing about its referent yet still communicate effectively with it. Further, speakers can differ wildly in the information they associate with the terms they use, and their information can be, and often is idiosyncratic, peculiar to their uses of those terms. Fregean senses cannot serve the role of either type of

situation. On the one hand, speakers who know virtually nothing at all about the referent of a term communicate perfectly effectively with the use of it, and so do not need Fregean 'modes of presentation' to do so. On the other hand, speakers who have idiosyncratic information that they associate with the referent of a term, as when my use of 'mama' connects me with information about my mother, and your use of 'mama' connects you with information about your mother, manage to communicate with the use of the term 'mama' even though their information, their 'conceptions', to use Millikan's term for such information, is so different as to have virtually nothing in common. Fregean senses, construed here as idiosyncratic information, cannot do any explanatory work here either, since communication succeeds despite the lack of shared information.

Section 2

In Millikan's defense it must be admitted that there are those who adopt a Fregean internalism. Their thought might be: it is only under a mode of presentation that a *Bedeuting* is 'present to the mind', and if a Fregean sense is transparent to, and directly apprehended by, the mind, then one cannot, in grasping a sense, be having a *Bedeuting* in mind, since senses are distinct from referents, and referents are (in the case of world-directed utterances and thoughts) in the world beyond the mind. Senses must therefore stand between mind and world.

The problematic assumption in the above reasoning is that Fregean senses are the direct objects of thought and cognition and ordinary objects in the world are *not*, senses being only contingently and causally connected with such objects. But there is no reason to think that the Fregean is committed to this assumption. For one thing, doing so makes it virtually impossible to understand why a Fregean would introduce the notion of sense to explain what

the rational subject grasps when she speaks and understands language, a semantic achievement. What we need here is another way of understanding the notion of a Fregean sense, one that does not assume that, in grasping senses, minds are thereby somehow blocked from grasping – indeed, grasping directly – objects in the world. And this is something that the notion of a Fregean *de re* sense, properly understood, can provide.

McDowell's views about how Fregean senses and the thought contents that they constitute relate to the objects they present, objects in the world beyond the mind, are essentially connected with his use of the notion of a *de re*, or object-dependent, sense. For McDowell, there could be no thought contents were there not *de re* senses. Such senses present objects to subjects in certain ways and are such that, were there no such objects to present in these ways, there would be no such ways of presenting them. So the view that senses – *de re* or any other – act as mental intermediaries between objects presented and thinking subjects is rejected; they are not 'in' the mind, in contrast with being 'in' the world. We do not grasp objects and properties by first grasping senses – entities in the mental domain – and then trying to connect them to objects and properties. That is to say, senses, and in particular *de re* senses, are not themselves objects, the grasping of which enables us to somehow reach beyond them to grasp things in the world.[5] They are ways *through* which, in thought, we are brought into direct contact with things in the world. The notion of 'association' that McDowell has in mind when he says that "for an object to figure in a thought is for it to be the *Bedeutung* associated with a *Sinn*" (McDowell 1999: 94-5) is no mere contingent connection, and this comes out clearly when considering the case of a *de re* sense.

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[5] "To construe knowledge of the sense of an expression . . . as, at some different level, knowledge of (perhaps acquaintance with) an entity (the sense of the expression) seems…. gratuitous" (McDowell 1977/1998: 175).

In a response to Charles Travis, he characterizes the division between the realm of sense and the realm of reference in terms of "Frege's line" – the line that "separates non-conceptual items, on the left, from conceptual items, on the right" (2008b: 259). Here McDowell clearly makes the distinction between the realm of sense (on the right-hand side of Frege's line) and the realm of reference (left-hand side). The distinction must, however, be understood against the background various other claims that McDowell makes about the contents of true thoughts. Chief amongst these are (1) that the content of a true thought is a fact, and (2) that facts are elements of the world. McDowell invites us to recognize that are two ways of conceiving the world – as the realm of facts/sense, and as the realm of objects/reference – but that these are not two distinct realms but rather two alternative conceptions of the world. Taking the constituents of propositions to be Fregean senses, then, of the following four claims:

(1) In thinking truly we grasp facts.

(2) Facts are propositional in structure.

(3) Propositions are what we think.

(4) Facts are what we think about.

(1) – (3) are endorsed, but (4) is rejected.

In distinguishing between the realm of sense and the realm of reference, McDowell does not endorse any two-world view of facts, on the one hand, and senses, on the other. On the contrary, he goes on to explicitly state that the kinds of expressions one uses to denote facts, "expressions of the form "the meat's being … on the rug, [and] the meat's being … underdone" … characterize right-hand side items [or alternatively] belong in the realm of *sense* and hence can be *thought*" (2008b: 261).

Of course, this insistence that there are two alternative conceptions of the world in play raises the question of how they are connected. McDowell (1999: 94) says that objects – elements from the realm of reference/left-hand side of Frege's line – *figure in* facts – elements from the realm of sense/right-hand side of Frege's line. To understand the connection between the two realms, then, we need to know what 'figuring in' amounts to. McDowell insists that we must distinguish the assertion that an object figures in content from the assertion that an object is a constituent of content (1986/1998: 237). The reason for this is clear: we need to distinguish between *what* one thinks, a Fregean Thought or thinkable, and what one thinks *about*, when one thinks what one thinks. And once we understand this, we are explicitly prohibited from reading the claim that objects 'figure in' thoughts in the Russellian way on which objects are literally the constituents of thoughts, because we don't think objects, we think about them. The relationship between facts – elements from the realm of sense – and objects – elements from the realm of reference – is that of sense to referent. This is not a reductive account of the key 'figuring in' relation; the relationship of 'figuring in' is simply the relationship of being the referent of a sense.

It is for this reason that a Fregean *de re* sense neither "stands between" mind and world nor reduces to the realm of reference; while it presents objects in the world to the mind, it is neither 'inside' the mind nor 'outside' the mind, nor are the objects it presents 'in' the mind since they do not constitute it. And so, we need a different analogy altogether from that of a mental intermediary in order to understand the way in which *de re* senses function in a Fregean account of what the rational subject grasps when she speaks and understands language.

How are we to understand the claim that Fregean *de re* senses are ways *through* which objects in the world are presented to the mind? Well, we might begin to do so by

means of an analogy with a certain understanding of what the senses (visual, auditory, etc.) are. A common way of characterizing a sense modality is as an informational channel or avenue. Keeley, for example, does so as follows:

> Modality is an "avenue into" an organism. Question: What travels on an avenue? Answer: information about the physical state of the world exterior to the central nervous system (CNS). What constitutes an "avenue"? An evolutionary dedicated sense organ that converts energy into nerve impulses and conveys those impulses to the CNS. This captures the original sense of the term: the different senses are different "modes" of perceptual interaction with the world. (Keeley 2002: 6)

Keeley speaks of a sense modality as an "avenue *on* which information travels", and this might seem not to be quite what we are looking for, but the metaphor of an avenue is easily combined with the thought that avenues can take us through cities, towns, and suburbs, from one city to another, and so on; and a sense organ seems more appropriately viewed as something through which (or through the exercise of which) energy is converted, rather than as something on which energy is converted. Also talk of an avenue as an "evolutionary dedicated sense organ" might seem not to be quite what we are looking for, since *de re* senses, whatever else they are, are not credibly thought of as organs of any kind. Indeed, there may be sense modalities for which there is no clear organ of sensation (proprioception may be one such modality, and, Keeley himself notes that medical students are typically taught that there is no sense organ associated with the vestibular sense (though his view is that there is such an organ, and that in general having an evolutionary dedicated sense organ

which processes information about the physical state of the world external to the CNS is a requirement on having a sense modality)). In view of the controversial nature of the requirement that a sense modality have a dedicated sense organ through which it is exercised, it seems more appropriate to speak of a sense modality as a channel – or a conduit, or medium - through which information about the world travels, which may or may not be opened up or exercised by a dedicated sense organ.

So: a sense modality is an informational channel through which information about the world beyond the sentient organism travels. This characterization is one that we have reason to think Millikan herself is sympathetic to, since she describes perception – and language itself - as something through which one gathers information about the world, and speaks of it as a medium.[6] It is a characterization that in no way encourages one to think of a sense modality, or perception, or language, as something that acts as a intermediary, standing between the sentient organism, perceiver, or speaker, and objects in the world with which she interacts. Importantly, it is compatible with the view, endorsed by Millikan and McDowell alike, that language and its semantic features can be as direct a way of being put in contact with objects in the world beyond the mind as perception itself; and it is compatible, too, with the view that the medium by which one is put into such contact is not something the organism need be aware of in any way in the process of grasping objects in the world beyond the mind. Just as a drinking straw serves as a medium through which one's tongue is put into direct

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[6] So, when arguing for the view that language is as direct a way as perception to acquire information about the world, she says

> Interpreting what you hear through the medium of speech sounds is in relevant ways just like interpreting what you see through the medium of the structured light that strikes your eyes. Understanding speech is a form of perception of the world, as direct as seeing. (Millikan 2009, manuscript)

contact with liquid, a sense modality, and - if Millikan and McDowell are right – the vehicles by which the rational subject speaks and understands language, are mediums that put organisms into direct contact with objects in the world beyond them. In the case of language use and understanding, Fregean *de re* senses have a claim to be just those vehicles; they are a conduit, a medium, through which the rational subject is put into direct contact with objects in the world around her. Just as it would be wrong to view a sensory channel as a thing which mediates between the sentient organism and the world, the awareness of which enables the organism to be aware of objects in that world, it would be wrong to view a *de re* sense as a thing which mediates between the rational subject and objects in the world around her, the awareness of which enables her to be aware of those objects.

We are not suggesting that there are no important differences between a sensory channel and a *de re* sense, any more than Millikan is suggesting that there are no important differences between perception of the world through sight and perception of the world through language (as she puts it). But just as she takes these differences to be irrelevant to her claim that perception of the world through language is no less direct than perception of the world through sight, we take the differences between a sensory channel and a *de re* sense to be irrelevant to our claim that awareness of objects in the world through a *de re* sense is no less direct than awareness of objects in the world through a sensory channel. As a result, we do not see that a commitment to Fregean *de re* senses is incompatible with two core commitments of a Millikan-type account of language use and understanding: the commitment to semantic externalism, and the commitment to the direct awareness of the world beyond the mind through language use and understanding.

What of Millikan's second concern, mentioned in the concluding paragraph of Section 1, that senses are too finely individuated be shared by speaker when they

communicate linguistically? We agree with Millikan that many uses of language are ones in which speakers possess virtually no information about the referents of their expressions, yet they do manage to communicate effectively. And one cannot but agree with her that, whatever explanatory work Fregean senses can do, they cannot require speakers to be in possession of information about the referents of their expressions that speakers typically do not, and need not, have in order to communicate effectively. Where we disagree with her is in the claim that Fregean senses cannot respect this condition.

Fregean senses must indeed meet the constraint that they have sufficient 'fineness of grain' to explain how a speaker could take contradictory attitudes to the same object at the same time, since that is a constraint on rational language use and understanding. However, this constraint can be met by a very austere theory of sense. One such theory might take the form of a truth-conditional approach to the theory of meaning, such as that articulated by Davidson, which requires assigning denotations to the singular terms of the language under study and satisfaction conditions to the predicates. A condition on the adequacy of these assignments is that, for every indicative sentence of the language, the theory must assign to it truth-conditions in such a way that so-called 'T-sentences', theorems derived from the assignments plus a syntax for the language, come out true. However, because the logic used is standardly extensional, one can be faced with unsatisfactory but true T-sentences: fro example, ''Grass is Green' is true iff snow is white.' And if the right-hand side of the bi-conditional T-sentence is meant to specify the truth-condition giving the meaning of the sentence mentioned on the left-hand side, this consequence is clearly unpalatable.

It could be that most of these ill-matching T-sentences will be eliminated as inadequate because theories yielding them as theorems will also yield false-T-sentences, such as ''Snow melts at 10º Centigrade' is true iff grass melts at 10º Centigrade'. But it is unlikely

that one could eliminate all mismatches of meaning, not without the use of further machinery. For example, one could not be confident that an assignment of denotations to 'Samuel Clemens' and to 'Mark Twain' would eliminate the (true) T-sentence ''Samuel Clemens wrote *Huckleberry Finn* is true iff Mark Twain wrote *Huckleberry Finn*'.   And now the crucial question arises: should a theory of meaning be judged as inadequate if it had this as a consequence? Note that the consequence for the truth-conditional semanticist is this: 'Samuel Clemens wrote *Huckleberry Finn*' means that Mark Twain wrote *Huckleberry Finn*. So a constraint on a putative theory of meaning is that the contents the theory ascribes to assertions must form part of the overall understanding the speaker has of their world, and this requires that those contents be provided using concepts grasped by the speaker. Such a theory can be expected to have, for each name in the language for which it is a theory, an axiom giving its denotation (e.g., for the expression 'Hesperus', the axiom governing its denotation would take the form ''Hesperus' denotes Hesperus'), which gives the sense of the expression, 'Hesperus'. Similarly, the sense of the expression 'Phosphorus', might be specified by an axiom such as ''Phosphorus' denotes Phosphorus'. A speaker would be credited with possession of the sense of a name, say, the sense of 'Hesperus' if and only if they knew the truth expressed by that axiom (and not merely if they knew that the axiom is true) – that 'Hesperus' denotes Hesperus.

The Fregean constraint that prohibits attributions of synchronous contradictory attitudes toward the same object would prohibit attributing attitudes involving the sense of 'Phosphorus' to a speaker who asserts 'Hesperus is the morning star' at the time that that assertion is made. Why? Because although a speaker who knows that 'Hesperus' denotes Hesperus, and so knows the sense of 'Hesperus', might know also that 'Phosphorus' denotes Phosphorus, and so know the sense of 'Phosphorus', she may not know that Hesperus is

Phosphorus, and so cannot be credited with knowing that 'Hesperus' denotes Phosphorus.[7]

Since she cannot be credited with knowing this, even if she does know the truths expressed

by the two axioms governing the denotation of, respectively, 'Hesperus' and 'Phosphorus',

she cannot be credited with any attitudes that involve the use of the name 'Hesperus' and the

sense of 'Phosphorus'. That she cannot helps to make rational sense of her linguistic

behaviour in a situation in which she asserts both 'Hesperus is the morning star' and

'Phosphorus is not the morning star', a situation that is likely to occur in cases where she

simply does not know that Hesperus is Phosphorous.

We have been discussing Millikan's rejection of Fregean sense on the assumption that

her own preferred way of thinking about meaning is to elide it altogether in favour of

reference: meaning just is reference. This is what Millikan sometimes says, but she also

suggests that meaning is 'stabilizing function'.[8] She applies this idea to linguistic forms (for

example, the indicative mood), but it is also essential to her idea of a Reproductively

Established Family (REF). An example from *Language, Thought, and Other Biological

Categories* illustrates the view vividly.

Consider the fabulous tribes, the Hubots and Rumans. These two tribes inhabit the

same environment, but are constituted differently, the Hubots needing (for their survival)

some mineral supplement they find only in gold, the Rumans requiring (for their survival) a

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[7] Put in the terminology of *de re* senses as informational channels, the sense of 'Hesperus' is one way *through* which that planet is grasped, the sense of 'Phosphorus' another, distinct, way. These are different informational channels, even if what travels through them is information about the same planet.

[8] Thus, she says,

> Looked at this way, the function - I call it a 'stabilizing function' - of a conventional language form is roughly its survival value. It is an effect it has had that encouraged speakers to keep reproducing it and hearers to keep responding to it in a roughly uniform way, each relying on the settled dispositions of the others. (Millikan forthcoming).

mineral supplement they find only in copper. Fortunately, both lumps of gold and of copper are in plentiful supply in their territory, the only 'problem' being that neither Hubots nor Rumans can tell them apart. Furthermore, they both have the (phonetic and orthographic) same term 'Golper' for the lumps they find around them. Question: does H(ubot)-'Golper' *mean the same as* R(uman)-'Golper'? Well, an internalist notion of meaning would deliver the verdict that the terms in both languages mean the same: the users of the terms are in the same epistemological predicament, not being able to tell the substances apart, so the internalist would be inclined to make the extension of H-'Golper' be the same as the extension of R-'Golper', the extension including lumps of both gold and copper. Given the epistemological situation (with consequent non-discriminating use of 'Golper'), this internalist will judge that the terms mean the same for Rumans and Hubots.

The teleosemanticist, however, asks the question: what makes the two terms proliferate and remain in the respective languages of the two communities? What purposes are served by the use of these terms? Given the different dietary needs, one can surmise that the Hubots use 'Golper' to communicate about lumps of gold, the Rumans use 'Golper' to talk about lumps of copper, and so the extensions of the terms in the two languages differ accordingly. What stabilizes the use of 'Golper' for Hubots is that it enables communication about (a sufficient number of) lumps of gold, such uses serving their dietary purposes, with the stabilizing function for Rumans being that use of the term picks out (a sufficient number of) lumps of copper. H-' Golper' and R-'Golper' tokens belong to different Reproductively Established Families (REFs), the source of their respective proliferations and stabilizations being different.

This fable is (and was originally intended to be) merely suggestive, and was never intended to provide a picture of meaning for human languages. It does, however, provide a

glimpse of the strength of the teleosemanticist's approach to the determination of extensions: that determination proceeds from outside the head of the users of the language.[9] In the fable as presented there is no need to postulate any knowledge of anything, let alone meanings, but we can embellish it as we think fit, so that the tribes have fully fledged intentional attitudes, a complex language, the full variety of human 'forms of living', but are saddled with the original predicament: somehow they need gold and copper for different purposes, use the same (orthographic and phonetic) term for both, and cannot discriminate between the two. Now, we surmise that Millikan would say that we still have no need to postulate any knowledge of the meaning of 'Golper' in this scenario; what holds the various uses of the term together are the different grounds that hold copper and gold together as substances. That is, the explanation for the unity of use is determined by whatever it is in the world that makes the gold-properties (on the one hand) hang together, and the copper-properties (on the other hand) hang together. Given that there are different grounds for this coherence of properties in the two cases, this is sufficient to generate the verdict that H-'Golper' and R-'Golper' have different extensions, and the same difference in the grounds for the coherence of properties is sufficient to explain how it is that the terms are used in the respective communities. As Millikan puts it in recent work,

> Moreover, as a practical matter, their own agreement in judgment with
> others is often the only thing actually discerned by language learners and
> users as a check on their usage, hence the only factor (of this kind)
> controlling proliferation of an extensional term's tokens. So it cannot be part
> of such a term's stabilizing function to implant intentional attitudes towards

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[9] "At the bottom level, then, what determines its extension is not the knowing of anything by its users." (Millikan forthcoming.)

its extension or members of its extension … *as recognized in any particular way, or as thought of under any particular description.* Our basic extensional terms do not have handed-down conventional intensions. (Millikan forthcoming.)

We have argued that a Fregean *de re* sense need not be envisaged as requiring any particular way of describing, or method of identifying, the object to which it refers. The manner in which an object, or substance, is picked out by various users of a referential term does not figure in the slimmed down version of a Fregean sense envisaged by the austere Fregean account. And that version of what constitutes the sense of such expressions is surely radical enough to satisfy the most ardent externalist, given that the object itself contributes to the individuation of the sense. So our suggestion is that Millikan can afford to revise her rejection of Fregean senses, and permit users of a language to possess knowledge of meaning in a more full-blooded way than she appears to allow.

Conclusion.

If sense is to play the role we have suggested, it is critical that one does not require a speaker's behaviour to display a *theoretical* knowledge of meanings, which nearly all speakers could not be expected to possess.[10] Millikan is surely right that the myriad ways in which speakers identify the objects to which they refer cannot be serious candidates for the sense of the referential expressions used: if the folk do have knowledge of sense, it must be a common sense. It is right, too, to say that speakers cannot be attributed knowledge of what it

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[14] Exactly how the behaviour that manifests knowledge of meaning is to be described is the subject of much disputation, most of it focusing on whether the behaviour can be described in terms attributing a content to the behaviour that only a language-user could possess (see McDowell and Dummett (in Auxier and Kahn (eds.) 2007) for a recent round of the argument.

is that makes the various properties used in such various ways of identifying a substance cohere together over time. But the informational channels that we have identified with *de re* senses need not require speakers to have such knowledge, and the intentional attitudes we seek to instill in our hearers by our use of a referential term might not have anything to do with our way of identifying the referent of the term.

Clearly the plausibility of any cognitive account rests on the idea that our linguistic actions are intentional under semantic descriptions. The underlying rationale is: no understanding of meaning, then no intention, so no rationality. In short, in assigning truth-conditions to assertions one views the speaker as being engaged in a rational activity, and as a rational agent the speaker will be required to have a rational psychological profile. The assigned content of an assertion will need to fit into this profile as a content believed by the speaker, the 'best fit' yielding the relevant truth-condition, where 'best fit' is determined by it being the 'most rational' way to augment this psychological profile given this action. Of course, any such procedure will need to make allowance for imperfect rationality, as well as deceit, irony, and other complicating factors. For present purposes, however, these are worries to be put aside.

One essential part of making sense of an action requires seeing the world from the agent's point of view, thus making it intelligible why it is that the agent is intervening in the world in that particular, perhaps peculiar, way. For example, the attribution to the agent of a false belief can help to explain why the agent acted in a way guaranteed to make them fail in their purpose. But this possibility, explaining failure as being the consequence of a defective understanding of the world, requires us to render that defective understanding as being the agent's defective understanding, one we comprehend as being an understanding of the world *as* appreciated *by* the agent. And this seems to require that the content of an assertion be

given in terms appreciable by the agent, on pain of not describing accurately what the agent was doing in uttering that sentence then.

Our concern in this paper has been to consider how a Fregean – someone who appeals to a notion of sense as what is grasped by rational creatures when they speak and understand language and what explains agreement in linguistic communication - might respond to Millikan's reasons for claiming that they can serve no useful explanatory role in helping to make intelligible the rational speaker's speech and understanding of language. An important part of this project is to understand the role that sense might play in describing indirect discourse, because making intelligible the phenomenon of indirect discourse requires one to take into consideration the point of view of the rational subject, a subject's perspective on her actions in relation to those of others and the world around her.

It may be, as we have said, that the intentional attitudes that we set out to instill in others have nothing to do with our way of identifying the referent of a term. It would, however, be strange if our use of such terms were not intended to bring the referent to our hearer's attention. It is, as we have argued, the connection of sense with the rational lives of individuals that makes this a plausible claim, and one which we suggest Millikan can accept without jettisoning any of her substantive complaints against more ambitious uses of the Fregean framework. After all, we think that accepting such a Fregean sense requires no more than this: "For a descriptive extensional term to survive without change in how people are using it there has to be enough internal and external agreement on its application, *enough agreement on its extension*" (Millikan forthcoming, our emphasis).

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