

# **Semantics and the Place of Psychological Evidence<sup>1</sup>**

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## **Abstract**

Minimal semantics is sometimes characterised as a ‘neo-Gricean’ approach to meaning. This label seems reasonable since a key claim of minimal semantics is that the minimal contents possessed by sentences (akin to Grice’s technical notion of ‘what is said by a sentence’) need not be (and usually are not) what is communicated by a speaker who utters those sentences. However, given an affinity between the two approaches, we might expect that a well-known challenge for the Gricean - namely that their account fails to fit with the psychological evidence concerning linguistic understanding - could also be levelled at the minimalist, and indeed this seems to be the basis of Recanati’s challenge to minimalism from his ‘availability principle’ (Recanati 2004). This paper aims to explore the relationship between semantics and psychology and show how both Gricean and minimalist approaches can avoid the challenge from psychological evidence. I conclude by suggesting that the way in which minimalism avoids this challenge also helps the account to defuse Clapp’s ‘naturalistic objection’ (Clapp 2007) that there are no grounds for selecting a correct minimal semantic theory.

## [Introduction]

My aim in this paper is to explore one point of similarity between an approach to semantic theorising known as minimal semantics and an earlier approach to meaning proposed by Paul Grice. Before I set out the structure of the paper in more detail, however, I would like to say something by way of an introduction to minimal semantics. Minimal semantics follows in the tradition of formal approaches to meaning of the kind put forward by Frege, early Wittgenstein, Carnap, Davidson and others. Although the term ‘formal semantics’ is itself somewhat vague, it seems that what unites theorists on this side of the divide is, first, the belief that semantic content attaches to objects which can be formally described (so sentences or, more probably, sentences relativised to contexts of utterance) and, second, the expectation that linguistic meaning will be amenable to study via scientific methods of inquiry, broadly construed. This formal approach is of course diametrically opposed to the other main tradition in philosophy of language: speech act or use theories of meaning. The classic advocates of speech act theories include Austin, later Wittgenstein and Searle, but more recently the approach has re-emerged under the label of ‘contextualism’, as advocated by Recanati, Travis, and the relevance theorists Sperber and Wilson, and Carston, amongst many others. The age-old debate between formal theories and speech act theories has thus metamorphosed into the debate between minimalism and contextualism in the contemporary domain.

To give us a slightly more detailed picture of semantic minimalism, in this paper I’m going to take the approach to be characterised by the following two claims:<sup>2</sup>

1. There are minimal contents (propositions/truth-conditions): these are contents which are maximally free from contextual effects and provide the literal meanings of sentences. According to minimal semantics, then, context is semantically relevant only when introduced by a standardly context-sensitive syntactic element, e.g. indexicals, demonstratives, tense markers (Cappelen & Lepore 2005, Borg 2004, Soames 2002).<sup>3, 4</sup>

2. Semantic content is not speech act content. This claim comes in somewhat different forms, for instance one might hold that minimal content is a proper part of speech act content (see Soames 2002 and Cappelen and Lepore 2005) or one might hold that they are simply different kinds of entities (see Borg 2004; this point of difference is discussed in Borg 2007).

Minimalists are committed to claim (2) because of claim (1), for if there are such things as minimal contents for sentences, which are maximally free from contextual effects, it is clear that these are not the kinds of things which get communicated in normal conversational exchanges. To take an example, the minimalist is going to claim that a sentence like ‘That apple is red’ just means that *that apple is red*, however what gets communicated by an utterance of this sentence will typically be a pragmatically enriched proposition, like *that apple is red on most of its skin*. Thus the minimalist is committed to drawing a sharp distinction between semantic content and pragmatic content or speaker meaning.

It seems then that minimalism adopts a broadly Gricean perspective on semantics (though we should note that Grice himself steered clear of the terminology of semantics and pragmatics): the entities amenable of semantic analysis are sentences, semantic content is taken to be permeable by

contextual features in certain highly constrained ways (e.g. reference determination for indexicals and demonstratives, and resolution of tense markers and ambiguity) and a clear distinction between sentence meaning and speaker meaning is made. However, given this shared perspective between the two accounts, we might expect that any objection to Grice which arises due to something in the common ground will also serve as an objection to minimalism. It is this point that I want to explore in this paper. Specifically, I want to explore the objection that neither theory fits well with relevant psychological evidence concerning linguistic understanding. The structure of the paper is thus as follows: in the next section I'll sketch a range of options for the relationship between semantics and psychology, and locate Grice and minimalism together on this spectrum. Then we will turn in §2 to look at the general objection that the two accounts fail to fit with relevant psychological evidence and we will see exactly what form this charge has taken against the two accounts. In §3 I'll suggest how I think a minimalist should respond to this challenge and finally, in §4, I'll close by examining how this response might help the minimalist avoid another objection to her approach, recently put forward by Lenny Clapp.

## 1). The Relationship Between Semantics and Psychology?

In addition to the points of similarity given above it also seems that Gricean and minimal semantics share a fundamental assumption about the way in which semantics and psychology hang together. To see this I'd like to sketch very briefly what I take to be the three main options for relating semantics and psychology.<sup>5</sup> As we will see, each of these options can be read in two distinct ways: a metaphysical version and a (weaker) epistemic variety. I'll suggest that both Gricean and minimal semantics share a common metaphysical outlook, but that both accounts then seem to run into problems with the associated epistemic claim. So, our question now is: how might we construe the relationship between semantics and psychology?

### 1) Independence:

a) *Metaphysical Independence.* According to this view there is no constitutive or dependence-based relationship between a correct semantic theory and the states of mind involved in language comprehension in ordinary agents. Constructing a semantic theory is taken to be one kind of enterprise while the construction of a theory of language processing is something quite different. Prima facie, this position may seem less than compelling. After all, if some piece of information, *I*, plays no role whatsoever in an agent's coming to grasp the semantic content of an expression, *E*, we might wonder what could make *I* a genuine semantic fact about *E* at all. The thought behind such a rejection of metaphysical independence is that it is simply implausible to hold that the semantic facts about a human language are ones which no human ever cognises. However, on reflection, I think such immediate scepticism about metaphysical independence is unfounded and that the position could yet turn out to be a plausible option. For we might envisage a semantic theory as constrained to capture knowledge that *would* suffice for understanding, regardless of whether it fits the actual cognitive processing of any language user. It would, it seems, advance our understanding of language to have a theory which could suffice for linguistic understanding, even if we simply lacked any information about whether or not the theory accurately captured the ways in which ordinary speakers came to linguistic understanding. Indeed, this kind of metaphysical independence might be suggested by at least some of the things that Davidson says about the role of a semantic theory, where a truth theory is required to *do duty* as a theory of meaning and to describe knowledge *capable* of underpinning (aspects of our) linguistic competence rather than as making prescriptive claims about the form which that competence actually takes in ordinary subjects.<sup>6</sup>

b) *Epistemic Independence.* According to this view there is held to be no epistemic route from one domain to the other: claims about the correct form for a semantic theory do not entail any predictions about psychological processes or the contents or structure of the mind of typical language users, and vice versa. A claim of epistemic independence might perhaps be embraced by someone who held that semantic theorising is solely concerned with conceptual analysis and that such conceptual analysis need not be

answerable to what language users typically think or do when faced with a given linguistic prompt. Semantics here would thus not be required to answer to empirical discoveries in cognitive science.

## 2) Psychological facts depend on semantic facts.

a) *Metaphysical dependence*: on this view there is held to be a constitutive relationship between the contents of the mind of the language user and the content of a natural language (and hence the content of a correct semantic theory for that language), such that the former depends on the latter. This metaphysical assumption is most famously associated with the kind of linguistic determinism proposed by Whorf and endorsed by many others. Thus for the linguistic determinist the kinds of things one can say constrains the kinds of things one can think. To give the rather hackneyed examples familiar in this area, because Eskimos have so many more words for snow than do English speakers, Eskimos are supposed to be able to think more kinds of thoughts about snow than English speakers. Or again, since some nomadic tribes lack a complex number vocabulary (for instance, the language might have words only for one, two and many) speakers of this language are unable to think complex thoughts involving number (their language prevents them from *thinking* 'I've got four sheep', not just from *saying* it). It seems that linguistic determinism is not a theory much in favour at the moment (see Pinker 2007 for discussion), but we should note that the same kind of metaphysical assumptions which lie behind linguistic determinism also lie behind certain other contemporary approaches which claim that we think in a natural language (see Carruthers 1996).

b) *Epistemic dependence*: on this view the route to an account of mental content runs through linguistic content, since thought content is essentially inaccessible and thus cannot provide a direct object of study. Such an epistemic dependence claim might be made in conjunction with (2a) or independent of it. Made without commitment to metaphysical dependence, we have the kind of picture commonly associated with the so-called 'linguistic turn' in philosophy, which sought to place philosophy of language centre stage for the study of the mind (see Dummett 1993, Evans 1983).

## 3) Semantic facts depend on psychological facts

a) *Metaphysical dependence*. According to this view, facts about semantic content are determined by facts about the minds of language users. What a semantic theory aims to capture on this view is the knowledge which underpins grasp of linguistic meaning amongst ordinary language users. It is the mind which is taken to be the primary locus for content, thus words and sentences acquire their meaning via their relationship to mental states.

b) *Epistemic dependence*. According to this view, the route to a correct semantic theory runs via an account of the contents of the minds of language users (thus a putative semantic theory might be confirmed or disconfirmed by psychological evidence).<sup>7</sup>

Now, it seems that both Grice and minimal semantics sign-up to (3a). For Grice the dependence of the semantic on the psychological is clear, for he

aims to explicate semantic content in terms of intentional content - that is to say meaning is ultimately to be understood in terms of speaker intentions.<sup>8</sup> For the minimalist the allegiance to (3a) is perhaps less overt, yet still the claim is that a minimalist theory aims to capture that part of our psychological make-up responsible for a subject's competence with linguistic stimuli, thus it would still seem right to characterise the theory as signing up to the dependence of semantics on psychology. So, according to both approaches semantic content depends in some way on mental content, on what is to be found in the minds of language users; but now we might ask 'what about (3b)?' A claim of metaphysical dependence might well be thought to carry a claim of epistemic dependence in its wake, for if semantic content depends on psychological content then, *ceteris paribus*, we would expect psychological evidence to be relevant to semantic theorising. Thus, unless we posit some kind of disruptive feature which serves to muddy the path from psychology to semantics, it would seem that psychological facts *ought* to provide good evidence for semantic facts. However, it is with respect to the claim of epistemic dependence in (3b) that both our accounts seem to run into problems. The worry is that neither Gricean semantics nor minimal semantics fit properly with relevant psychological evidence, so let's turn to this objection now.



## 2). Psychological Evidence Runs Counter to the Theories

To begin with Gricean semantics: on Grice's model it seems that literal sentence meaning is *prior* to speaker meaning. On hearing an utterance, a subject S is supposed to first grasp the literal meaning of the sentence uttered, then see that this flouts some general principle of good communication, finally this licenses the subject to proceed to infer some more suitable proposition as the one the speaker actually meant to convey. So to take an example, imagine that A says 'There is nothing to eat'. A hearer, B, can then reason as follows:

The sentence 'There is nothing to eat' literally means *there is nothing to eat*

The proposition in (i) is trivially false.

Asserting trivial falsehoods is in contravention of the general maxims of communication.

I believe that A is a competent speaker and abides by conversational maxims

Thus I should infer some more suitable proposition as the one A means to convey, e.g. I should take A as intending to communicate that *there is nothing suitable to eat*.

For Grice, then, it seems to be an integral part of his account that sentence meaning comes first: it is what a hearer must grasp prior to proceeding to a grasp of speaker meaning. Our question now then is: does this Gricean account fit with the psychological evidence?

The first point to notice is that it obviously doesn't fit with first-personal psychological content, for we often arrive at attributions of speaker meaning without consciously entertaining sentence meaning and then engaging in the kind of extended inferential reasoning Grice suggests. However, this realisation is not necessarily problematic for Grice, for his account might still hold as an account of occurrent mental content. That is to say, although we don't consciously engage in the kind of reasoning which Grice suggests, such a process might still provide the unconscious route to a grasp of speaker meaning. So does the Gricean picture describe the unconscious processes by which we arrive at speaker meaning?

The answer to this question seems to be 'no', for we sometimes seem to be in a position to grasp pragmatically enriched speaker meaning *before* we are in a position to grasp literal sentence meaning. There are at least three kinds of case which are relevant here: non-sentential assertion, metaphor comprehension, and scalar implicatures. Turning to non-sentential assertion first: it is clear that a significant proportion of the things people say do not (at least at the surface level) reach the level of complete sentences. Thus we have exclamations like 'Fire!' or 'Help!', and comments like 'Nice dress', 'Bear country' and 'From France'. To make the case that these or similar utterances are genuine cases of non-sentential assertion (i.e. the production of something which falls short of sentencehood but which nevertheless conveys a complete proposition) we need to be sure that there is no syntactically present but phonetically unmarked material in the utterances. That is to say, we need to be sure that the words spoken exhaust the

syntactic content of the utterance, and in at least some cases this doesn't seem to be the case.<sup>9</sup> Whether or not all instances of apparently subsentential assertion can be handled by mechanisms like ellipsis is a much debated point (see Stainton 2006 for extended argument in favour of genuine subsentential assertion and Stanley 2000 for an argument against it) and it is not something we can hope to settle here. Thus the point I want to make is a conditional one: if it turns out that there are such things as genuine non-sentential assertions then they seem to show that Grice's model of how speaker meaning is recovered cannot be correct. For obviously if a speaker does not produce a complete sentence but still succeeds in communicating a complete proposition at the level of speaker meaning, then grasp of that speaker meaning *cannot* itself depend on a prior grasp of sentence meaning. So non-sentential assertion, if a genuine phenomenon, provides a first piece of evidence against the Gricean model.

A second challenge comes from so-called 'direct access' views of metaphor recovery (e.g. Gibbs 2002), where it is held that we are at least sometimes able to recover metaphorical meaning for words and phrases before we are in a position to grasp complete sentence meaning. That is to say, at least sometimes subjects proceed to a metaphorical interpretation of part of a sentence before they have heard the sentence uttered in its entirety. So for instance, where we have talk of 'icy glares' or 'green shoots of recovery' the claim is that we proceed directly to a metaphorical interpretation of the phrases before we hear the whole sentence the phrases are embedded in. Once again, if this is right then it seems to cause problems for Grice's account because it runs counter to the priority claim: hearers are not, contrary to what the Gricean account seems to demand, waiting to process a complete sentence prior to working out speaker meaning.

Finally, this idea that pragmatic effects must, at least sometimes, occur at a local rather than a sentential level also seems to be demonstrated by some experiments concerning the recovery of scalar implicatures. A scalar implicature occurs when a speaker opts to use a weaker or stronger item on a given scale and thereby pragmatically conveys that the alternative terms on the scale do not hold. So for instance, though the lexical entry for 'some' is held to be that familiar from first-order logic, namely *some and possibly all*, many utterances of 'some A's are B's' convey the pragmatically enhanced reading that 'some *and not all* A's are B's' (e.g. 'some delegates came to my talk' conveys the enriched reading that some but not all of them did). Or again, 'or' is taken to have a lexical entry matching that for the inclusive-or in logic, namely 'A or B or both', but again many utterances involving 'or' convey a pragmatically enhanced reading, namely the inclusive-or 'A or B and not both' (e.g. 'Main meals come with chips or salad'). For Grice, since such enhanced scalar readings are pragmatically enhanced instances of speaker meaning they should only be available to subjects once they have determined the literal meaning of the complete sentence in which the scalar terms appear. So, recalling the picture above, if I hear you say 'Some delegates came to my talk' I should first work out the literal meaning of this sentence, then I should see that this flouts some principle of good communication (for instance, it is not the most

informative thing you could have said), finally I should infer some alternative proposition, e.g. *some but not all the delegates came to your talk*. However, this model seems to be contradicted by experimental findings concerning how ordinary subjects process scalar terms. So, in a set of experiments Storto and Tannenhaus tracked the eye movements of subjects when exposed to a grid of pictures and a sentence relating to the pictures which contained a scalar term. To give an example of the kind of test they ran: hearer's were exposed to a two-by-three grid like the following:



They were then exposed to part of a sentence, for example ‘The car or the clock is next to a ...’ and their eye-movements were tracked to this point. The result was that by this stage in the sentence the majority of subjects were already focused on the pictures in the column on the left-hand side. What this seems to show is that by this stage in sentence processing subjects were already processing ‘or’ not in its weaker inclusive sense (one or the other or both) but in its stronger exclusive sense (one or the other but not both). For it is only if ‘or’ is read exclusively in this sentence fragment that one has enough information to rule out the column on right of the grid, which depicts the same pair of objects and thus would serve to make true an inclusive interpretation of ‘the car or the clock is next to a...’. The findings from these eye-tracking experiments, together with cases of apparent sub-sentential assertion and direct access to metaphorical interpretations, seem to show that on at least some occasions context acts to affect content *before* sentence meaning has been recovered. That is to say, they seem to show that pragmatic effects can occur at a local (word- or phrase-based level) as well as a global (sentence) level.<sup>10</sup> Yet this runs counter to the priority apparently assigned to literal meaning by Grice, thus evidence about the psychological processing of linguistic stimuli seems to run counter to Grice’s proposal.

Turning now to minimal semantics, it seems that a similar kind of challenge - stemming from the psychological evidence concerning linguistic understanding - can be made against the theory. Indeed this seems to be the basis of Recanati’s objection to the minimalist approach in terms of what he calls the ‘availability principle’:

What is said must be intuitively accessible to the conversational participants (unless something goes wrong and they do not count as ‘normal interpreters’).<sup>11</sup>

The availability principle is one which Recanati suggests any feasible theory of semantic content must respect, yet it is a principle which minimalism clearly flouts. For, as noted when we introduced minimalism at the start of the paper, even if there are such things as minimal contents they are not the kinds of things which speakers and hearers consciously entertain in most normal conversational exchanges. If I hear you say ‘There’s nothing to eat’ or ‘You won’t die’, the contents I am likely to consciously entertain include *there is nothing to eat in the fridge* or *you won’t die from that cut*, they don’t include *there is nothing to eat (in some contextually unconstrained domain)* or *you won’t die*. Thus minimal contents are not (usually) what conversational participants consciously entertain on hearing an utterance but also nor are they the things agents (usually) bring to consciousness when reflecting on how assignments of utterance meaning were made. If asked how I got to *there is nothing to eat in the fridge* I’m likely to appeal to facts like your looking in the fridge, but I’m unlikely to appeal to the minimal content the minimalist assigns the uttered sentence. It seems then that minimal contents are simply not available to normal subjects and as such they cannot, Recanati objects, play the role of semantic content. According to Recanati, the availability constraint “leads us to give up Minimalism. That is the price to pay if we want Availability to be satisfied”.<sup>12</sup>

So, when we turn to look at what is in the minds of subjects when they are engaged in linguistic processing it seems that what we find is not Grice’s picture of grasp of literal meaning plus an act of inference to speaker meaning, nor is it the minimalist’s minimal propositions. Whether we are appealing to conscious, first-personal content or some less immediate notion of unconscious or occurrent content, the psychological evidence seems to run counter to both theories. Yet this is problematic since, as noted in the previous section, both accounts subscribe to the view that semantic content is metaphysically dependent on psychological content. The worry is that, in the absence of a story about why one cannot move from psychological evidence to semantic theorising, the current evidence shows that both accounts must be rejected.

### 3). The Response:

So, how worried should the Gricean or the minimalist be by the suggestion that their theories fail to fit with relevant psychological evidence? Well, Kent Bach has argued that the Gricean shouldn't be worried at all, for, as he writes:

Grice did not intend his account of how implicatures are recognised as a psychological theory nor even as a cognitive model. He intended it as a rational reconstruction. When he illustrated the ingredients involved in recognizing an implicature, he was enumerating the sorts of information that a hearer needs to take into account, at least intuitively, and exhibiting how this information is logically organized. He was not foolishly engaged in psychological speculation about the nature of or even the temporal sequence of the cognitive processes that implements that logic.<sup>13</sup>

Now, on one reading, Bach's response to the challenge of the last section is, I think, the same as the one I want to propose below on behalf of the minimalist; however, I think there is also another reading where it is perhaps a little more problematic. My worry is that talk of 'rational reconstruction' runs the risk of driving too great a wedge between the semantic theory and the psychological theory, for if all one is offering is a way in which speaker meaning *could* be recovered, with no requirement that ordinary speakers *do* recover meaning in this way, then we seem to be sliding away from a picture which treats semantic content as dependent on psychological content and towards an account which treats semantic content and psychological content as more or less independent of each other (i.e. moving towards option (1a) in §1). A rational reconstruction which makes absolutely no psychological speculation runs the risk of providing a theory of meaning which might be alright for Martians but simply doesn't hold true for us.

Perhaps then we could respond to the challenge here not by denuding our theory of all psychological speculation but by widening our understanding of what counts as psychological evidence. The response I want to make on behalf of the minimalist is that we view minimalism as providing a theory of the form and content of the language faculty, where this is taken to be a genuine component of the cognitive make-up of ordinary agents (so, semantics is at least in part a branch of individual psychology, as Chomsky recommended for syntax). However, minimalism is not a theory of conscious content, nor even a theory of the occurrent mental states involved in given acts of linguistic processing. Rather what minimalism specifies is the content a competent language user is guaranteed to be able to recover, given adequate lexical resources *plus* the proviso that attentional resources are not diverted from processing literal meaning, and agents are guaranteed the possibility of recovering sentence-level content because the theory they have cognized is one which trades, ultimately, in sentence-level meanings. The claim is then that, at some level of specification, there are structures in the mind/brain which represent the basic elements of the minimalist theory (word meanings, syntactic rules for constructing sentences, and semantic rules for determining sentence meanings from those word meanings and syntactic structures). Furthermore, the deductive processes posited by the theory on route to determination of sentence meaning will have to be mirrored by operations within the mind, where this is most easily understood as being mirrored in the causal interactions between brain

structures.<sup>14</sup> However even if minimalism is the right way to characterise the knowledge underpinning our linguistic competence, it doesn't seem that the theory need be committed to the claim that, in every instance of communicative success, the theory acts all the way to deliver sentence level content. Sometimes, it seems, we go part way towards constructing a representation of sentence-level content but we stop, either because we are distracted or, more often, because fragments of meaning are all we need to proceed to a guess about what the speaker is trying to convey. The minimalist is happy to concede that what we are really interested in in communicative exchanges is getting at what the speaker intends to communicate and this is often very different to the literal meaning attaching to the sentences she utters. Thus the minimalist should be happy to allow that sometimes hearers simply stop thinking about semantic content before the language faculty has had a chance to deliver sentence-level content (i.e. a hearer should stop semantic processing whenever she has enough evidence to get at whatever the speaker was trying to convey).<sup>15</sup> Yet this doesn't show that the theory realised in the mind of the language user is not one designed to deliver sentence-level content nor that it is one which doesn't trade essentially in complete propositions. All it shows is that the psychological processes realising the theory are sometimes stopped on the way to delivering sentence-meaning.

So, the claim is that minimal semantics does embrace both (3a) and (3b), although only on a refined reading of the epistemic claim: psychological evidence *is* relevant to semantic theory construction, but not necessarily psychological evidence concerning how a particular utterance is processed. Minimalism is thus a theory which is open, at least in principle, to confirmation or disconfirmation by the psychological evidence, but this must be evidence about what subjects know about their language, not merely evidence about how they come to grasp what speakers are (pragmatically) trying to convey. Even if hearers may sometimes be able to grasp an instance of speaker meaning without calculating the semantic content for the particular sentence uttered, nevertheless, according to minimalism, it is possession of a theory of meaning which ultimately trades in sentence-level contents that explains (at least in part) why subjects are in a position to recover speaker meaning at all.



#### 4). Clapp's Naturalistic Challenge to Minimalism

Finally, then, I'd like to close by suggesting how the account of minimalism from the previous section can answer an objection raised by Lenny Clapp. According to Clapp 2007 minimal semantics fails to give any account of how we select a correct semantic theory. By treating speaker intuitions about content as orthogonal to theorising about content, we deprive the account of any way to ground theory selection, for if we can't appeal to intuitions about what speakers and hearers think sentences mean, what other grounds could we have for saying that *grass is green* is the right interpretation of the sentence 'Grass is green', as opposed to some quite different proposition? Given the account of minimalism proposed in the previous section, I hope the answer I'd like to give to this grounding question is clear: an interpretation is the right/wrong one if it matches/fails to match the one generated by the semantic theory actually possessed by ordinary speakers.<sup>16</sup> What makes 'grass is green' mean that *grass is green* is that this is the content delivered by the semantic theory contained within a subject's language faculty; grounding is thus achieved by appeal to the contents of the mind. Clapp, however, considers and rejects this proposal, since such minimal contents will not serve to tell us *for all possible worlds* whether a given sentence is true or false in that world.

Take the sentence 'The cat is on the mat': is the minimal proposition that *the cat is on the mat* true or false in a world where the cat is floating a few centimetres above the mat? That we don't know what to say in this kind of case shows, Clapp contends, that minimal propositions are not genuine candidates for semantic content.<sup>17</sup> However, the problem with this objection, as I've suggested elsewhere (Borg 2004), is that it seems that no plausible candidates for sentence level content will meet such a constraint. For instance, if we are worried by the presence of the preposition 'on' we might suggest that it should be given a contextually enriched, pragmatic sharpening. Though it is a little unclear exactly how this might go, one suggestion would be that (leaving aside the issue of incomplete definite descriptions) the enriched proposition should be something like *the cat is on the mat in the normal sense of being on associated with cats and mats*. Now (even allowing that there are such things as 'normal senses' here) there is a problem of grain, for it is not obvious that such senses should attach at the level of cats and mats or to something more fine-grained. The normal way in which a cat sits on a mat might not be identical to the normal way in which a Manx cat sits on a doormat (specifically, while the former might specify tail location, the latter clearly won't). However, leaving this problem to one side, it still seems that the original worry can resurface for this contextually enriched proposition, for we can still ask is the proposition that *that cat is on that mat in the normal sense of being on associated with cats and mats* true in a world where the cat has most of three legs on the mat but most of one leg off it?

Perhaps then we should opt for something which makes the context-sensitivity of the proposition more evident, say *the cat is on the mat in the contextually salient sense of on*. However, even here it seems open to question whether the requirement to provide a determinate answer in all

possible worlds is satisfied. For instance, imagine that you are looking for the cat and I assert ‘The cat is on the mat’, where this means that *the cat is on the mat in the contextually relevant sense*. Even having supplied a context it’s not clear exactly when my utterance is true or false, for instance imagine the cat is wholly on the mat but the mat has been moved slightly to the left. Is what I say true, or is it false since it seems that the contextually relevant sense of ‘on’ here should specify something about the cat’s location? And assuming that we want to say the utterance is true in this case, we can then ask how far to the left can the mat shift and what I say remain true: is my utterance still true if the cat is on the mat in a different room, a different house? Intuitions vary here, but the point is simply that appealing to ‘contextually relevant senses’ doesn’t seem to help for there is no reason to think that the addition of a contextually relevant sense will result in a proposition which tells us, for all possible worlds, whether or not the proposition is true or false at that world. For, given any contextually salient sense, it seems we can always gerrymander a situation where the answer is simply unclear, just as we could for the original minimal proposition. The problem we are homing in on here is, I think, that it is only maximally specific contents which are capable of collapsing knowledge and verification (i.e. ensuring that if one knows a truth condition one can verify whether it is satisfied in every possible world) but there is no reason to think that the literal meanings of sentences are given by maximally specific propositions. So, if no plausible candidates for sentence-level content are capable of meeting the proposed condition on semantic contents (i.e. that they tell us for all possible worlds whether they are true or false at that world) then I think the minimalist is justified in getting off this particular bus before it gets going. Clapp is quite right to think that minimal contents don’t suffice to tell us, for all possible worlds, whether they are true or false at those worlds, but so long as they do allow us to tell, for a vast range of clear-cut cases which truth-value holds, that is all we can (and should) ask for from semantic contents. As I’ve suggested elsewhere, to think otherwise seems to me to yield to verificationist urges which are best kept in check in the semantic realm.<sup>18</sup>



## 5). Conclusion

Semantic minimalism owes much to its Gricean predecessor. Specifically both approaches make serious use of the claim that semantic content is not speech act content and treat the objects of semantic theorising as minimally contextually affected (i.e. allowing only a highly constrained set of pragmatic processes to affect semantic content, such as reference determination for indexicals and demonstratives). I've argued here that minimalism and Gricean semantics also share another point of contact, for both approaches adopt a view of semantic content as metaphysically dependent on psychological content. Given this, however, I suggested that both accounts were likely to prove vulnerable to objections concerning the extent to which psychological evidence supports the theories. For if semantic content depends on psychological content then, *ceteris paribus*, we would expect psychological evidence to be relevant to semantic theorising. This apparent vulnerability was, I suggested, at the heart of the challenge to Grice from apparent cases of the recovery of speaker meaning without the recovery of sentence meaning, and to minimalism from Recanati's 'availability principle'. However I have tried to argue here that, even if the opponents of Grice and minimalism are right and the theories cannot be taken to specify either conscious level content nor unconscious, occurrent content in at least some cases of communicative success, still this need not entail the rejection of the theories. For what they should be taken as proposing is an account of the form and content of the knowledge possessed by competent language users, not necessarily an account of the processing strategies deployed on each and every occasion on route to grasp of speaker meaning. What makes a subject a competent speaker of a language, and thus what underpins her communicative success in general, is (according to these approaches) tacit knowledge of a theory which ultimately trades in sentence-level contents. That sometimes successful communication might occur without calculation of such content is not, then, something the theories must rule out.

So minimalism should, I think, be construed as a theory of what's in the mind, not what is conscious nor even necessarily what plays an inferential role in arriving at the interpretation of a given speech act. This is not to say that the theory cannot ultimately be confirmed or disconfirmed by psychological evidence, but to recognise that there is no direct route from evidence about the way in which a specific instance of communicative success comes about to the general form of a cognized semantic theory. I think this broad appeal to psychological evidence is sufficient to avoid Clapp's naturalistic challenge, since it grounds a correct semantic theory in the mind of the language user. With respect to Clapp's ensuing challenge that minimal contents cannot tell us for all possible worlds whether a sentence is true or false in that world, I conceded this point but suggested that it was a constraint which semantic content should anyway not be asked to meet.

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## Notes

1 Thanks to audiences at the Joint Session of the Aristotelian and Mind Associations, Bristol 2007, particularly Lenny Clapp, and the University of Manchester, January 2008. Research for this paper was made possible by the award of a Philip Leverhulme Prize.

2 Personally, I'd add a third clause to the definition of minimalism:

Semantic content is delivered by a modular (computational) language faculty. This entails that there can be no appeal to the intentional states of current speakers at the semantic level.

This is something I argued for in Borg 2004 and 2004b, however the modularity aspect of minimalism is not something which other advocates have endorsed and it is not crucial to the debate in this paper.

3 Note that Soames post-2002 is not an advocate of the minimal approach.

4 So minimalism is to be distinguished from theories which claim semantic content must be entirely free from contextual effects, e.g. Katz 1977 and Bach 2006. In permitting only standard context-sensitive expressions the approach also differs from the kind of hidden-indexical account proposed by Jason Stanley (e.g. Stanley 2005). Note however that in sharing the minimalist's assumption that all contextual effects on semantic content must be syntactically marked, I'd take the hidden indexical view to be aligned more closely with minimalism than contextualism, but see Cappelen and Lepore 2005 for a different take.

5 These options are not meant to be exhaustive (for instance, some kind of two-way dependency could be envisaged), however I do think they cover the main positions in logical space.

6 Davidson 1984. We should note, however, as Åsa Wikforss pointed out in conversation, that it would probably be a mistake to take metaphysical independence as the official Davidsonian line, given other remarks he makes, such as his requirement that conversational participants construct passing theories of one another (Davidson 1986).

7 At its most extreme, a claim of epistemic dependence might amount to what Davies 2006 disparagingly calls 'cognitive scientism' – the view that *all* the relevant facts are to be revealed via experimentation and thus that semantics is nothing over and above the collation and ordering of experimental findings. However it seems that (3b) need not be read in such strong terms.

8 Though see Avramides 1989 and Garcia-Carpintero 2001 for caveats concerning the usual *reductive* reading of the dependency claim in Grice.

9 Common cases where syntactically elided material is allowed include question and answer contexts; for instance, if asked 'Would you like a drink?' and you respond 'No thanks, I wouldn't' your answer is commonly held to contain the syntactically present but unvoiced material *like a drink* which is easily recoverable from the immediate linguistic environment.

10 See also Sauerland 2004 for an alternative kind of argument against the global Gricean account of pragmatic influence, and Russell 2006 for a response.

11 Recanati 2004: 20

12 Recanati 2004: 20

13 Bach 2006b: 25

14 Of course there are serious and seriously difficult questions here concerning how we move between an abstract statement of a semantic theory and an account of psychological processes (let alone talk of brain structures); see Davis 1987 for an illuminating discussion of this point. However I hope that the overarching point – that there is no simple move from an assumption about the kind of semantic theory realised in the mind of a subject to claims about the kinds of processes that a subject must undergo on a specific occasion of communicative success – can be made without too deep an excursion into these murky waters.

15 There are, it should be noted, implications of this point for the kind of modularity picture I advocated in Borg 2004. To put things crudely, it can't be the case that the language faculty remains entirely encapsulated until the point of outputting a sentence-level content. Rather the picture is one where the outputs of the language faculty are available at

incremental levels, so that, as it were, other modules or central-processing systems can 'see' the construction of sentence-level meaning stage by stage and can utilise the sub-sentential fragments of meaning which are going into the construction of sentence-meaning. The modularity claim will then be that, although pragmatic and semantic interpretation processes run in parallel (rather than the kind of sequential picture seen in the original rendition of Grice's view above), with pragmatic processes able to operate on sub-sentential clauses before the semantic analysis of the sentence is complete, still no pragmatically enhanced reading is permitted to feed back into the semantics module to effect the semantic analysis of the sentence.

16 The answer here then is the same as that suggested to the overgeneration problem for T-theory accounts proposed by Larson and Segal 1992.

17 Clapp 2007: 259; as Clapp notes, this general line of argument follows Searle 1978. In a footnote (n.10) Clapp puts this challenge as follows: "Borg's view merely replaces the question 'Why is P, and not P\*, the semantic content of 'The cat is on the mat'?' with 'Why is P, and not P\*, the semantic content of [the Mentalese sentence] THE CAT IS ON THE MAT?' To meet the naturalistic challenge Borg must now answer this latter question." However, put this way the challenge sounds rather like a request to provide a naturalistic theory of mental content (say like Fodor's theory of asymmetric dependence) and while this is a perfectly fair request it doesn't seem that the lack of such a theory is an embarrassment solely for minimalism.

18 The question of the correct constraints on genuine truth-conditions is taken up again in 'Must a semantic minimalist be a semantic internalist?', forthcoming in *The Proceedings of the Aristotelian Society (Supplementary Volume)*, 2009.