Notes on Intention-Based Semantics

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1 IBS and its Attractions

The objective of intention-based semantics (henceforth, IBS) is to explain the
notion of meaning\(^1\) and all other semantic properties and relations in a two
stage process.\(^2\) In the first stage, speaker-meaning is explained reductively
(without recourse to semantic vocabulary) in terms of the speaker’s acting with
the intention of producing a belief or action in an audience. Thus, the first stage
will consist of a theory of roughly the form:

In uttering \(U\), \(S\) means that \(p\) iff, for some \(H\), \(S\) utters \(U\) intending in way
\[\ldots\] to activate in \(H\) the belief that \(p\).

In the second stage, all other semantic properties, and in particular the “public”
semantic properties (synonymy, reference, word- and sentence-meaning, etc.)
are explained in terms of speaker-meaning.

The second stage can itself be broken into several steps. First, the IBS
theorist will set out a notion of convention (in non-semantic terms) as a set of
self-perpetuating regularities in behavior. Armed with this notion of convention,
the IBS theorist will then attempt to explain what it is for a sentence \(s\) to mean
\(p\) in a population \(P\) in terms of a convention in place in \(P\) that correlates
sentences (or sentence types) with the act of meaning that \(p\). Thus, this stage
of the IBS picture might eventuate in a theory of the form:

\(s\) means \(p\) in a population \(P\) iff there prevails in \(P\) a system of conventions
conformity to which requires one not to utter \(s\) unless one means thereby
that \(p\).

Finally, the IBS theorist would use this notion of sentence meaning to define all
other semantic notions.

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\(^{1}\)Famously, [Grice, 1957] distinguishes between natural meaning (the sense of ‘meaning’ at
work when we say that smoke means fire) and nonnatural meaning (the sense of ‘meaning’
tended to capture something like intending to communicate to an audience). The IBS
program is directed at the analysis of nonnatural meaning. I’ll make some remarks about the
relation between natural and nonnatural meaning in section 4.

\(^{2}\)The following characterization is from ([Schiffer, 1987], 120).
The IBS picture, understood in this way, offers several attractions. First and most obviously, it provides the hope of explanations of a number of interesting semantic notions. Second, it proposes to reduce all other semantic notions to the special notion of speaker-meaning, thereby exchanging several disparate mysteries for a single research program. Third, it offers the hope of a respectable ontological role for the semantic: if, as IBS promises, semantic facts can be reduced to psychological facts (and if psychological facts can be reduced to physical facts; see section 4), then we needn’t worry that semantic realism (the assumption that there are semantic facts) threatens metaphysical naturalism (the demand that all true facts about the world be stateable in physical or topic-neutral language).

In what follows, I’ll try to set out the two stages of an IBS analysis in a bit more detail, and then turn to the question of the relationship between IBS and theories of reference and semantic content.

2 Stage 1: Speaker-Meaning

As we have seen, the first stage in the IBS analysis consists of an attempt to define reductively a notion of speaker-meaning in terms of a speaker’s intention to produce certain effects in an audience. However, in order to withstand several complications and potential counterexamples, this rough-and-ready idea must be refined substantially. First, to capture the idea that the speaker achieves the goal of producing an effect in her audience by means of communication, rather than, say, a clever trick, we must add the requirement that the hearer should recognize the intention of the speaker. This first refinement seems useful, but it too is insufficient; we must also require that the effect achieved in the audience occurs (at least partly) because she recognizes the intention of the speaker. This first refinement seems useful, but it too is insufficient; we must also require that the effect achieved in the audience occurs (at least partly) because she recognizes the intention of the speaker. Incorporating these initial refinements, the theory at this stage of development says

(G) $S$ means that $p$ by uttering $U$ iff $S$ uttered $U$ intending:

(i) to produce in $H$ the belief that $p$,

(ii) that $H$ recognize this intention, and

(iii) that (i) be effected at least in part by (ii).

This version of the account is attractive, but [Strawson, 1971] points out that it is still not sufficient because of the following sort of counterexample. Suppose that $S$ intends, by the act of arranging certain convincing-looking evidence for $p$, to cause an audience $H$ to come to believe that $p$ (hence (i) is satisfied). Suppose also that $S$ knows that $H$ is watching $S$ arrange the evidence, and knows that $H$ will take the arranged evidence as reason to believe that $p$ (hence (ii) and (iii) are satisfied). However, suppose further that $H$ does not know that $S$ knows that $H$ is watching. In this case, intuition (at least, Strawson’s intuition) suggests that $S$ does not communicate that $p$ to $H$ by her actions. On Strawson’s diagnosis of the case, the problem is that although $H$ will take
the evidence as reason to believe that \( p \), she will not take \( S \)'s arranging the evidence as a way of communicating or telling that \( p \). To prevent this kind of counterexample from undermining the proposed analysis, Strawson suggests that we should add the further requirement (over and above (i)–(iii)) that

(iv) \( S \) intends that intention (iii) itself be recognized by \( H \).

The addition of intention (iv) is sufficient to save the Gricean analysis from the Strawsonian counterexample discussed above. However, Schiffer argues in [Schiffer, 1972] that there are Strawsonian-style counterexamples to even a revised Gricean analysis that includes requirement (iv). Schiffer’s counterexamples are elaborate, so I shall not discuss them in detail here (cf. ([Schiffer, 1972], 18–19). The general problem these counterexamples bring to light is that communication seems to break down if intention (iv) is not recognized by \( H \), or if the intention that intention (iv) is not recognized by \( H \), and so on. To put the point in other words, the idea of communication presupposes (what is called in ([Blackburn, 1984], ch. 4)) a certain “openness” between speaker and audience. This openness requires that the speaker and audience are mutually aware of an infinite set of intentions they direct toward each other. When this openness is absent (at any level, however deep), it seems that communication is not achieved; therefore, Schiffer argues, the proposed account of speaker-meaning won’t be sufficient unless it can ensure this kind of (indefinitely deep) openness.

Schiffer suggests that the Gricean analysis should take account of the need for openness in communication by incorporating a notion of mutual knowledge.\(^3\) For Schiffer, \( S \) and \( H \) mutually know that \( q \) iff \( S \) knows that \( q \), \( H \) knows that \( q \), \( S \) knows that \( H \) knows that \( q \), \( H \) knows that \( S \) knows that \( q \), and so on. Schiffer suggests that a mutual knowledge condition should be built into the Gricean analysis of meaning to obtain something like

\[(G+) \ S \text{ means that } p \text{ by uttering } U \text{ iff } S \text{ intends it to be mutual knowledge between } S \text{ and } H \text{ that } S \text{ uttered } U \text{ with the intention to produce (in such and such way) in } H \text{ the belief that } p.\]

Because of its reliance on the notion of mutual knowledge, (G+) precludes the kind of deceit which made (G) vulnerable to Strawsonian-style counterexamples. However, there are (at least) two reasons for worrying that the reliance on mutual knowledge in (G+) makes the latter psychologically implausible. First, we may notice that mutual knowledge requires that ordinary speakers and hear-

\(^3\)Lewis’s similar notion of common knowledge ([Lewis, 1969]) serves much the same purpose.

\(^4\)This formulation of (G+) makes obvious the analogy between it and (G). Schiffer’s own presentation of the theory in [Schiffer, 1972] is a bit different, and Grice has preferred to state the theory not in terms of a mutual knowledge condition, but by stipulating that speakers may not have so-called “sneaky” intentions. ([Grice, 1989], ch. 18) These differences won’t matter for our purposes.
ers know that \( q \) for indefinitely many substituends of \( q \).\(^5\) Second, because the substituends of \( q \) become indefinitely long, mutual knowledge demands that ordinary speakers and hearers know things they are literally incapable of thinking consciously.

One way of meeting the first sort of problem involves the appeal to tacit knowledge: we can claim that, although speakers and hearers only explicitly know that \( q \) for finitely many substituends of \( q \), they tacitly know that \( q \) for infinitely many substituends of \( q \). Whatever the difficulties might arise in cashing out this notion of tacit knowledge, we have independent reasons for wanting to ascribe to speakers and hearers psychologically real infinite tacit knowledge (e.g., the knowledge that \( s \) is a grammatical sentence of their language for infinitely many substituends of \( s \)), and there’s no obvious reason for thinking the explanation of mutual knowledge would require anything more than what is required for the explanation of these other kinds of tacit knowledge. To answer the second kind of worry about psychology plausibility, Loar suggests that we should recast the notion of mutual knowledge slightly ([Loar, 1981], 249–250). On this reconception, \( S \) and \( H \) mutually know that \( q \) iff \( S \) knows that \( q \), \( H \) knows that \( q \), . . . , \( S \) has sufficient grounds for thinking that \( H \) knows that \( q \), \( H \) has sufficient grounds for thinking that \( S \) knows that \( q \), and so on. Because ordinary agents can have sufficient grounds for thinking even things they are, in fact, incapable of thinking consciously, this reformulation of the notion of mutual knowledge can defuse the second sort of worry about the psychological plausibility of \((G+)\).

A further sort of objection to \((G+)\) holds that there are cases of speaker-meaning where the conditions of the theory are not met, hence that the Gricean analysis does not provide necessary conditions for speaker-meaning. These cases involve examples such as diary entries, posted signs, speech rehearsals, and soliloquies. Intuitively, the difficulty is that in these cases the speaker apparently does not intend to produce a response in a particular audience. Both ([Grice, 1989], ch. 5, §5) and ([Schiffer, 1972], II.2 and III) respond that these cases can be explained as involving a speaker’s intention to produce something which would produce a particular response in appropriate circumstances to an audience satisfying a certain property. For example, a posted warning sign would cause a particular response in a passer-by who happened to see the sign (under appropriate circumstances). Grice and Schiffer argue that if we amend \((G+)\) to take such potential responses by audiences with particular properties into account, we can accommodate the problematic cases.\(^6\)

\(^5\)Schiffer initially claimed that the regress attendant on the use of mutual knowledge is “perfectly harmless” to the theory ([Schiffer, 1972], 32), just as it is perfectly harmless to say that when two normal perceivers in normal conditions are both sitting before a candle, each knows that the other knows that there is a candle before him, each knows that the other knows that he knows that there is a candle before him, and so on. Several authors have objected that the case of the candle is not as uncontroversial as Schiffer supposed, and even Schiffer has come to reject the Gricean analysis because of (inter alia) doubts about the psychological reality of mutual knowledge ([Schiffer, 1987], 245–247).

\(^6\)Schiffer also suggests that the theory must be extended to cover cases of speaker-meaning that are not cases of telling, such as reminding, answering an exam question, etc.
If a suitably elaborated version of (G+) can meet these and related challenges, IBS could provide an attractive understanding of the nature of speaker-meaning.

3 Stage 2: Linguistic Meaning and Convention

The second stage of the IBS program involves the use of the notion of speaker-meaning to explain the conventional, or linguistic meaning of sentences and other expressions. The rough idea here is that populations enshrine linguistic conventions codifying particular linguistic expressions as devices used by individuals in that population to speaker-mean that p. The main tasks of this stage of the program, then, include provision of appropriate understandings of language and convention, and connecting these ideas with speaker-meaning in a way that will undergird a notion of (public) linguistic meaning.

Typically, Griceans have turned here to the work of David Lewis. Lewis defines a language as a function from sentences to propositions ([Lewis, 1975], 489). Of course, interesting languages will have infinitely many sentences, and (on standard assumptions) will be finitely specifiable; this fact, together with the idea that a language should assign meanings to subsentential expressions, leads Lewis to think that it should be possible to generate each language by a grammar Γ consisting of (i) a lexicon of elementary constituents paired with meanings, (ii) a finite set of combinatorial operations for building (and deriving meanings for) complex expressions from their constituents (and their meanings), and (iii) a representing operation that maps constituents onto strings of sounds or marks (cf. [Lewis, 1975], 497–8, [Lewis, 1972]).

This gives us a way to understand a language as an abstract object. But to explain why one from among indefinitely many such abstract objects gives the linguistic meaning of an expression in a particular population of concrete speakers and hearers, a Gricean must solve the so-called actual language problem — the problem of specifying what it means to say that $L$ is the language of a given population.

A standard Gricean solution to the actual language problem involves the idea that there is a conventional regularity in the population $P$ relating $L$ to $P$ in the appropriate way. To complete this solution to the actual language problem, then, the Gricean must first explain what a conventional regularity is, and then must tell us what kind of conventional regularity would serve to relate $L$ to $P$ appropriately.

Take the first question first: what is a conventional regularity? Here, too,

([Schiffer, 1972], III.3) I shall not discuss this elaboration here.

7To avoid a charge of circularity in the use of this understanding of language to explicate the notion of linguistic meaning, Lewis must not define propositions in semantic terms (i.e., not in terms of aboutness relations, synonymy, etc., that will ultimately be cashed out by appeal to linguistic meaning). His understanding of propositions in terms of sets of possible worlds is not semantic in this sense, although it is is semantic in the (in this case, harmless) sense that it involves the entities associated with sentences by model theory.
Griceans can appeal to a proposal of David Lewis:8

A regularity $R$, in action or in action and belief, is a convention in a population $P$ if and only if, within $P$, the following six conditions hold. (Or at least they almost hold. A few exceptions to the “everyone”s can be tolerated.)

1. Everyone conforms to $R$.
2. Everyone believes that the others conform to $R$.
3. This belief that the others conform to $R$ gives everyone a good and decisive reason to conform to $R$ himself. . . .
4. There is a general preference for general conformity to $R$ rather than slightly-less-than-general conformity — in particular, rather than conformity by all but any one. . . .
5. $R$ is not the only possible regularity meeting the last two conditions. There is at least one alternative $R'$ such that the belief that the others conformed to $R'$ would give everyone a good and decisive practical or epistemic reason to conform to $R'$ likewise; such that there is a general preference for general conformity to $R'$ rather than less-than-general conformity to $R'$; and such that there is normally no way of conforming to $R$ and $R'$ both. . . .
6. Finally, the various facts listed in conditions (1) to (5) are matters of common [mutual] knowledge: they are known to everyone, it is known to everyone that they are known to everyone, and so on. . . . ([Lewis, 1975], 490–491).

With this notion of convention in hand, the Gricean now needs to explain what sort of convention connects the abstract object $L$ with a population $P$. There are two different Gricean answers to this question that have appeared in the literature. According to the version advocated in [Schiffer, 1972], the convention in question is a regularity of using tokens of sentence-type $s$ to speaker-mean that $p$. Thus, on this answer, $L$ is the language of a population $P$ iff there is a convention in $P$ such that if $L(s) = p$, then a member $x$ of $P$ utter $s$ only if $x$ thereby speaker-means that $p$.9

The other proposed Gricean explanation has it that the convention associating languages with populations is “a convention of truthfulness and trust in $L$, sustained by an interest in communication” ([Lewis, 1975], 493). According to Lewis, to be truthful in $L$ is “to avoid uttering any sentence of $L$ unless one

8The definition given in the main text is from [Lewis, 1975], and is a slightly modified version of the account defended at greater length in [Lewis, 1969]. See also Schiffer’s account of convention in ([Schiffer, 1972], 136–137, 154–155).

9Neither this nor the Lewisean account discussed below can be quite right as they stand. For either solution to the actual language problem would make non-literal utterances conflict with the convention establishing meaning. Loar has suggested how a Gricean might attempt to meet this difficulty in ([Loar, 1981], 256–260), but I shall not pursue this topic here.
believes it to be true in $L$, while to be trusting in $L$ is "to form beliefs in a certain way: to impute truthfulness in $L$ to others, and thus to tend to respond to another’s utterance of any sentence of $L$ by coming to believe that the uttered sentence is true in $L$" ([Lewis, 1975], 492). Thus, for Lewis, $L$ is the language of a population $P$ iff there prevails in $P$ a convention of truthfulness and trust in $L$ that is sustained by an interest in communication.

Given either of these accounts, a Gricean can hold that a sentence $s$ has the linguistic meaning that $p$ in a population $P$ iff $L$ is the language of $P$ and $L(s) = p$.

4 IBS and The Naturalizers

Assuming that some form of a Gricean program can provide a successful explanation of both speaker-meaning and linguistic meaning, we may ask how IBS might relate to proposed theories of reference and semantic content. However, there are likely at least as many different kinds of answers to this question as there are different theories of reference and semantic content. To limit the scope of this essay, I shall confine my attention in this section to the possibility of relating IBS to a naturalized semantics for propositional attitude content.

These theories attempt to provide naturalistic explanations of the content of our mental representations (and particularly propositional attitude representations); some of the main proposals included under this heading are functional role theories ([Block, 1986], [Harman, 1975]), informational theories ([Stampe, 1977], [Dretske, 1981]), and teleological theories ([Millikan, 1984], [Fodor, 1990], [Dretske, 1995]). There are at least two reasons for wanting to combine some such view with an IBS explanation of speaker-meaning and linguistic meaning. First, such a combination gives an interesting and attractive picture of the relationship between thought, language, and communication. And second, supplementing IBS with a naturalized semantics for thought gives the proponent of IBS a way of explaining the fundamental notions deployed in her theory. I'll consider these motivations in turn.

First, the picture of the relationship between thought, language, and communication emerging from the combination of these views has been advocated by (among others) Jerry Fodor, who has defended a naturalized semantics of the content of propositional attitudes (cf., [Fodor, 1990]), but has insisted that he is a Gricean ("in spirit though certainly not in detail" [Fodor, 1975], 104, fn. 3) about the linguistic meaning of expressions of public languages. On this line, the semantic properties of thoughts are constituted independently of language and its role in communication (of course, this is not to say that the semantic properties of thoughts are causally independent of language or the communicative role of language). Instead, the semantics for thought is given by some naturalized theory of one of the kinds mentioned above. On the other hand, the semantics for language will be given by the IBS account of linguistic meaning, while the use of language in communication will be explained in terms of the IBS notion of speaker-meaning. Thus, the IBS theorist who accepts the
combination envisaged here could provide a reasonably elaborate picture of the relation between thought, language, and communication.\textsuperscript{10}

This brings us to the second reason for thinking that a proponent of IBS should be attracted to a naturalized semantics for thought. Recall that the IBS explanation of speaker-meaning helps itself to unanalyzed notions of intending (\(S\) intends to produce a certain effect), knowing (\(S\) knows that \(H\) knows that \(\ldots\)), and recognizing (\(H\) recognizes \(S\)'s intention to produce a certain effect); that is to say, the account is, as its name suggests, \textit{based on intentions}. But if IBS analyzes linguistic meaning in terms of speaker-meaning, which is itself explained in terms of the contents of various propositional attitudes, the program leaves its edges untied until it provides a way to understand the contents of propositional attitudes. To respond to this charge, a proponent of IBS might answer that the contents of propositional attitudes can be explained in terms of one of the proposed naturalistic accounts mentioned above. Thus, by accepting such a theory, a proponent of IBS can hope to supply an explanation of the fundamental notions in the IBS program.

Finally, if one favors a version of naturalized semantics for propositional attitudes involving some sort of covariational relationship (e.g., some informational or teleological theory), there is even more reason to find attractive the proposed combination of IBS with a naturalized semantics for propositional attitudes. To see this, first notice that Grice's late essay "Meaning Revisited" contains the suggestion that nonnatural meaning arises from natural meaning ([Grice, 1989], ch. 18, 292ff). And second, recall that natural meaning (the sense in which we may say that black clouds mean rain) is presumably covariational: the reason that black clouds mean rain is that the presence of the one covaries reliably with the presence of the other.

The analogies here are striking. Grice thinks that nonnatural meaning is derivative from natural meaning. IBS holds that public language meaning is derivative from propositional attitude contents. Grice claims that natural meaning is covariational. Leading naturalized semantic theories for propositional attitude content (informational theories) are covariational. It seems reasonable, in light of these correspondences, to defend a theory which understands both natural meaning and propositional attitude content as different kinds of covariation, and then to explain public linguistic meaning (and speaker-meaning) in terms of these covariational relations. If informational theories can be sustained, this would give strong motivation for thinking that Griceans (or at least Grice) should make room for these naturalized theories of semantic content as welcome supplementations to IBS.\textsuperscript{11}

\textsuperscript{10}One potential complication for this envisioned syncretism is that, while a naturalized semantics may succeed in explaining the content of my thoughts about water without appealing to the surrounding population and communication, it will not be able to do so for my thoughts about elms or arthritis, because the contents of these thoughts must be explained partly in terms of social deference (cf. [Putnam, 1975] and [Burge, 1979]). Fodor argues that this worry can be answered in ([Fodor, 1994], 33–39). I can’t examine this matter in the present essay.

\textsuperscript{11}Needless to say, covariational (and other naturalized) theories of semantic content are not uncontroversial. Nonetheless, the possibility of combining theories in the way I have suggested seems an interesting prospect.
References


