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**(Descriptive) Externalism in Semantics**

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**Abstract**

This chapter examines the “externalist” claim that semantics should include theorizing about representational relations among linguistic expressions and (purported) aspects of the world. After disentangling our main topic from other strands in the larger set of externalist-internalist debates, arguments both for and against this claim are discussed. It is argued, among other things, that the fortunes of this externalist claim are bound up with contentious issues concerning the semantics-pragmatics border.

**Introduction**

Semantics is the study of meaning—in some sense. In what sense? According to a common view, semantics concerns *inter alia* the relation between words and the world—in particular, their *intentional* (or: *representational*, *aboutness*) relations. When a competent user utters ‘Schnee ist weiss’ to make an assertion, she makes a claim about how the world is. What in part enables her to represent the world as being this way is that ‘Schnee’ refers to snow, something satisfies ‘ist weiss’ just in case it’s white, and so ‘Schnee ist weiss’ is true just in case snow is white. As David Lewis (1970, p. 18) famously put it: “Semantics with no treatment of truth-conditions is not semantics.” Similar sentiments are found in leading semantics textbooks:

To know the meaning of a sentence is to know its truth-conditions. If I say to you [‘There is a bag of potatoes in my pantry’] you may not know whether what I said is true. What you do know, however, is what the world would have to be like for it to be true. …. A theory of meaning, then, pairs sentences with their truth-conditions. (Heim and Kratzer 1998, p. 1)

… the study of the relation of symbols to what they stand for [“refer to”, “denote”, “their informational content”] must indeed be a part of an account of meaning. For otherwise how could we understand the fundamental fact that configurations of symbols carry information about all the diverse aspects of our experience? (Chierchia and McGonnell-Ginet 1990, p. 53)

Characterizing these semantic properties is no easy matter. Language users understand many more expressions than they could store individually in memory. So, much of the hard work involves compositionally characterizing the semantic properties of a potentially infinite number of complex expressions as a function of those of their constituents and their mode of combination. Moreover, the subtleties of these semantic properties are often masked by our own competence with the terms. ‘Snow’ is a mass term, apparently denoting some sort of undifferentiated stuff, unlike a count noun such as ‘snowballs’; and ‘Snow is white’ expresses a generic claim that is not falsified by a bit of yellow snow. How best to (compositionally) characterize the semantics of mass nouns and of generics is much disputed.

Our focus, however, is not these complexities, but the underlying word-world, or *externalist*, conception of semantics. A central debate in the foundations of semantics concerns whether it’s correct. *Internalist* opponents maintain that semantics rather concerns, or ought to concern, only *non*-intentional relations among linguistic items and (other) mental structures. On their view, semantics lays out what concepts or thoughts expressions directly activate or express, *without* recourse to intentional relations to things external to the mind/brain. (The qualification ‘directly’ is meant to put to one side priming, association, and inference via world knowledge.) For example, the word ‘Schnee’ might activate one’s concept SNOW; one might utter ‘Schnee ist weiss’ in order to express one’s belief that snow is white. Whether these *concepts and thoughts* represent aspects of the world—and whether such representational properties have a place in empirical inquiry into the mind-brain—is another matter, not a question for *linguistic* semantics, which concerns itself only with the semantic properties of *linguistic* items (words, phrases, sentences, etc.).

In this chapter, we examine some of the prominent arguments for and against externalism, as well as the dispute’s upshot for existing work in the field. Note that the question is not what the word ‘semantics’ means, but rather what are, or would be, fruitful paths for work in semantics to take. Also, the question is not whether characterizing words’ intentional relations to the world *exhausts* semantics, but rather whether it is, or should be, a *part* of semantics. This allows that semantics might concern *both* words’ non-intentional relations to other mental structures *and* their intentional relations to the world, so that work championed by typical externalists and work championed by typical internalists could turn out to be compatible. As we frame things, however, the *theses* of externalism and internalism are opposed to one another, even if work championed by their proponents is not—since we include in internalism the *rejection* of intentional relations so far as the scientific study of linguistic semantics is concerned. Finally, regarding the upshot for extant work, we will need to consider whether, if internalist considerations win the day, this requires us to jettison work in truth-conditional semantics or rather just to reconstrue it in internalist terms.

**Varieties of Externalism and Internalism**

The ‘externalist vs. internalist’ label is also applied to other disagreements concerning the nature of semantics. This is no accident, as the various externalisms sometimes come packaged together, likewise for the various internalisms. But the disagreements are, or seem to be, dissociable. So our first order of business is to clarify our main topic further by distinguishing it from these other externalist/internalist debates.

Let’s first distinguish *descriptive* and *foundational* semantics. (Stalnaker 1997; cf. Kaplan 1989 on semantics vs. metasemantics) Descriptive semantics asks what semantic properties expressions have. Foundational semantics asks *in virtue of what* they have them. A candidate *descriptive* semantic claim, in this case externalist, might be: ‘Hund’ means *dog*. Foundational semantics assumes that this descriptive fact (granting it is one) obtains in virtue of something more basic. It assumes that a dependence relation obtains between semantic properties and more fundamental non-semantic properties (the *supervenience base*), and it inquires into that relation. A candidate foundational semantic claim, again from an externalist, might be: The descriptive semantic fact that ‘Hund’ means *dog* obtains in virtue of a convention among Germans, involving attitudes and expectations they have towards one another (cf. Lewis 1975). Note that the foundational question is not about *causes* (though answers may invoke them), but about *constitution*. Phylogeny, glossogeny, and ontogeny might bear on how it *came to pass* that ‘Hund’ means *dog*, but it’s a further question whether elements of the causal story are also among the supervenience base for ‘Hund’’s *now having* that semantic property. (Compare: this is a water molecule in virtue of the relations among the hydrogen and oxygen atoms that constitute it, however they came to be so arranged.)

Distinct externalist/internalist debates correspond to the descriptive/foundational distinction. Our focus is the *descriptive* externalist/internalist debate: whether intentional relations to aspects of the world are among the semantic properties of linguistic items. The *foundational* externalist/internalist debate concerns what makes it the case that those properties obtain—in particular, whether the supervenience base for semantic properties includes only properties internal to language users or rather also includes relations to things external to them. It is this second debate that philosophers of language usually have in mind when they talk of semantic externalism and internalism. A typical foundational externalist allows that neurophysiological twins can have otherwise identical lexical items with different semantic properties; what makes the difference must thus reside in some relation to something external. Hilary Putnam (1975), for example, argues that what a speaker’s natural kind terms refer to depends in part on the speaker’s natural and social environments. A typical foundational internalist denies this.

Putnam argues for foundational externalism by arguing that a descriptively externalist semantic property—the reference of natural kind terms—does not supervene on an internalist supervenience base. His view is thus both foundationally and descriptively externalist. But it would seem that (pending substantive argument to the contrary) a descriptive externalist may be either a foundational internalist or a foundational externalist—similarly for descriptive internalists. The debates thus cross-cut. Various descriptive externalists (e.g., Segal 2000) have challenged Putnam’s arguments for foundational externalism, maintaining instead that speakers’ intrinsic properties fix the reference of their terms. Likewise, it’s a possible position (though proponents are not readily found) to deny, with descriptive internalists, that linguistic items stand in *representational* relations to worldly items, but also hold, with foundational externalists, that the non-intentional semantic properties expressions *do* have are determined in part by (non-intentional) relations to things in the world. For example, one might hold that linguistic items are computational mental structures without representational properties, but also that computational structures are themselves individuated in part in virtue of the mind/brain’s relation to its environment (cf. Bontly 1998, Ludlow 2003a).

These externalist/internalist debates—descriptive and foundational—both concern the semantic properties of *linguistic* items. It’s worth noting that parallel debates arise concerning the properties of *non*-linguistic items, particularly non-linguistic mental structures: what, if any, representational properties do they have, and in virtue of what do they have them? In the introduction, we said in effect that linguistic descriptive internalism needn’t address whether the concepts and thoughts that they take linguistic items to activate or express are themselves representational. Having drawn the descriptive/foundational distinction, we can now add that linguistic descriptive internalism also needn’t address foundational questions concerning what makes concepts and thoughts have whatever properties they do. (For a seminal extension of Putnam’s linguistic foundational externalism to mental content, see Burge 1979; cf. also Burge 2003 on Chomsky’s internalism more generally.)

Though one can contrast linguistic items with concepts and thoughts, it doesn’t follow that linguistic items are not mental structures (of some other kind). This brings us to yet another debate to which the label ‘externalist vs. internalist’ gets applied—now concerning what words are, as opposed to what semantic properties they have.

Chomsky (1986) famously distinguishes two conceptions of language. An I-language—or, “internalized” language—is the computational system, realized in an individual’s mind/brain, that generates the structures specifically implicated in linguistic behavior. An E-language is an “externalized” language that is understood independently of the properties of the mind/brain. Chomsky introduces the notion of E-language in discussing proposed technical constructs in the scientific study of language. But it also naturally comprises pre-theoretic conceptions of languages—English, German, etc.—as existing external to and independently of any particular person.

Chomsky argues that I-languages are the proper target of scientific inquiry: E-languages, among other things, have insufficiently clear identity conditions, while a focus on I-languages opens fruitful lines of inquiry concerning acquisition, the causal basis of linguistic behavior, the interface of linguistic competence with other cognitive capacities, cross-linguistic commonalities and variation, etc. (See Wiggins 1997 for a defense of E-language, and Heck 2006 in reply. And see Stainton 2006 for an overview of Chomsky’s views on these and related matters.) But debates about the proper object of linguistic inquiry—I-languages or E-languages (or both)—again seem to cross-cut our primary concern, at least pending substantive argument. Various authors (Larson and Segal 1995; Ludlow 2003b, 2011) explicitly present themselves as providing a descriptive externalist semantics (a characterization of intentional word-world relations) for the structures generated by an I-language. Others (Brandom 1994) embrace a social, E-language conception of language while eschewing representational properties in their theorizing.

Finally, the externalist/internalist debate is sometimes formulated as one concerning what kind of *thing* a meaning is: whether it is something that can be external to the mind/brain (the referent of a term) or is something internal to it (a concept). But descriptive externalism need not commit one to external meaning *entities*. Some descriptive externalists—notably Donald Davidson (1983, cf. also Lepore and Ludwig 2005)—eschew meaning entities altogether as obscure and explanatorily otiose. The claim is not that the putative referents of words—tables, rocks, Donald Davidson—don’t exist, but rather that there are no entities that are *meanings*; so, in particular, those entities aren’t meanings. Moreover, a meaning-entity internalist can embrace descriptive externalism. Elbourne (2011), who casts the externalist/internalist debate in meaning-entity terms, favors meaning-entity internalism (meanings are concepts), but maintains that meaning-entity externalists and internalists agree that the meanings of words—whatever they are—are what enable words to “hook on” to the world. (Incidentally, instead of identifying meanings either with referents or with concepts, one might suggest that they are the combination of the two, with concepts determining reference. Cf. Frege (1918), albeit this use of ‘concept’ aligns more with his ‘*Sinn*’ (sense). His use of the term ‘*Begriff*’ (concept) corresponds more closely, albeit imperfectly, to our ‘property.’ We should note also that some take concepts to be non-spatial *abstracta*, and so in that sense neither internal nor external.)

These other externalist/internalist debates deserve further discussion—as do their bearings on one another. Various ways of arguing for descriptive externalism or internalism may commit one as well concerning the other debates. But in any event it is important to distinguish the debates. They involve distinct claims, and underscoring this better places us to see clearly how one might be connected with another. That noted, we shall henceforth concentrate on the debate between descriptive externalists and internalists concerning linguistic items. Should semantics include a characterization of intentional relations between linguistic items and aspects of the world?

**Against Externalism**

Internalists (e.g., Chomsky 2000, Jackendoff 2002, Pietroski 2005) have answered this question in the negative on various grounds. This section catalogues some of the considerations an internalist might put forth, as well as some lines of reply. The remarks are intended only to indicate the issues, not to settle them. In the next section, we turn to arguments in favor of externalism.

First, some internalists raise questions concerning the objects to which words putatively bear intentional relations. Some of these objects can seem in various ways suspect or at least such that they have no place in empirical inquiry—for example, because they are vague, mind-dependent, fictional, or otherwise odd (Jackendoff 2002). For example:

* rivers (which ‘river’ putatively denotes) have unclear boundaries, for example at a confluence
* political entities like Arizona (which ‘Arizona’ putatively denotes) only exist in virtue of there being people with various beliefs and intentions
* the use of some terms—such as ‘book’ in ‘This book weighs 2 pounds and is a best-seller’—would seem to commit us to entities that are both abstract and concrete
* names for fictional beings, like ‘Superman,’ seem not to refer at all
* and various putatively referring terms—such as ‘sake’ (as in ‘for my sake’) and ‘the average American’—would seem to commit us to recognizing odd entities indeed.

There are several possible lines of reply, perhaps different ones appropriate to different cases. First, the descriptive externalist might deny that her semantics involves reference to the alleged objects. For instance, Kennedy and Stanley (2009), building on previous proposals (e.g., Higginbotham 1985), argue that ‘the average American,’ far from denoting some particular person with 2.3 children, is not a genuine singular referring expression at all. They develop a view on which ‘average’ denotes the property of being a measure function, a domain, and degree such that the sum of the result of applying that measure function to that domain, divided by the number of items in the domain, equals that degree. So, sentences such as ‘The average American has 2.3 children’ yield truth-conditions to the effect that the number of children of Americans divided by the number of Americans is 2.3. On their analysis, the terms here refer to numbers, Americans, their children, and relations among them.

Second, the descriptive externalist might deny in some cases that the relevant referent is so odd, or otherwise objectionable, after all. The general strategy is to argue that the internalist sets the bar too high, perhaps even precluding otherwise accepted objects of scientific inquiry. For example, if purposes or interests aren’t odd, why are sakes? That the word ‘sake’ has a distinct distribution, apparently restricted to certain collocations, is interesting but arguably orthogonal to the internalist’s objection. The internalist might rejoin that sakes, like purposes or interests, are not tangible things, or are mental and thus mind-dependent. But, again, why this should cause alarm? The internalist herself happily wallows in such non-tangible mental stuff as concepts and thoughts, so presumably would deny that they can be *a priori* debarred from scientific inquiry. Similar remarks apply to other mind-dependent things such as Arizona. Likewise, the vague boundaries of brains and other objects of scientific inquiry can be used to turn aside the worry about rivers.

The ‘book’ example—‘This book weighs 2 pounds and is a best-seller’—is one of various mismatch cases to which Chomsky (2000) has drawn attention. They involve apparent reference to objects with shifting sets of incompatible properties. The best-seller isn’t any particular copy of the book: it’s a best-seller because of the many copies sold. But only particular copies have weight. Yet the sentence seems to treat the book type and the book token as one, as if one and the same thing could be both abstract and concrete. Externalists might reply here as well that no particular odd object gets referred to. The cases rather bring out the complexity of speakers’ understanding of relations among objects and their properties. In this case, the proper interpretation of the sentence (or at least of what the speaker says in uttering it) requires knowledge of how types and tokens relate—in particular, how a token might be said to have a property by courtesy in virtue of a property of its type (and vice versa). What it *is* for a particular copy of a book to be a best-seller, for example, is for it to be a token of a type that’s a best-seller. Indeed, externalists might even allow in their ontology items, in addition to book-types and book-tokens, that are hybrids of the two—and they may suggest that much social ontology involves things with hybrid natures (consider institutions such as universities which are both located and abstractly constituted). If internalists object that items constituted of, for example, aspects that are abstract and aspects that are concrete are ontologically odd, externalists can suggest that internalists are not being psychologistic enough: their intuitions of oddness might themselves be the product of a “folk metaphysics” whose bearing is open to question.

Externalists might try adding that it’s unclear that internalists have anything better to offer concerning such cases (cf. Elbourne 2011, p. 26). Moreover, the problem—if it is one—does not seem specific to language, since we also can entertain the *thought* that this book weighs 2 pounds and is a best-seller. Again, internalists run the risk of proving too much—though some might reply that these cases help mark the limits of scientific tractability concerning aspects of both language and thought. (Chomsky also raises various other challenges for externalist semantics. For example, he suggests that such sentences as ‘Poems are written by fools like Smith’ and ‘Mountains are climbed by fools like Jones’ pose problems for semantic compositionality: why does the first, but not the second, require that *all* X’s be A-ed by such fools? (Chomsky 1975) For an externalist reply, see Forbes (2012).)

Some of the preceding remarks apply as well to the difficult topic of fictional names and other apparently non-referring terms, which introduce a variety of complications and have been addressed in various ways. (See Everett and Hofweber 2000.) Here I use them to put on the table a third line of reply available to descriptive externalists. The internalist objections canvassed so far assume that externalist semantics requires that the world in fact contain that which words are about. The reference relation, for example, must relate words to things that exist. But many intentional terms are arguably ambiguous between a weaker and stronger sense, where only the latter has existential import. (Cf. Rey 2006.) Thus, we can say that ‘Superman’ refers to Superman, not to Lex Luther, while also acknowledging that there is no actual person to whom the name applies. To mark the difference, we might say that the weak sense concerns what the term *purports* to refer to in the stronger “success” sense. Accounts of fictional names attempt to accommodate this in various ways. One suggestion is that fictional names are used within the scope of a pretence: *suppose* things are as depicted in this story, then ‘Superman’ refers to Superman. Or at least so it might be for the name as used in ‘Superman is strong.’ For sentences “outside” the fiction—such as ‘Superman appears in DC Comics’—one might say that the name refers to an *abstractum*. Particularly problematic are negative existential sentences such as ‘Superman does not exist.’ (Cf. Evans 1983, Kripke 2013.)

More generally, the externalist may claim that semantics should include a characterization of what words *purport* to be about. Emmon Bach (1986, 1989) thus speaks of natural language metaphysics: the semanticist, in characterizing a language’s semantic properties, lays bare how things are represented in language to be, but prescinds from drawing conclusions therefrom concerning how the world in fact is. (Cf. Pelletier 2011, with reference to the mass/count distinction.) Indeed, since much of the fine-grain work ascribes semantic properties arguably not consciously available to speakers themselves—including properties concerning sets, possible worlds, and other esoterica—perhaps some of the seeming metaphysical commitments of our semantic competence should not be viewed as commitments of the speakers themselves. The idea is that the sentences of speakers’ I-languages might possess truth-conditions under the supposition that certain kinds of things exist. Such suppositions might facilitate the modeling and computation of semantic properties and relations. But the speaker herself needn’t be committed to such entities in virtue simply of using the language—far less the semanticist who merely describes the speaker’s semantic competence. (Cf. Gross 2006.)

Should this still count as a kind of externalism? On the one had, we are allowing that the worldly correlates needn’t exist; on the other hand, we are preserving the idea that words have representational content and that semantics goes beyond mere causal relations between words and other mental structures. I count this as a kind of externalism, in part given some prominent internalists’ critical focus on appeals to intentionality at least so far as semantics is concerned (see the next paragraph). But one could reasonably choose to use the labels differently. (Cf. Collins’ (2011, p. 137) characterization of internalism: “The explanations offered by successful linguistic theory neither presuppose nor entail externalia”—also Collins 2009, p. 53.) What matters are the possible positions, not how we label them. But, to the extent that the applicability of the label is uncertain, the debate itself is unclear. It’s possible that at least some of the disagreement among semanticists concerning the proper construal of extant work stems from confusion concerning the terms of the debate.

The objections so far canvassed concern the things to which words are supposed to relate. But some have also objected to intentional relations themselves. For example, Jackendoff (2002) argues that, because we cannot make physical sense of intentional relations, there in fact are none. His remarks suggest that this basis for rejecting descriptive externalism depends on a foundational demand that (it’s maintained) externalism can’t satisfy—viz., that the intentional relation be at least in principle reducible to a physical relation. Jackendoff’s claim is akin to the content eliminativism of Quine (1960) and Churchland (1981). It calls to mind as well behaviorist scruples, but Jackendoff is a cognitivist who parts company with behaviorists by allowing computational mental structures a central explanatory role.

There are in fact proposals for rendering intentionality physicalistically acceptable. (Loewer 1993 surveys some.) But it might also be replied that the explanatory credentials of theories invoking intentionality do not require satisfying Jackendoff’s foundational demand (Gross 2005a, Burge 2010). On this view, a notion earns its keep to the extent that it’s invoked in successful, fruitful theories. (Cf. Chomsky 2000 on methodological naturalism.) We may still aim for integration with other theories in other domains to the extent possible (this would increase explanatory scope and deepen understanding); but such integration is just one virtue among many and, in any event, should not be imposed prematurely. Still, perceived barriers to integration, whether in principle or in practice, may suggest to some that inquiry is on the wrong track. The proof of the pudding is in the eating. Note that Chomsky (2000), like Jackendoff, is skeptical of representational notions playing a role in scientific inquiry as things now stand and in the foreseeable future. But he does not go so far as to deny the phenomenon of intentionality. It’s one thing to deny a phenomenon; it’s another to deny merely its scientific tractability. (For some further comparison of Jackendoff and Chomsky on these matters, see Gross 2005a, 2007. Gross 2005a also discusses the implausibility of rejecting intentionality altogether.)

One needn’t throw out the very phenomenon of aboutness, however, in order to question whether *words* bear an intentional relation to aspects of the world (even if speakers or their thoughts do). Another challenge comes from the pervasive phenomenon of content context-sensitivity. What words are about, or what speakers say in using one and the same expression, varies across conversational contexts. Obvious examples include demonstratives, indexicals, pronouns, tense markers, and the like. But virtually all expressions seem to be context-sensitive in various ways. Thus ‘drink’ in, say, ‘Do you want something to drink?’ can sometimes be restricted to alcoholic drinks, other times not, while in still others it might include motor oil (suppose that’s the beverage favored by some visiting space aliens). When someone utters ‘Hand me the green book,’ various different parts of the book might be relevant, depending on the conversational context: the cover, the spine, the pages, the ink, etc. In particular, as these and countless other examples suggest, it can seem well-nigh impossible to keep all the complexities of speakers’ interests from intruding into the study of meaning. (Cf., e.g., Travis 2008, Sperber and Wilson 1986, Wilson and Sperber 2012, Carston 2002, Gross 2001 and 2005b, Bach 1994, and Recanati 2004.) One might further tie this pervasive context-sensitivity to a broader (if perhaps amorphous) *flexibility* inherent in natural language, reflected as well in such phenomena mentioned above as vagueness, fiction, and property-mismatch. One might include as well various other phenomena for which we lack space, such as some of those that motivate dynamic semantics.

The idea that, in natural languages, pragmatics intrudes into semantics has an august lineage. It was a central theme of so-called ordinary language philosophy and related work. (Austin 1961, Strawson 1971, Wittgenstein 1953) It’s also consonant with the thought of “ideal language” philosophers, who intended formal languages to *replace* natural languages for certain purposes. (Tarski 1983, Russell 1957, Carnap 1950) It was thus a bold step when Davidson (1984) and Montague (1974) suggested that natural languages might be studied as formal languages even regarding their semantics. Current skeptics often credit the insights of ordinary language philosophers—e.g., Chomsky (2000). (Skeptics then differ as to whether these insights merely render descriptive externalist semantics implausible or further suggest the scientific intractability of pragmatics and linguistic intentionality altogether. *Contra* the latter, see, e.g., Sperber and Wilson (1986) and Wilson and Sperber (2012).)

But now how might this idea pose a challenge to externalism? A first worry is simply that the phenomenon of context-sensitivity shows that no semantics can be adequate that assigns expressions an invariant intentional relation to the world; so, a two-place word-world relation is inadequate on empirical grounds. But this is too quick. First, perhaps some of the phenomena are not really semantic at all and so don’t require any tinkering with the basic externalist framework. For example, they might involve lexical or structural ambiguity (that is, a multiplicity of *expressions* rather than variation in the externalist import of one expression on different occasions), or they might reflect *post*-semantic pragmatic effects, such as conversational implicature, rather than something that must be captured in the expression’s standing linguistic meaning. That said, no externalist thinks all the phenomena can be so handled (though for arguments that context-sensitivity is a much more limited phenomenon than has been thought, see Cappelan and Lepore 2005 and Borg 2007 and 2012). The second, more important reply is that externalists, despite the word-world shorthand, in fact do not take the intentional relation to be two-placed. It’s standard to include context as a further *relatum*—or various elements of context (for example, the speaker, the time of utterance, etc.). (Cf. Ludlow 2003b.) On one way of developing the idea, expressions can then still be seen as denoting aspects of the world, but now the aspects they denote—viz., functions from contexts to the world—will be more abstract than one might have thought they would generally be. On other views, only speakers (perhaps also word-tokens) strictly speaking refer and the like, but intentional notions nonetheless play a central role in characterizing the specific contributions of word-types.

The fundamental issue here, then, is whether a truth-conditional semantics can adequately and plausibly accommodate the phenomena—where adequacy concerns getting the (contextualized) truth-conditions right, and plausibility concerns getting them right in a way that aligns with speakers’ actual semantic competence. (Cf. Pietroski 2003 and Gross 2005b. This plausibility consideration arguably does not apply to Soames (1989) and others who sharply distinguish semantics and accounts of semantic competence. But it is central to those who take an I-language perspective.) Many internalists think not, maintaining instead that expressions are constraints on, or instructions to construct, concepts, and that these word-concept relations are not illuminated by contextualized truth-conditional semantics (Pietroski 2005, Carston 2012). Externalists, for their part, have replied that at least some internalist alternatives over-generate and that, anyway, the one must posit contextual parameters in semantics in order to accommodate other phenomena, such as certain kinds of binding. (On the binding argument, see Stanley and Szabo (2000). For replies, see, e.g., Recanati (2004), Collins (2007), and others surveyed in Sennett (2008). For a more general development of the view, see Stanley (2007), which also reprints Stanley (2002) containing the over-generation charge.) Further, one might try arguing that any internalist proposal that expressions are constraints on, or instructions to construct, concepts *ipso facto* conceives of expressions semantically as functions from contexts to concepts; and, insofar as *concepts* bear intentional relations to the world, there would seem no in principle bar to characterizing the truth-conditional contributions of expressions in terms of such a function. If this is right, then the internalist’s case would have to rest, not on the technical infeasibility of constructing a truth-conditional semantics, but on its lack of explanatory interest.

In a moment, we’ll turn to just this objection: that descriptive externalist semantics lacks explanatory interest. But before passing from the context-sensitivity worry, it’s worth noting that, if it has force, it raises problems as well for *certain* forms of internalism. First, some internalist proposals see words and their meanings, on the one hand, and concepts, on the other, as fairly well-aligned (Jackendoff 2002) and would have to replace this one-one mapping with one that’s one-many if the contextualist’s point is correct. Second, some have attempted to reject intentional relations in semantics, while preserving the structure of extant theories, by construing ‘true,’ ‘refers,’ and other semantic vocabulary in “deflationist,” non-intentional terms (Williams 1999; cf. Gross forthcoming). On such views, the word ‘true,’ for example, does not denote a substantive, explanatory property, but rather has the expressive function of allowing us to indirectly endorse claims that we cannot endorse directly—for example, because we don’t know what was said (“What Joan said, whatever it was, is true—I trust her”), or because the relevant claims are too numerous (“Every claim of the form ‘P or not P’ is true”). But if pervasive context-sensitivity prevents truth-conditional semantics from illuminatingly characterizing the semantic properties of words, it does so regardless of whether truth-talk and the like is construed intentionally or in a deflationary manner. Finally, some have suggested recasting truth-conditional semantics in terms of the beliefs, or other mental states, sentences express. For example, instead of a theory that yields such theorems as ‘‘Schnee ist weiss’ is true iff snow is white,’ we might aim to construct theories yielding, for example, ‘‘Schnee ist weiss’ expresses the belief that snow is white.’ (See, e.g., Schroeder (2008), Richard (forthcoming), and Ludlow (2003b, 2011, forthcoming). The approach is a generalization of familiar proposals for handling sentences which arguably do not describe objective facts in the world or at least whose terms arguably do not denote naturalistically acceptable properties—such as sentences containing moral vocabulary. Indeed, in some cases, the philosophical motivations for such proposals are not unlike some of those canvassed above concerning odd objects.) If it’s allowed that the relation of expression is not intentional, then perhaps we can preserve the structure of a truth-conditional semantics without employing notions of truth, reference, and the like. There are technical problems specific to this approach. For example, because not believing something does not entail believing its negation (one might suspend judgment), the semantics of negation must be handled with care. But the point here is just that any problems posed by pervasive context-sensitivity to truth-conditional semantics would again seem to threaten this alternative just as much.

We turn now to our final argument against externalism. It suggests that intentional relations to the world play no role in linguistics’ explanatory successes. For example, semantic theories are often said to account for facts about ambiguity. But what explains the fact that ‘Mary saw the man leaving the school’ is three-ways ambiguous, while ‘Mary saw the man from Manchester’ is two-ways ambiguous, are syntactic constraints on possible meanings, independent of the expressions’ worldly intentional relations. Again, our knowledge that ‘him’ in ‘Homer was impressed with him’ is not referentially dependent on ‘Homer’ in no way depends on whether Homer existed or whether we know to whom ‘Homer’ refers, if anyone. The suggestion is that in these, and many other cases, externalist semantic theorizing in fact does none of the explanatory work. (See, e.g., Collins 2009, from whom the examples above are adapted. A somewhat different objection is that externalist semantics—at least in its usual guises—can *obscure* phenomena in need of explanation. (Yalcin forthcoming) Perhaps such worries are blunted by the non-exhaustive, ecumenical attitude I have assigned the externalist.) Combined with the previous objection, we arrive at Chomsky’s (2000, p. 132) suspicion that perhaps natural language has only syntax and pragmatics. But a descriptive internalist about semantics need not go so far. Jackendoff (2002), for example, argues for an autonomous internalist semantics that explains, e.g., alternation data not explained by syntax. (Cf. Chomsky’s (2003, p. 287) remark that he’s not opposed to semantics; he just calls it syntax.) In any event, successfully showing that externalist semantics plays no explanatory role might not by itself show that words lack intentional relations to the world. It would, however, render suspect the scientific interest of semantic theorizing that emphasizes such relations. But *has* their explanatory vacuity been shown? Showing that *some*, even *many*, explanations do not turn on such relations does not show there are *none* that do. The challenge to externalists is thus to point to such explanatory successes.

**For Externalism**

Insofar as semantics can be said to have had some success in pursuing its aims, it should not be surprising if semanticists who understand their field externalistically feel that there are explanatory successes ready to hand. The trick for the internalist is thus to undermine the claim to explanatory power or to argue that the explanations don’t turn on an externalist construal of semantic theorizing. We have just noted some examples of the latter sort. How might an externalist more directly advance her cause, and how might an internalist reply?

A first argument for externalist semantics is the light it has shed on a variety of lexical items and constructions—from quantifiers to conditionals to modals, etc. Take generalized quantifier theory, according to which quantifiers denote higher-order properties concerning the size of sets associated with noun phrases (Barwise and Cooper 1981). This approach, which was developed and motivated within a broadly externalist framework, enabled various interesting properties of quantifiers to be uncovered such as conservativity and (non)monotonicity, some of which illuminate other interesting linguistic phenomena that otherwise do not seem obviously tied to representational factors—e.g., that monotone decreasing quantifiers license negative polarity items (Ladusaw 1979). Descriptive internalists must argue that these insights can be absorbed and accommodated into their framework. They will also want to argue that any role of semantic externalist thinking in arriving at these insights was incidental or merely heuristic. A natural move is to suggest, first, that the relevant representational properties are possessed by the concepts to which quantifiers are related, not by the quantifiers themselves (unless one is an internalist who rejects intentionality *tout court*), and second, that the patterns of entailment judgments that the theory aims to explain can flow from constraints built into the semantic instructions to build concepts.

A second argument is that externalist semantics is necessary to explain the success of language use—our success both in communicating and in using communication to achieve further ends. We use language *inter alia* to inform others about how things are in the world. When I say, “I’ll leave the keys under the mat,” you know where to look and can thereby succeed in finding them. How could there have been this success unless you knew that, in uttering those words, I had said something quite specific about an aspect of the world—viz., that a particular place would have a certain set of keys there at a particular time? And how could you have known that, in uttering those words then, I had said that, unless you knew what those words mean? Finally, how could your words’ meaning what they do issue in a speech act with representational content unless they too had content—that is, bore intentional relations to the world? The implied answer is that an explanation of communicative success requires an externalist conception of semantics. This argument can be viewed as an expansion of the textbook motivations for descriptive semantic externalism quoted in our introduction.

One can run this sort of line in two ways (perhaps in both). It may be offered as a partial *causal* explanation of linguistic behavior or as an account of the *rationality*, or *justification*, of linguistic action. To expand briefly on the latter, the thought is that our linguistic behavior is typically a species of intentional action, done for reasons. (This does not require that language users consciously entertain these reasons.) And among the *reasons*—not just the *causes*—that explain why speakers do what they do, and why hearers do what they do in response, are their beliefs about what the uttered words’ standing meaning is. It must be noted, however, that there seems to be a mismatch between the semantic knowledge typically cited in causal accounts of linguistic behavior and the semantic knowledge in principle available to supply justification. While the latter can be to a significant extent characterized homophonically, can be warrantedly self-ascribed without reliance on 3rd-person evidence, and is—perhaps must be—accessible to consciousness, the former is typically non-homophonic (even bracketing context-sensitivity), cannot be warrantedly self-ascribed without reliance on 3rd-person evidence, and seems in large part *in*accessible to consciousness (Gross 2010). It’s thus unclear that the justificatory version of this line of thought can vindicate scientific externalist semantics.

There are also further replies an internalist can make, even to the *causal* version of the story. The argument assumes that speech acts have intentional content and claims that the best explanation of this assigns intentional content to word types as well. But the assumption that speech acts have intentional content will presumably be denied by those who reject intentionality *tout court*, as we saw Jackendoff seems to do. Less radically, without denying that speech act content has intentional content, an internalist might question the claim that the best explanation of speech acts’ having intentional content requires ascribing intentional content to word types.

Why might one think the best explanation does require this? Suppose one thinks the best explanation of speech act content includes plugging contextual values into the parameters supplied by a contextualized statement of truth-conditions (Stanley 2007). One might reasonably take such a truth-conditional account of words’ contributions to the determination of speech act content to suffice for holding that word types themselves have intentional content—for example, that they denote the relevant functions from context to the world. But recall that one argument *against* externalism challenges just this picture. It’s claimed that pervasive context-sensitivity renders the view at best psychologically implausible. If so, this undermines the externalists’ best grounds for inferring externalist semantic properties from speech act content and its role in communicative success.

Of course, externalists might reply by arguing that they have a better take on the relation of semantic properties to speech act content. Stainton (2011, p. 484, fn. 2), for example, argues that intentional content is needed to explain such negative facts as what we *can’t* (readily) say using certain words (cf. the over-generation worry mentioned above):

That it is very easy to talk about puppies using the Spanish word ‘perrito’, but very hard to refer to chainsaws thereby, is partly explained by the fact that the public word ‘perrito’ is semantically related to puppies. That a person who says ‘I promise to plant two beeches in your yard tomorrow’ in English cannot satisfy their commitments by planting two elms is partly explained by . . . [Stainton’s elision] And so on. Thus, referential semantics explains something.

(The emphasis on the terms being part of a public language, however, is orthogonal to our focus.)

They might argue further that, on the internalist’s alternative, it’s left mysterious how contextually-sensitive processing of word types—items *without* intentional content—leads to concepts and thoughts that *do* possess intentional content (assuming again one doesn’t deny representationality altogether). Externalist explanations, because they do not have this problem, are at least in that regard better. Some internalists might embrace this mystery, however, favoring a frank admission of our ignorance over what they would consider no good explanation at all. Chomsky (2000), for example, suggests that intentionality might remain a mystery to us; correspondingly, he might not hold out much hope for our coming to understand the complex details that yield intentional content from non-intentional linguistic items. Other internalists are more sanguine that pragmatics and mental intentionality, or at least aspects thereof, may prove scientifically tractable (Sperber and Wilson 1986). In any event, we see again that at least one strand of the externalist/internalist debate is deeply entwined with questions concerning the semantics-pragmatics interface. These issues arise as well with our next argument.

The third argument is that denying words’ intentional relations to the world renders mysterious why and how some of the primary data of semantics—truth-value judgments—have the bearing on semantic theorizing that they are taken to have. (Cf. Stanley (2007), who seems to suggest further that truth-value judgments provide the *only* evidence, or at least the only “viable basis” (p. 6), for semantic theorizing. But, even just limiting ourselves to judgment data, there are also, for example, the entailment judgments and judgments concerning possible readings to which linguists commonly advert.) The idea might be developed as follows. Language users have intuitions concerning the truth-values of sentences judged against various circumstances, and a semantic theory explains these judgments by attributing semantic knowledge of sentences’ truth-conditions—i.e., of in what circumstances sentences would have what truth-value. If semantics did not involve intentional relations, how could it explain how speakers make such judgments, and, if it doesn’t, how could those judgments provide any evidence? Further, without such evidence, on what basis could semanticists develop and justify their theories?

A reply is that language users’ truth-value judgments concern speech-act contents, not the standing semantic properties of sentences and their parts, since it’s the former that ultimately matter to communication (Bach 2002). If speakers’ judgments do not concern (contextualized) sentential truth-conditions, then it should not be a requirement on semantic theorizing that it assign sentences truth-conditions that by-and-large match the assignments of sentential truth-conditions (allegedly) displayed by speakers’ judgments. The relevant constraint on semantic theorizing, rather, is that it best explain those judgments—and any other relevant data—while meshing with the rest of our theoretical commitments. Or, better, that it *play a role* in best explaining these judgments and any other relevant data, since the judgments in fact result from the interaction of various aspects of the mind/brain, including whatever aspects are implicated in our navigating the contextual complexities that (some) internalists invoke against externalist linguistic semantics. But if this is how language users’ judgments constrain semantic theorizing, then an independent argument is required for the claim that the best explanation requires assigning representational properties to linguistic items.

As with the previous argument, externalists might here complain that internalism leaves it mysterious *how* semantic competence, in concert with whatever else, could explain the judgment data. For, again, it is unclear how *non­-*intentional items cause *intentional* items to come into being. Moreover, they might claim that it is required of an inference to the best explanation that it include a sufficiently detailed causal story of how the inferred explanatory stuff causally leads to the data for it (Devitt 2006 and 2010, Fodor and Lepore 2012). However, this requirement of inference to the best explanation is controversial. For example, it’s unclear it’s required by best practices in the physical sciences (Bogen and Woodward 1988, applied to linguistic theorizing in Gross and Culbertson 2011 and Maynes and Gross 2013).

The worry of non-intentional/intentional causal fit applies generally to forms of semantic internalism that allow mental intentionality. There are also more specific worries that externalists can raise against more specific forms of internalism. (These count as arguments for externalism insofar as supporting an inference to a best explanation involves showing that one’s preferred explanation is better than the rest.) We have already encountered some: deflationism and expressivism do not of themselves address arguments from pervasive context-sensitivity, nor do forms of internalism that identify meanings with concepts; handling negation is a delicate matter for expressivism. It’s beyond our scope to explore the specifics of internalist alternatives further. We note only that, like any theory, an internalist semantics has to earn its keep.

**Concluding Remark**

Our intention has been to offer an overview, not to advocate a position. But we may conclude by underscoring two themes for which our discussion has made a case. First, externalism-internalism debates gain in clarity when distinct strands are separated. Indeed, it is possible that at least some writers have been at cross-purposes, even perhaps construing our more specific focus—descriptive semantic externalism—in varying ways. Second, the debate between descriptive externalists and internalists is bound up at crucial junctures with debates concerning the semantics-pragmatics border and interface.

It might be suggested that reflection on these themes points in opposite directions. Distinguishing among externalist claims creates room for a kind of externalism that preserves the results and perspective of much mainstream semantics while yet meshing with the psychologistic motivations that drive various forms of internalism. Pervasive context-sensitivity, on the other hand, if it cannot be adequately addressed within an externalist semantic framework, arguably suggests the need for semantic theorizing to head in a different direction—albeit one that would hopefully absorb the structural insights of whatever idealizations it turns out externalist semantics has made. No doubt the situation will become clearer with further first-order semantic theorizing.

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**Further Reading**

Chierchia and McConnell-Ginet (1990/2000) provide a textbook discussion of many of these issues, ultimately defending a version of our externalist thesis while attempting to accommodate internalist motivations and theorizing. Elbourne (2011) is a briefer, chattier introduction, with internalist leanings. Lewis (1970, 1975) contains a classic articulation of an externalist perspective—but see Chomsky (1986, 2000) and Jackendoff (2002) for an internalist counter-balance. Sperber and Wilson (1986/1995) is a central source for pragmatic intrusion into semantics; Stanley (2007) treats these matters externalistically.

**Related Chapters**

**References**

Austin, John 1961. *Philosophical Papers*. Oxford: Oxford University Press. (Third edition published in 1979.)

Bach, Emmon 1986. “Natural Language Metaphysics.” In R. Barcan Marcus, G. Dorn, and P. Weingartner (eds.), *Logic, Methodology, and Philosophy of Science* VII. Amsterdam: North-Holland, pp. 573-95.

Bach, Emmon 1989. *Informal Lectures on Formal Semantics*. Albany: SUNY Press.

Bach, Kent 1994. “Conversational Impliciture.” *Mind & Language* 9, pp. 124-62.

Bach, Kent 2002. “Seemingly Semantic Intuitions.” In J. Keim Campbell, M. O'Rourke, and D. Shier (eds.), *Meaning and Truth*. New York: Seven Bridges Press, 2002, pp. 21-33.

Barwise, Jon, and Robin Cooper 1981. “Generalized Quantifiers and Natural Language.” *Linguistics and Philosophy* 4, pp. 159-219.

Bogen, James, and James Woodward 1988. “Saving the Appearances.” *The Philosophical Review* 97, pp. 303-52.

Bontly, Thomas 1998. “Individualism and the Nature of Syntactic States.” *British Journal for the Philosophy of Science* 49, pp. 557-74.

Borg, Emma 2007. *Minimal Semantics*. Oxford: Oxford University Press.

Borg, Emma 2012. *Pursuing Meaning*. Oxford: Oxford University Press.

Brandom, Robert 1994. *Making It Explicit: Reasoning, Representing, and Discursive Commitment*. Cambridge: Harvard University Press.

Burge, Tyler 1979. “Individualism and the Mental.” *Midwest Studies in Philosophy* 4, pp. 73-121.

Burge, Tyler 2003. “Reply to Chomsky.” In M. Hahn and B. Ramberg (eds.), *Reflections and Replies: Essays on the Philosophy of Tyler Burge*. Cambridge: MIT Press, pp. 451-70.

Burge, Tyler 2010. *Origins of Objectivity*. Oxford: Oxford University Press.

Cappelen, Herman, and Ernie Lepore 2005. *Insensitive Semantics*. Oxford: Blackwell.

Carnap, Rudolf 1950. *Logical Foundations of Probability*. Chicago: University of Chicago Press.

Carston, Robyn 2002. *Thoughts and Utterances: The Pragmatics of Explicit Communication*. Oxford: Blackwell.

Carston, Robyn 2012. “Word Meaning and Concept Expressed.” *The Linguistics Review* 29, pp. 607-23.

Chierchia, Gennaro, and Sally McConnell-Ginet 1990. *Meaning and Grammar: An Introduction to Semantics*. Cambridge: MIT Press. (Second edition published in 2000.)

Chomsky, Noam 1975. *Essays on Form and Interpretation*. New York: North-Holland.

Chomsky, Noam 1986. *Knowledge of Language*. New York: Praeger.

Chomsky, Noam 2000. *New Horizons in the Study of Language and Mind*. Cambridge: Cambridge University Press.

Chomsky, Noam 2003. “Reply to Ludlow.” In L. Antony and N. Hornstein (eds.), *Chomsky and his Critics*. Oxford: Blackwell.

Churchland, Paul 1981. “Eliminative Materialism and the Propositional Attitudes.” *Journal of Philosophy* 78, pp. 67–90.

Collins, John 2007. “Syntax, More or Less.” *Mind* 116, pp. 805-50.

Collins, John 2009. “Methodology, Not Metaphysics: Against Semantic Externalism.” *Proceedings of the Aristotelian Society Supplementary Volume* 83, pp. 53-69.

Collins, John 2011. *The Unity of Linguistic Meaning*. Oxford: Oxford University Press.

Davidson, Donald 1984. *Inquiries into Truth and Interpretation*. Oxford: Oxford University Press.

Devitt, Michael 2006. *Ignorance of Language*. Oxford: Oxford University Press.

Devitt, Michael 2010. “Linguistic Intuitions Revisited.” *British Journal for the Philosophy of Science* 61, pp. 833–65.

Elbourne, Paul 2011. *Meaning: A Slim Guide to Semantics*. Oxford: Oxford University Press.

Everett, Anthony, and Thomas Hofweber. 2000. *Empty Names, Fiction, and the Puzzles of Non-Existence*. Stanford: CSLI Publications.

Evans, Gareth 1983. *The Varieties of Reference*. Oxford: Oxford University Press.

Fodor, Jerry, and Ernie Lepore 2012. “What Sort of Science is Semantics?” In G. Peter and R.-M. Krauße (eds.), *Selbstbeobachtung der modernen Gesellschaft und die neuen Grenzen des Sozialen*. Dordrecht: Springer, pp. 217-26.

Forbes, Graeme 2012. “Some Examples of Chomsky’s.” In R. Schantz (ed.), *Prospects for Meaning*. Berlin: de Gruyter.

Frege, Gottlob 1918. ‘Der Gedanke. Eine Logische Untersuchung.’ Beiträge zur Philosophie des deutschen Idealismus I, pp. 58–77. Translated as ‘Thoughts,’ by P. Geach and R. Stoothoff, in his *Collected Papers on Mathematics, Logic, and Philosophy* (B. McGuinness, ed.), Oxford: Blackwell, 1984, pp. 351–72.

Gross, Steven 2001. *Essays on Linguistic Context-Sensitivity and its Philosophical Significance*. London: Routledge.

Gross, Steven 2005a. “The Nature of Semantics: On Jackendoff’s Arguments.” *The Linguistic Review* 22, pp. 249–70.

Gross, Steven 2005b. “Context-Sensitive Truth-Theoretic Accounts of Semantic Competence.” *Mind & Language* 20, pp. 68-102.

Gross, Steven 2006. “Can Empirical Theories of Semantic Competence Really Help Limn the Structure of Reality?” *Nous* 40, pp. 43-81.

Gross, Steven 2007. “Reply to Jackendoff.” *The Linguistics Review* 24, pp. 423-9.

Gross, Steven 2010. “Knowledge of Meaning, Conscious and Unconscious.” In B. Armour-Garb, D. Patterson, and J. Woodbridge (eds.), *Meaning, Understanding, and Knowledge* (Vol. 5: The Baltic International Yearbook of Cognition, Logic and Communication), pp. 1-44.

Gross, Steven forthcoming. “Does ‘True’s Expressive Role Preclude Deflationary Davidsonian Semantics?” In S. Gross, N. Tebben, and M. Williams (eds.), *Aspects of Anti-Representationalism*. Oxford: Oxford University Press.

Gross, Steven, and Jennifer Culbertson 2011. “Revisited Linguistic Intuitions.” *British Journal for the Philosophy of Science* 62, pp. 639-56.

Heck, Richard 2006. “Idiolects.” In J. Thomson and A. Byrne (eds.), *Content and Modality: Themes from the Philosophy of Robert Stalnaker*. Oxford: Oxford University Press.

Heim, Irene, and Angelika Kratzer 1998. *Semantics in Generative Grammar*. Oxford: Blackwell.

Higginbotham, James 1985: “On Semantics.” *Linguistic Inquiry* 16, pp. 547–93.

Jackendoff, Ray 2002. *Foundations of Language*. Oxford: Oxford University Press.

Kaplan, David 1989. “Afterthoughts.” In J. Almog, J. Perry, and H. Wettstein (eds.), *Themes from Kaplan*. Oxford: Oxford University Press, pp. 565–614.

Kennedy, Christopher, and Jason Stanley 2009. “On ‘Average.’” *Mind* 118, pp. 583-646.

Kripke, Saul 2013. *Reference and Existence: The John Locke Lectures*. Oxford: Oxford University Press.

Ladusaw, William 1979. *Polarity Sensitivity as Inherent Scope Relations*. PhD Dissertation, University of Texas, Austin.

Larson, Richard, and Gabriel Segal 1995. *Knowledge of Meaning*. Cambridge: MIT Press.

Lepore, Ernie, and Ludwig, Kirk 2005. *Donald Davidson: Meaning, Truth, Language, and Reality*. Oxford: Oxford University Press.

Lewis, David 1970. “General Semantics.” *Synthese* 22, pp. 18-67.

Lewis, David 1975. “Languages and Language.” In K. Gunderson (ed.), Language, Mind and Knowledge. Minnesota Studies in the Philosophy of Science, vol. 7. Minneapolis: University of Minnesota Press, pp. 3–35.

Loewer, Barry 1996. “A Guide to Naturalizing Semantics.” In B. Hale and C. Wright (eds.), *The Blackwell Companion to the Philosophy of Language*. Oxford: Blackwell, pp. 108–126.

Ludlow, Peter 2003a. “Externalism, Logical Form, and Linguistic Intentions.” In A. Barber (ed.), *Epistemology of Language*. Oxford: Oxford University Press.

Ludlow, Peter 2003b. “Referential Semantics for I-Language?” In L. Antony and N. Hornstein (eds.), *Chomsky and His Critics*. Oxford: Blackwell, pp. 140-61.

Ludlow, Peter 2011. *The Philosophy of Generative Linguistics*. Oxford: Oxford University Press.

Ludlow, Peter 2014. “Recursion, Legibility, Use.” In T. Roeper and M. Speas (eds.), *Recursion: Complexity in Cognition*. Dordrecht: Springer.

Maynes, Jeffrey, and Steven Gross 2013. “Linguistic Intuitions.” *Philosophy Compass* 8, pp. 714-30.

Montague, Richard 1974. *Formal Philosophy*. New Haven: Yale University Press.

Pelletier, Francis Jeffrey 2011. “Descriptive Metaphysics, Natural Language Metaphysics, Sapir-Whorf, and All That Stuff: Evidence from the Mass-Count Distinction.” *The Baltic International Yearbook of Cognition, Logic and Communication, Volume 6: Formal Semantics and Pragmatics: Discourse, Context, and Models*, pp. 1-46.

Pietroski, Paul 2003. “The Character of Natural Language Semantics.” In A. Barber (ed.), *Epistemology of Language*. Oxford: Oxford University Press, pp. 217–56.

Pietroski, Paul 2005. “Meaning Before Truth.” In G. Preyer and G. Peter (eds.), *Contextualism in Philosophy: Knowledge, Meaning, and Truth*. Oxford: Oxford University Press.

Putnam, Hilary 1975. “The Meaning of ‘Meaning’.” In K. Gunderson (ed.) Language, Mind and Knowledge. Minnesota Studies in the Philosophy of Science, vol. 7. Minneapolis: University of Minnesota Press, pp. 131-93.

Quine, Willard van Orman 1960. *Word and Object*. Cambridge: MIT Press.

Recanati, Francois 2004. *Literal Meaning*. Cambridge: Cambridge University Press.

Rey, Georges 2006. “The Intentional Inexistence of Language—But Not Cars.” In. R. Stainton (ed.), *Contemporary Debates in Cognitive Science*. Oxford: Blackwell.

Richard, Mark forthcoming. “What Would an Expressivist Semantics Be?” In S. Gross, N. Tebben, and M. Williams (eds.), *Aspects of Anti-Representationalism*. Oxford: Oxford University Press.

Russell, Bertrand 1957. “Mr. Strawson on Referring.” *Mind* 66, pp. 385-9.

Schroeder, Mark 2008. *Being For: Evaluating the Semantic Program of Expressivism*. Oxford: Oxford University Press.

Segal, Gabriel 2000. *A Slim Book About Narrow Content*. Cambridge: MIT Press.

Sennet, Adam 2008. “The Binding Argument and Pragmatic Enrichment, or, Why Philosophers Care Even More Than Weathermen about ‘Raining.’” *Philosophy Compass* 3, pp. 135-57.

Soames, Scott 1989. “Semantics and Semantic Competence.” *Philosophical Perspectives* 3, pp. 575-96.

Sperber, Dan, and Deirdre Wilson 1986. Relevance: Communication and Cognition. Oxford: Blackwell. (2nd revised edition, 1995)

Stainton, Robert 2006. “Meaning and Reference: Some Chomskian Themes.” In E. Lepore and B. Smith, *The Oxford Handbook of Philosophy of Language*. Oxford: Oxford University Press, pp. 913-40.

Stainton, Robert 2011. “In Defense of Public Languages.” *Linguistics and Philosophy* 34, pp. 479-88.

Stalnaker, Robert 1997. “Reference and Necessity.” In B. Hale and C. Wright (eds.), *The Blackwell Companion to the Philosophy of Language*. Oxford: Blackwell, pp. 534-54.

Stanley, Jason 2002. “Making It Articulated.” *Mind & Language* 17, pp. 149-68.

Stanley, Jason 2007. *Language in Context*. Oxford: Oxford University Press.

Stanley, Jason, and Zoltan Szabo 2000. “On Quantifier Domain Restriction.” *Mind & Language* 15, pp. 219-61.

Strawson, Peter 1971. *Logico-Linguistic Papers*. London: Metheun.

Tarski, Alfred 1983. Logic, Semantics, Metamathematics, second edition, ed. by J. Corcoran. Indianapolis: Hackett.

Travis, Charles 2008. *Occasion-Sensitivity*. Oxford: Oxford University Press.

Wiggins, David 1997. “Languages as Social Objects.” *Philosophy* 72, pp. 499-524.

Williams, Michael 1999. “Meaning and Deflationary Truth,” *Journal of Philosophy* 96, pp. 545-64.

Wilson, Deirdre, and Dan Sperber 2012. *Meaning and Relevance*. Cambridge: Cambridge University Press.

Wittgenstein, Ludwig 1953. Philosophical Investigations. Oxford: Blackwell.

Yalcin, Seth forthcoming. “Semantics and Metasemantics in the Context of Generative Grammar.” In A. Burgess and B. Sherman (eds.), *Metasemantics: New Essays on the Foundations of Meaning*. Oxford: Oxford University Press.