CHAPTER 1

Introduction

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Because it has no established usage, the phrase 'epistemology of language' can suggest any of a number of different agendas. But speaking broadly, there seem to be two levels at which epistemology bears on language.

First there is what might be called 'the discipline level'. We need to make decisions on how to investigate the phenomena of language. How to describe these phenomena? What questions are worth asking of them? What avenues of enquiry are most likely to bear fruit? What methodologies are best suited to these investigations, now or in the foreseeable future? These are epistemological decisions in roughly the sense that any decisions in the philosophy of science are epistemological, the scientific discipline in this case being linguistics.[1]

Second there is what might be called 'the language-user level'. We are speakers and understanders of language ourselves, able to communicate, to be expressive, and to reason using language. An interest in how such achievements are humanly possible is epistemological in the same sense that an interest in, say, our capacity to come to know facts about the physical objects around us through perception is epistemological.

Epistemology of language is characterized by epistemic concerns that recur across a broad range of areas other than language. Through reflection on these concerns in a specifically linguistic context we can hope to learn as much about knowledge as about language. At the language-user

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[1] Whether a scientific approach to language is appropriate is itself a question many would wish to pitch at the discipline level. I shall speak indiscriminately of the philosophy of language and linguistics except where it is obvious from the context that I am talking of distinct traditions.

level this is borne out—to take just one example—by changes in thinking about unconscious and innate knowledge, changes that have sprung from work that has had linguistic knowledge at its heart. And these changes at the language-user level have taken place only because of parallel developments at the discipline level: attributions of innate knowledge of language are called for only if one accepts the poverty-of-the-stimulus methodology that is standardly used to motivate them.[2] More generally, those contributions to the philosophy of science that have come with the progress of the cognitive sciences, including linguistics as a paradigm case, bear witness to ongoing interaction between language and epistemology at the discipline level. Another example of such interaction is also a pressing methodological consideration: do appeals to intuitions, and the associated method of thought experimentation (e.g. concerning reference and meaning), have a place alongside more orthodox experimental methods, and if so what place is that?

The sixteen contributors to this volume engage with a variety of quesitons, posed at both levels. Some have chosen to work towards settling disagreements that have been in place for decades or more, disagreements that are as critical now as they have ever been. Others take the epistemology of language into newer areas that are likely to define the field in years to come. Each chapter can be read and understood in isolation, but in this introduction I outline the authors' ambitions and the context in which their contributions are made. I have divided the papers into four sections: 'Knowledge in Linguistics'; 'Understanding'; 'Linguistic Externalism'; and 'Epistemology through Language'.

1 Knowledge in Linguistics

The two levels of epistemology of language just distinguished are welded together in the claims, associated with the work of Noam Chomsky and others,[3] that:

[2] Laurence and Margolis (2001) provide an opinionated survey of debates over poverty-of-the-stimulus argumentation. I return to the topic of unconscious knowledge below in connection with Searle (1990).

[3] See e.g. Chomsky (1986), 4.3 for (i) and ch. 1 for (ii). Chomsky's most developed statement and discussion of the ground and implications of these two claims—including cer-

(i) ordinary language users possess structures of knowledge, reasonably so called, of a complex system of rules or principles of language,

and that

(ii) the core part of a scientific ('naturalistic') approach to the study of language should consist of an attempt to render this knowledge explicit.

The proposal is not that ordinary speakers are like professional linguists in the manner in which they *arrive at* or *deploy* this knowledge. But linguistic theories, on this conception of linguistics, are nevertheless to be understood as the explicit statement of certain aspects of the *content* of knowledge states possessed by ordinary speakers. The papers in Part One are all concerned with this conceptualist understanding of linguistics, as it has come to be known.[4] Debate over conceptualism in this sense has turned on what kind of knowledge linguistic knowledge is, if indeed it is any kind of knowledge, and on what goals might be proper to linguistics other than or in addition to that of rendering explicit the content of states of linguistic knowledge.

Conceptualism often serves as the default conception many linguists have of the project they are engaged in. Particularly among syntacticians and semanticists, the answer to the question 'What are your theories theories *of*?' is that they are being put forward as explicit statements of knowledge possessed by individual speakers, knowledge that by hypothesis plays some pivotal role in these individuals' overt capacity to use language in the way they do. Conceptualism is now also fairly widespread among those whose background is primarily in the philosophy of language.

But conceptualism is far from achieving hegemony. This can be put down in part to the vociferousness of its sceptics. Some of these sceptics are unwill-

tain qualifications to my raw statement of them—can be found in the essays in Chomsky (2000). There are several collections that, unlike the present one, are dedicated specifically to the assessment of Chomsky's contributions to philosophy and linguistics: Harman (1974); George (1989*b*); Kasher (1991); Antony and Hornstein (2003); and McGilvray (forthcoming). Radford (1997) gives an introduction to the technicalities of Chomskian syntax from the minimalist perspective favoured at least since Chomsky (1995*b*).

[4] The label is not an entirely happy one since the knowledge is held by many 'conceptualists' to be non-conceptual, non-intentional, and subdoxastic. But it has had wide currency since being introduced by Jerrold Katz (in Katz 1990 and elsewhere), so I shall stick with it throughout this introduction.

ing to accept that ordinary speakers have knowledge of the kind standardly attributed to them by linguists; others are happy with this in principle, but do not think that explicating this knowledge is what linguists have or should have as their primary concern. ('Scepticism' is thus a doubly appropriate term here since it can operate at both the language-user level and the discipline level.) Equally significant is the persistence of disagreements within the conceptualist camp concerning what *kind* of knowledge is being imputed to speakers, with some holding back from calling the relevant psychological state 'knowledge' at all, preferring to talk of representation or cognition.[5]

The schismatic character of the conceptualist church originates in the variety of objections to the unadorned statement of conceptualism I provided above. Each objection gives rise to different responses and qualifications. Objections can be distinguished according to whether they threaten (i) or just (ii). The first three papers of Part One are concerned with objections to (ii) alone, the final two with objections to (i) (and hence (ii)).[6] I shall consider them in this order.

Those who deny that linguistics is or should be concerned to reveal the knowledge states of ordinary speakers normally have some non-conceptualist understanding of the goals of linguistics ready to hand as an alternative. One such alternative is Platonism, named as such and defended by Jerrold J. Katz. Katz takes the main objective of linguistics to be the description of languages, thought of as abstract entities akin to the abstract structures of mathematics. The task of describing the partial cognitive grasp we have of these objects falls, not to linguistics, but to *psycho*linguistics. Linguistics is not

[5] A spectrum of positions have been adopted. Knowles (2000) argues for treating the relation as one of straightforward knowledge-that. Dwyer and Pietroski (1996) argue it is belief but not knowledge. Chomsky (1980), 91, claims that it is more like knowledge than belief. Others hold that it is neither knowledge nor belief but something we can construct from scratch (see in particular a long-running debate from Wright's criticism (1986*b*) of Evans (1981), the replies in Davies (1987), Peacocke (1986), Davies (1989), and Peacocke (1989), with useful complementary discussion and criticism in George (1989*a*), Miller (1997), and Antony (1997). Some constructions of the relation between linguistic theories (especially semantic ones) and speakers are, however, not conceptualist at all but more or less instrumentalist: Foster (1976); Sainsbury (1980); Fricker (1983); and, again, Wright (1986*b*) (on which see Antony 1997).

[6] Some authors, e.g. Devitt and Sterelny (1987), reject (i) on certain readings, but hold that even if these objections fail there are independent reasons for rejecting (ii).

even an empirical discipline. To assume otherwise would be akin to claiming that mathematics could be studied using the methods of psychology.[7]

Conceptualists have replied that our interest in these abstract objects resides wholly in the fact that they are abstractions from the minds of individual speakers. What other point could there be to studying them? Unlike mathematical facts, which are distinct from our knowledge of those facts, 'pure' linguistic facts seem to be pointless abstracta. This charge is borne out, they add, by the observation that what Katz calls 'linguistics' bears little relation to what goes on in linguistics departments, which seem to practise what he calls 'psycholinguistics'.[8]

The first two contributions in Part One were written a few years earlier than the others in this collection and have been revised to appear in print here for the first time. Both seek to apply morals drawn from elsewhere in the philosophy of science to the specific case of linguistics, with a view to defending conceptualism against Scott Soames (Chapter 2) and against Michael Devitt and Kim Sterelny (Chapter 3).

Soames differs from Katz in holding that linguistics is an empirical discipline; yet like Katz he argues that linguistics does (or should) aim to describe the properties of languages or expressions, properties that are to a degree independent of facts about individual speakers: 'there are linguistics facts that are non-psychological in nature', with semantic properties in particular being dependent on 'extra-psychological notions'.[9] Moreover, there are 'psychological facts [about linguistic competence] that are non-linguistic', having to do with speed or order of processing and the like. From this he concludes that linguistics—the attempt to uncover these linguistic facts—is an enterprise conceptually distinct from anything that can be called a

[7] Katz (1990; 1996). Apart from conceptualism and Platonism, Katz gives the label 'nominalism' to those performance-fixated conceptions of the goal of linguistics that are widely regarded as having preceded the cognitive revolution, as criticized in, for example, Chomsky (1959).

[8] See Fodor (1981) and George (1996). Devitt and Sterelny (1989) agree with the criticism (pp. 515–16) but not with the inference to conceptualism.

[9] Soames (1984), 163. Soames seems to have in mind the thought that an individual can be mistaken about the correctness conditions on utterances in her or his language, conditions that are determined by facts about the community and/or by facts about the physical world. An earlier and briefer criticism of Soames (1984) than that provided by Antony in ch. 2 below can be found in Chomsky (1986), 34–6. Both Soames and Katz are criticized in Higginbotham (1983). For Soames on Katz, see Soames (1991).

branch of psychology. Linguistic theories are nevertheless empirical, since although they 'abstract away from potential differences in the internal representations and computational routines of various mental systems', they do so 'in order to concentrate on the structure of the common output they all produce', a structure that can only be revealed empirically.

Louise M. Antony (Chapter 2) accuses Soames of applying to linguistics standards that are manifestly inappropriate when applied in other scientific domains. At first glance, she says, Soames appears to be guilty of trying to specify a priori what kinds of evidence can bear on linguistics, and inferring from this specification that linguistics is only about facts belonging to the domains that are evidentially relevant to it. If that were his point, he would be overlooking the fact that evidence is holistic: there is potential for discoveries in one discipline to bear evidentially on puzzles in some apparently unrelated field. She concedes that Soames is not making *this* mistake. But he is, she says, relying on a related claim: that one can distinguish between evidence that bears on a discipline in such a way as to define the ambitions of that discipline, and other evidence that, though it bears on the discipline, does so in a non-constitutive way. The example that gives her contribution its title is designed to show up the error of this way of thinking.

Michael Devitt and Kim Sterelny regard language as a human product, but not one that is a 'characteristic of the human mind'. Although (*contra* Katz) linguistics will be an empirical discipline, it will not be so because the facts of linguistics are a proper subclass of the facts of psychology. But (*contra* Soames) their main argument for this conclusion does not turn on an a priori claim about what the facts are that linguists must uncover, where these turn out to be distinct from the facts of psycholinguistics. Rather, it develops from a kind of discipline-sized principle of charity: 'The best reason that we can expect to find for thinking that linguistics is about *x* rather than *y* is that the considerations and evidence that have guided the construction of linguistic theory justify our thinking that the theory is *true* about *x* but not *y*.'[10] By this criterion, they continue, linguists cannot be taken at their word

[10] Devitt and Sterelny (1989), 498–9. See also Devitt and Sterelny (1987), ch. 8, and other articles cited by Laurence (in ch. 3 below). Related discussion can be found in Wiggins (1997) and Millikan (2003), both of whom argue that the notion of a language that is more than an abstraction from the mind/brain of an individual speaker has a place beyond folk linguistics.

when they say they are concerned with uncovering innate structures that underpin our competence. Devitt and Sterelny instead attribute to linguists an ambition to identify the syntactic and semantic properties of 'symbols', which are 'parts of the physical world'. These properties are the ones by virtue of which symbols are able to 'have their roles in our lives', most notably their communicative role. Linguistics will be an empirical discipline with psychological aspects, but not a wholly psychological discipline.

According to Stephen Laurence (Chapter 3), the criterion Devitt and Sterelny appeal to is flawed. As a *reductio*, Laurence applies the criterion to the practice of developing what actually *is* intended to be a psycholinguistic theory (a theory backed up by claims about reaction times). Once again, the result is that the theories arrived at would not count as a branch of psychology. Laurence concludes that to accept the criterion would be to endorse bad philosophy of science, since it is a criterion that yields absurd results when applied in other contexts.[11]

In Chapter 4 Michael Devitt develops the alternative theory of the aims of linguistics outlined in his earlier work with Sterelny and summarized above. Drawing analogies between linguistic competence and the competence of chess players, logic machines, and dancing bees, Devitt defends the thought that there is a linguistic reality that is distinct from any psychological reality in speakers. Anticipating various charges that have been levelled against similar-sounding views, he insists that this linguistic reality does not collapse into facts about performance; and though the structure of this reality is characterized by rules, these need not be represented, or otherwise present, in the mind of speakers. At most we can say that the competence of speakers to speak a language must 'respect' the rules of that language. He also claims to be going beyond Katz (1990) and Soames (1984) in arguing not only for the conceptual distinctness of linguistic facts from psychological facts, but also for our having a legitimate theoretical interest in uncovering these linguistic facts.

Turn now to objections to clause (i) of the conceptualist stance. Most objections to this clause turn on the supposed implausibility of the claim that ordinary speakers know the axioms, rules, and theorems of linguistic

[11] Laurence (this volume), sect. 4. In sect. 5 he rejects other forms of arguments against conceptualism, including others he attributes to Devitt and Sterelny.

theories. They also tend to share a common form, asserting the existence of some feature *F* such that both:

(*a*) *F* is an essential feature of knowledge,

and

(*b*) *F* is missing from the relation—the putative 'knowledge' relation—that ordinary speakers bear to the linguistic theories purportedly applicable to them.

Any true-making substituend for '*F*' in (*a*) and (*b*) will mean that conceptualism, at face value, must be rejected.

To illustrate, take the ascription of knowledge of the c(onstituent)-command condition on polarity expressions:[12]

> A polarity expression must be c-commanded by an affective constituent.

(Constituent X c-commands constituent Y iff X and Y are distinct, neither dominates the other, and X is immediately dominated by a constituent that dominates Y.) If we are free to suppose that adult speakers know this and certain other principles, innately or otherwise, then we are in a position to explain why they distinguish between (1) and (2), with the second being deemed unacceptable (conventionally indicated with an asterisk):

(1) The fact that he has resigned won't change anything.
(2) *The fact that he hasn't resigned will change anything.[13]

In (2), *hasn't* is an affective constituent that, in contrast to *won't* in (1), fails to c-command the polarity expression *anything*. But acceptance of this explanation requires that there be no feature *F* such that the relation borne by ordinary speakers to the c-command condition lacks *F* whereas

[12] Radford (1997), 3.9, introduces the theory behind this condition using the example in the main text.

[13] Strictly, what is unavailable is a non-free-choice reading of (2). There are acceptable 'free choice' readings of the same string that require stressing 'anything' or adding, say, 'you care to mention'. Compare the different readings obtained according to whether 'any' is stressed in 'I don't want any house'.

knowledge requires *F*. Many regard as absurd the supposition that ordinary speakers know the c-command condition.

John Searle, for instance, charges that the kind of knowledge attributed to ordinary speakers by linguists is not available to consciousness and so is not genuinely knowledge.[14] More recently, Dean Pettit has suggested that knowledge must be possessed of a species of epistemic warrant that is missing from the cognitive relation ordinary speakers bear to linguistic theories.[15] Other candidates for *F*, properties essential to knowledge but missing from ordinary speakers' linguistic competence, include: verbalizability,[16] conceptuality and rational integration,[17] objectivity,[18] and propositionality.[19]

[14] Searle (1990); see also Dummett (1981) and the reply in Chomsky (1986). A slightly different set of challenges turns on the topic of knowledge of the content of one's own mind ('self-knowledge'), particularly the properties of the expressions of one's idiolect—see Higginbotham (1998*b*) and Smith (1998).

[15] Pettit (2002); see also Nagel (1969). Chomsky talks explicitly of knowledge that is unjustified in Chomsky (1976) and (1980).

[16] Quine (1970) objects to a lack of evidence for attributions of non-verbalizable knowledge. He has been widely criticized for inferring from this (alleged) lack of evidence to the incoherence of such attributions. For more on this debate, as well as the notion of an 'extensionally equivalent set of rules' that lies at its heart, see Laurence (this volume); Stich (1971; 1972); Chomsky and Katz (1974); Root (1974); George (1986); Neale (1987); as well as, in a more conciliatory mood, Quine (1975).

[17] The concepts that a speaker allegedly lacks—making it inappropriate for us to attribute knowledge to them—can include concepts invoked only by language theorists, such as the concept *c-command* or *satisfaction by an infinite sequence* (Campbell 1982), as well as concepts expressed by words that the speaker can use despite only 'partially grasping' their 'full meaning', e.g. 'carburettor' (see Higginbotham 1989*b*: sect. 3, and the papers in pt. 3 of this collection for discussion). What lacking a concept in either category may be taken to consist in is itself relatively open. It could be the failure of the putative knowledge to integrate with the rest of their rational system through a failure to be 'inferentially promiscuous'; or it may be simply that it lacks the marks of intentionality in Bentano's sense, such as substitution failure or lack of existential import. For discussion relating to one or other of these forms of the objection see Cooper (1973); Evans (1981); Stich (1983); Higginbotham (1989*a*); Stainton (1996); Barber (1997; 1998); Higginbotham (1998*a*); and Knowles (2000).

[18] George (1990), Higginbotham (1991), and Barber (2001) offer different attempts to deal with the concern that, if what we know is constituted out of our knowing it, the knowledge will lack objectivity. There is also a large literature coming at the problem of objectivity via the topics of scepticism and rule-following, often using Wittgenstein's discussion in *Philosophical Investigations* and/or Kripke (1982) as a springboard. See Forbes (1984); Chomsky (1986), 223–43; Wright (1989); and references in the useful survey

[*See p. 10 for n. 18 cont. and n. 19.*]

One approach conceptualists could take or have taken to these objections is to deny that the relevant *F* is missing from our relation to our language; another is to deny that *F* is an essential feature of knowledge. Sometimes making careful distinctions means that both forms of response can be taken at once. Regarding the need for knowledge to be consciously available, for example, one could distinguish between access consciousness and phenomenal consciousness. Knowledge is consciously accessible if it plays a role in the subject's wider cognitive life; linguistic knowledge *is* available to the subject in this sense, as can be seen precisely from the role it plays in linguistic behaviour. And we may lack phenomenal consciousness of our linguistic knowledge, but this form of consciousness is not essential to the explanatory potential of knowledge attributions, and so can be regarded as an inessential feature of knowledge.[20]

Conceptualists have also responded by refusing to enter into discussions of what is or is not essential to knowledge in the traditional philosophical sense of the term, or even in its ordinary usage. Such a discussion, they imply, would quickly degenerate into a pointless verbal dispute. What matters when thinking about features listed as candidates for *F* is not that they are essential to knowledge as conceived of by the folk or by René Descartes, but whether they are explanatorily essential. The refusal to get bogged down in merely verbal disputes is crystallized in the popular move, initiated by Chomsky, of abandoning the word 'knowledge' in favour of some surrogate, to be thought of as a term of art, such as 'tacit knowledge', 'competence', 'cognizing', 'representation', or even simply 'R'.[21]

discussions by Hale (1997) and Miller (1998), ch. 5. Wiggins (1997) cites the possibility of error as a reason to reject Chomsky's (1995*a*) claims about linguistic knowledge.

[19] Several critics of conceptualism (e.g. Harman 1968) have compared the attribution of tacit knowledge of linguistic principles unflatteringly to the attribution of knowledge of the principles of mechanics in the explanation of cycle-riding. The moral of the analogy is that linguistic principles describe what speakers know *how* to do, not something they know propositionally ('knowledge that').

[20] See Block's reply to Searle (1990) in the same volume, rounded out in Block (1995).

[21] See Chomsky (1980) and (1986), 267–8. Cognizing is stipulated to be the same as knowledge but stripped of those features that stand in the way of using knowledge attributions in psychological explanations in cognitive science. (Chomsky is also keen to add that, although science is not bound to ordinary usage, as it happens ordinary usage of 'knowing' is often closer to that of 'cognizing' than it is to traditional philosophical definitions.) Searle (1990) objects to the practice in cognitive science of (as he sees it)

This terminological manœuvre has its place but hardly eliminates the importance of reflecting on the character of the corresponding relatum. After all, at the very least we are presupposing attributions of cognizing to be explanatory, and for this to be the case there must be some explanatory framework within which the attribution is embedded—one cannot simply stipulate one's way to an explanation.[22] To what extent does letting go of the *word* 'knowledge' (or equally, the word 'belief') signal an abandonment of the associated explanatory framework, intentional explanation?

Georges Rey takes up this question in Chapter 5, where he attempts to identify the explanatory framework at work in linguistics. The default framework, he says, is standard computationalism, according to which semantically evaluable entities—mental representations—are felicitously transformed in computational processes, something that is possible because these same entities have causal properties in addition to their semantic ones. Rey is highly sympathetic to this computationalist framework, and argues that this is the framework within which linguistics must operate if it is to operate at all. Given this, he is puzzled by anti-intentionalist claims made by Chomsky (especially in Chomsky 2000) that, Rey believes, sit uneasily with the appeal to computationist explanation.

Rey notes that at the heart of linguistics are appeals to intentional terms such as 'representation', e.g. as embedded within the context: 'level of . . .'. Rey is interested in whether linguists' use of this and other terms, either in their practice or in their reflections on that practice, fit with the role representations are supposed to play within computationalist explanation as it is normally understood. Some of the remarks made by Chomsky, for example, can seem to be at odds with this role: '"representation" is not to

defining one's way to successful explanations by coining a special notion, cognizing, that is just like knowledge save that is lacks any of knowledge's troublesome features; appealing to inference to the best explanation in order to give this notion legitimacy widens the diameter without removing the circularity. See Matthews (1991) for discussion of inference to the best explanation in this context. Philosophical discussion of tacit knowledge in cognitive science more generally can be found in Fodor (1968), Graves *et al.* (1973), and Crimmins (1992), as well as the literature cited parenthetically in n. 5 above.

[22] To say this is not to say that one should actually stop doing linguistics until one has understood the nature of the explanation, as Searle (1990) seems to be suggesting (see previous note). As Fodor (1981) remarks, one often comes to understand why an explanatory strategy is legitimate long after one has taken it to be such.

be understood relationally, as "representation of"'.[23] Chomsky repeatedly rejects the relevance to naturalistic enquiry of intentional phenomena: 'intentional phenomena relate to people and what they do as viewed from the standpoint of human interests and unreflective thought, and thus will not (so viewed) fall within naturalist theory, which seeks to set such factors aside'.[24] Chomsky has offered his own interpretation of his apparent appeals to intentionality in other places, saying that they are merely inessential expository devices. Rey, after seeking but failing to reconcile this hostitlity to intentionality with the need to adopt the computationalist framework, concludes that we should charitably overlook Chomsky's anti-intentionalism and take at least some of his uses of intentionalist discourse at face value.

The final chapter of this section serves as a bridge to Part Two, which focuses on specifically *semantic* knowledge. Robert Matthews (Chapter 6) examines the adequacy of conceptualism in linguistics, focusing on refuting an argument advanced by Jerry Fodor and Stephen Schiffer to the effect that, whatever the truth about syntactic knowledge, attributions of knowledge of truth-conditional semantic theories are unnecessary and empirically unmotivated.[25]

In *Remnants of Meaning* (1987) Schiffer introduced the character of Harvey, who comes to know the meaning of utterances not by deploying knowledge of a semantic theory, but by virtue of possessing a mechanism in his head that takes sentences of Mentalese into other sentences of Mentalese. For example, it might take

JEAN JUST UTTERED, 'LA NEIGE EST NOIR'

into

JEAN JUST SAID THAT SNOW IS BLACK

(where an upper-case English expression is to be understood as referring to the Mentalese expression with the same content as the English one). To effect this translation, there is no need to suppose that Har-

[23] Chomsky (1995*a*), 53. I offer an interpretation of this particular claim in Barber (2001).

[24] Chomsky (2000), 22.

[25] Fodor (1976) and Schiffer (1987). For similar claims see Soames (1985) and (1989). The Harvey example, introduced immediately below in the text, is discussed by Fricker (this volume) and Lepore (1997).

vey actually knows the axioms of a semantic theory, or even the relevant theorems of such a theory (its 'T-sentences'). The point of the example is that ordinary speakers could be just like Harvey in terms of what is going on in their heads, and so also just like him in not knowing the axioms or theorems of a semantic theory. Schiffer suggests that, for all the empirical evidence we have available to us, this is not only possible but likely.

Matthews rejects this conclusion by rejecting the assumption that someone like Harvey should be described as failing to know a semantic theory. Under its most plausible reconstruction within the computationalist framework, the knowledge relation is *precisely* one that Harvey could be said to bear to a semantic theory: a semantic theory provides a specification-in-intension of the function computed by the mechanism attributed to Harvey, which takes Mentalese expressions into Mentalese expressions. To this extent, Harvey's cognition certainly 'involves' a semantic theory. Matthews takes it to be an open empirical question whether Harvey knows a semantic theory, specifically its axioms, in some stronger sense than simply being able to effect the pairing of utterances with meanings/truth conditions specified by the theory.

2 Understanding

Part One concerns the status of linguistics as a discipline, and the adequacy of conceptualism. Rightly or wrongly, the content and category of the linguistic theory that is ostensibly known/represented/cognized are often treated as irrelevant to this debate. Part Two focuses more specifically on semantic theories and their status. Two questions dominate: whether semantic theories that attribute extensional properties such as reference, satisfaction, or truth conditions to expressions can or should be married to the conceptualist perspective; and what to make of the connection between knowledge of meaning and linguistic understanding.

On the first question, there is an interesting symmetry between Chomsky's approach to linguistics and Donald Davidson's philosophy of language. Chomsky, we have seen, treats theories in linguistics as objects of ordinary-speaker knowledge; but he has long been sceptical of the agenda, popular among philosophers of language in the analytic tradition, of seeking

to provide truth-conditional semantics for natural languages. Since 1967 Davidson has been a consistent advocate of this latter agenda; yet he has equally consistently abstained from treating these theories as objects of actual knowledge.[26] What they agree on is the claim that it is unwise to assume that truth theories are objects of knowledge.

A move that has become popular in recent years is to fuse these two perspectives—to psychologize Davidson and extensionalize Chomsky. Those who take this approach regard extensional theories as objects of knowledge, knowledge that partially accounts for our capacity to understand one another through language. The case for this fusion is simple enough: only if we were possessed of such knowledge could we have certain of the linguistic abilities that we do.

One ability we have is a capacity to intuit the difference between valid and invalid arguments, a difference that seems to turn on the semantic structure of the sentences out of which arguments are composed. Our sensitivity to this structure depends, by hypothesis, on our having somehow internalized the clauses of the relevant semantic theory.[27]

Another ability is the capacity to assign truth conditions to utterances in a systematic and accurate way. By supposing that a speaker has knowledge of semantic clauses for the component expressions of an uttered sentence and for grammatical concatenation, and then by granting her an ability or disposition to carry out appropriate derivations, we can begin to see how she could arrive at an appreciation of the truth condition of the utterance. That phonological and syntactic knowledge alone fails to come close to providing what is needed for understanding is obvious. In the following passage, from the novel *The Corrections* by Jonathan Franzen, a boy is not allowed from the family table until he has eaten his rutabaga and liver:

'Dad means for you to sit there till you eat that. Finish it up now. Then your whole evening's free. . . . Noun adjective,' his mother said, 'contraction possessive noun. Conjunction conjunction stressed pronoun counterfactual verb pronoun I'd just

[26] See Chomsky (2000), throughout; and Davidson (1967; 1990). Though Davidson is sceptical of the value of embedding truth theories inside psychological operators, he is not wholly explicit on the reasons for this reluctance. Soames (1956), esp. sect. 3, criticizes the argument in the main text. Peacocke (1986) incorporates a reply to Soames (1985), with Soames responding in the same volume; see also Soames (1989); (1992), 25.

[27] Structural validity is the cornerstone in Evans (1976), part of an early attempt to psychologize Davidson (see Evans 1981 and the subsequent literature cited in n. 5 above).

gobble that up and temporal adverb pronoun conditional auxiliary infinite—' Peculiar how unconstrained he felt to understand the words that were spoken to him. Peculiar his sense of freedom from even that minimal burden of decoding spoken English. (Franzen 2002: 261–2)

To explain why this is not how it is for us, what is needed, over and above tacit knowledge of phrase-structure rules, is tacit knowledge of a compositional truth theory. That, at least, is what many have claimed.[28]

At one time persuaded of the value of grafting Davidsonian semantics onto Chomskian syntax, Paul M. Pietroski (Chapter 7) is now sceptical of the value of extensional semantics. Pietroski is willing to grant that speakers have a certain kind of thin semantic knowledge, sufficient to explain a far more limited range of semantic phenomena. Consider the various contrasts within the following list (where a common subscript index requires the words to be assigned a common referent, a distinct index signifies a distinct referent, and an asterisk indicates the unacceptability of the string so interpreted):

(3) Rachel$_i$ knew she$_i$ would laugh.
(4) Rachel$_i$ knew she$_j$ would laugh.
(5) She$_i$ knew Rachel$_j$ would laugh.
(6) *She$_i$ knew Rachel$_i$ would laugh.
(7) Rachel$_i$ laughed at her$_j$.
(8) *Rachel$_i$ laughed at her$_i$.
(9) Rachel$_i$ laughed at herself$_i$.
(10) *Rachel$_i$ laughed at herself$_j$.
(11) She$_i$ knew Rachel$_j$ would laugh at herself$_j$.
(12) *She$_i$ knew Rachel$_j$ would laugh at herself$_i$.

The pattern of acceptability judgements associated with the different inter-

[28] Larson and Segal (1995) draw together and develop various strands of the Chomsky/Davidson programme. See also Higginbotham (1985; 1986; 1988; 1992) and Laurence (1996). Davidson's work takes the syntax of the first-order predicate calculus as its foundation and adds to it as necessary. But once truth theories come to be regarded as embedded within the mind of a particular speaker, this presupposition is unmotivated. Within the new framework, work on sorting out traditional problems of opacity, reference failure, the logical form of adverbs, and so forth is undertaken on the understanding that it must ultimately gel with a syntax that is more likely to be Chomskian than Fregean.

pretations of these strings can be accounted for by supposing that we all know the c-command condition on binding:[29]

> A bound constituent must be c-commanded by an appropriate antecedent,

that *herself* is a reflexive anaphor and so must take its reference from ('be bound by') an antecedent expression by which it is c-commanded (9–12), and that the pronouns *her* and *she* either need not or must not pick up their referential properties in this way (3–8). Another 'thin' semantic phenomenon is our capacity to distinguish readings of structurally ambiguous strings such as (13):

(13) Visiting relatives can be tedious.

This capacity to disambiguate can be understood to reside in our possessing the knowledge that leaves us the option of parsing in either of two ways. Finally, there are certain judgements we make about necessary connections, inferences that seem to be analytic and/or a priori, that could be rooted in the lexicon. The inference from (14) to (15) may serve as an example:

(14) John knows that he will survive.
(15) John will survive.[30]

But such 'thin' semantic knowledge[31] falls a long way short of allowing the knower to interpret the sentences as a whole. For this, one must know what 'laugh at' means, what 'visiting' means, and so forth, where this is equivalent to appreciating how the appearance of these expressions within any given sentence contributes to the truth conditions of that sentence. Or so many have assumed.

Pietroski challenges the assumption, using as a springboard the scepticism Chomsky and others have voiced about extensional semantics as a contribution to any properly scientific study of language.[32] His argument

[29] See Radford (1997), 3.9, and Chomsky (1995*b*), 1.4.2 (co-author Richard Larson).

[30] See Jackendoff (1990) for discussion of the interpretation of this kind of phenomenon.

[31] 'Fat syntax' would perhaps be a better label, but it has been used already by Stich (1991) in a different context.

[32] The others include Hornstein (1987; 1988; 1989; 1995) and McGilvray (1998). For discussion and further references see Ludlow (2003).

distils down to the complaint that truth conditions are an 'interaction effect', the motley product of many different factors. This means not only that judgements about truth conditions cannot be systematized in a compositional theory, but also that it is not worth our trying to systematize them in this way. He accepts that there can be systematicity in semantics; but he denies that we should interpret '1' (or 'T') in systematic semantic theorems:

(16) . . . is 1 iff . . .

as 'true'. It might just as well be left as it is. Systematicity gets you a theory of 1-conditions; things only get messy in the move from 1-conditions to truth conditions.

The idea can be made vivid using an example found in Chomsky (1986: 44). He notes various cases of what we might pre-theoretically label as 'referential dependency', such as the contrasting adequacies of (17), (18), and (19):

(17) John$_i$ thinks that he$_i$ is intelligent.
(18) He$_j$ thinks that John$_i$ is intelligent.
(19) *He$_i$ thinks that John$_i$ is intelligent.

These can be explained using binding principles seen already in connection with (3)–(12), in particular the rule that a pronoun must not be bound by an item that c-commands it. But exactly the same phenomenon seems to appear even when the relevant noun phrases fail to refer:

(20) Joe Public$_i$ thinks that he$_i$ is intelligent.
(21) *He$_i$ thinks that Joe Public$_i$ is intelligent.
(22) The average man$_i$ thinks that he$_i$ is intelligent.
(23) *He$_i$ thinks that the average man$_i$ is intelligent.

This suggests we should not describe the phenomenon as being about reference after all. To this example we might add that of Bob Dole, an unpopular Republican candidate for the US presidency in 1996. Dole was fond of referring to himself in the third person: 'Bob Dole won't raise taxes', and so forth. Disrespectful commentators were given to violating the binding principles needed to rule out (19) by uttering sentences like (24):

(24) (?) No one wants Bob Dole$_i$ to win; even he$_i$ doesn't want Bob Dole$_i$ to win.

Odd though it is, all names and pronouns in (24) *are* used to refer to the same person. Troublesome cases (20)–(24) and others like them can be sidelined by dropping the assumption that the term 'refers' in 'co-refers' is to be taken as full-blown reference in the pre-theoretic sense, something that people do in acts of communication in all its complexity, not a property of expressions as such. 'Co-referring' could instead be interpreted as 'co-indexed', where indexing has *something* to do with reference, but not necessarily something that we can (or should want to) spell out in detail.

Instead of resting at the level of thin 'quasisemantics' and talking of the 'r-relation' instead of the 'reference relation' (Chomsky 1986: 44; 1995*b*: 1.4.2), one could attempt to hold on to a face-value interpretation of 'refers' by confronting these and other examples using technical solutions that, as tends to happen, invoke ever more elaborate hidden syntactic machinery.[33] Pietroski prefers to conclude that, since semantics is whatever our best theory of semantics is about, and our best (most progressive) theory of semantics is not about extensional properties but about their thinner counterparts, the extensional approach should be dropped for the white elephant it is.[34]

An ongoing debate about richness of syntax serves to link Pietroski's paper with the next contribution, from Reinaldo Elugardo and Robert M. Stainton (Chapter 8). When someone utters (25):

(25) I haven't had breakfast,

[33] Positing hidden syntax to deal with supposedly semantic problems is remarkably widespread among philosophers of language, often worryingly so: for example, to cope with the problem of deference to what is in fact gibberish Récanati (1997) suggests that we silently quantify over languages; and Forbes (1997) posits hidden logophors in replying to the problem of apparent opacity in the absence of any opaque operators (see Saul 1997 and Barber 2000).

[34] Two interesting points for discussion here are, first, the extent to which this last argument relies on the principle found in Devitt and Sterelny (1989) and criticized by Laurence in this volume (see pp. 6–7 above); and second, how Pietroski's position compares with that of Wilson and Sperber (2002), who also argue for a downgrading of the theoretical interest of truth conditions in favour of relevance conditions, though their concern is that truth conditions are *insufficiently* sensitive to the context of use.

we do not default to the interpretation that at no point since the dawn of time has the utterer had breakfast. But this distinction is not marked in the overt syntax. So either we should give up the attempt to tie this feature of the default interpretation of the sentence to its syntax, or we should posit hidden syntax.[35] If the latter option is tempting, it becomes less plausible as a strategy the more endemic the problem is seen to be.

(26) I opened three tins of beans.

(26) is, by default, interpreted as being true when and only when the utterer opened exactly (or at least) three tins, but rarely as being true just in case she opened *at most* three tins. Yet there are contexts when an at-most interpretation would be appropriate. Should we posit hidden syntax to explain this? Where is this syntax? In the language module? Is it innately specified?[36] Assuming that answers to these questions are not forthcoming, and that this is a reason to worry, we might be tempted—in keeping with the proposal by Pietroski—to shield the syntax from some proportion of the myriad of factors that enter into determining truth conditions, treating the process whereby the jump from syntax to truth conditions is achieved as having one or more of the following features: not part of the language module; pragmatic not semantic; *ad hoc*; unsystematic; unworthy of our seeking to systematize it.

The connection to Elugardo and Stainton's chapter is that the surface incompleteness of (25) and (26) can be treated as of a kind with the more radical surface-incompleteness phenomenon they address: non-sentential assertion. To borrow an example of theirs, when Andrew walks into a room uttering:

(27) From France

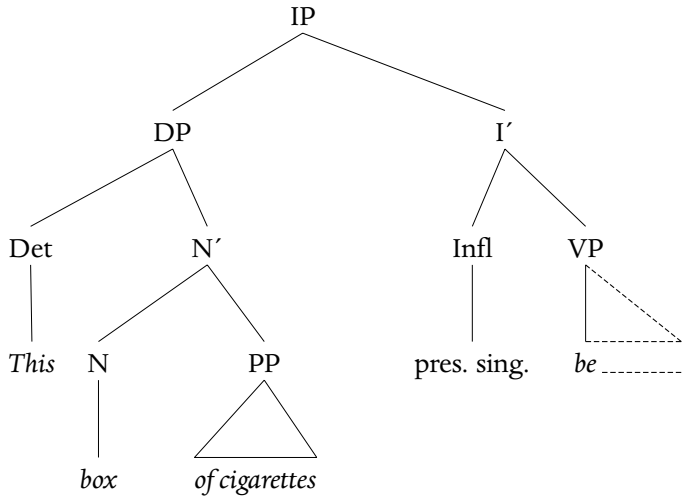
while wiggling a box of cigarettes in his raised hand, we are happy to regard his utterance as true or false according to whether the box of cigarettes is

[35] Thus one might argue that the present-perfect tense form means the sentence is referring to an 'extended now', so that it is encoded in the sentence that it is true only if a past event of having breakfast and the utterance itself both occur within this extended now.

[36] For discussion see Stanley (2000); Borg (forthcoming); Cappelan and Lepore (forthcoming).

from France. Yet there is no sentence to interpret. Or at least there is no sentence on the surface, and there are good reasons for not positing hidden but determinate syntax such as:

(28)



to combine with (27) so as to deliver up a complete interpretable sentence.[37] So the task of getting from the uttered fragment of language to the proposition expressed cannot be fully captured in a compositional truth theory, since compositional truth theories operate on syntax and there is no more than a subsentential fragment of syntax available in this case.

Elugardo and Stainton address the following question (among others): if the proposition expressed by (27) is not arrived at through the interpretation of a partially hidden sentence, how is it arrived at? They outline the options before plumping for a particular answer on more or less empirical grounds. Drawing on recent work on visual cognition they suggest that the uttered subsentential language fragment combines with descriptive and indexical referring terms of Mentalese to yield a fully propositional formula of Mentalese whose content is the proposition expressed by the utterance. The principles at work to make this happen felicitously will be pragmatic rather than semantic. If their solution is adequate for these radically incomplete,

[37] The case against the 'elliptical sentence' view is summarized by Elugardo and Stainton in the present volume, but see also Stainton (2000).

non-sentential cases, it would seem to carry over to the incompleteness apparently endemic even in the utterance of whole sentences.

In what became known as the 'modesty' debate that took place in the 1970s and 1980s, Michael Dummett and John McDowell disagreed over how far semanticists owe an explanation of what knowledge by a native speaker of English of the semantic propositions expressed in (29) and (30) must 'consist in' if its attribution is to deliver an account of understanding:[38]

(29) 'Snow' refers in English to snow.
(30) 'Snow is white' is true in English iff snow is white.

Dummett claimed that modesty in the elaboration of what knowledge of reference or of truth conditions consists in turns semantic knowledge into something trivial, something a non-competent speaker could learn in a book without having the faintest understanding of 'snow'. What is to prevent my being said to know that 'snow' refers to snow merely upon reading the letters s-n-o-w in a book and so realizing that such a word exists? To answer this we need a 'full-blooded' account of what knowledge of reference conditions consists in. Against this McDowell claimed that, in an account of linguistic understanding, nothing need be added beyond the modest claim that semantic clauses express what is known.

The debate in that context had to do with Dummett's rejection of global realism (on which see further Alexander Miller's contribution in Chapter 15), but it is a debate that takes place upstream of that controversy. Even though they each keep away from the metaphysical debates that once drove the interest in the question, the authors of the next three chapters are all concerned with how knowledge of semantic clauses relates to linguistic understanding.

Stephen Schiffer (Chapter 9) begins to address the question of what it is to know the meaning of an expression by noticing some difficulties facing what, approached naively, are initially attractive answers. One of these answers is that to know the meaning of an expression *e* is to have the propositional knowledge that *e* means that such-and-such. Another is that it is to be possessed of a certain knowledge-how. A succession of modifications

[38] Dummett (1975), 101–2, 108; (1976); McDowell (1980); and McDowell (1987) plus Dummett's reply in the same volume. Higginbotham (1989*b*), sect. 3, defends a position that resembles McDowell's in its modesty.

in response to the shortcomings of these and other proposals leads him to the opinion that for someone to know what an expression means in a given language is for her to be in a state that plays a certain role—called the *knowledge-of-meaning role*—in the information processing that takes one from a perception of the utterance of a sentence containing the expression to knowledge of what was said in that utterance.

This raises the question of what processing role the knowledge-of-meaning role for an expression, complex or primitive, might be. Roughly speaking, Schiffer holds that it is an information-processing state that directly or indirectly represents the expression as linked with what Schiffer calls its *character**, which, again roughly speaking, is Schiffer's replacement for David Kaplan's notion of character (Kaplan 1989). Along the way, Schiffer also argues that, while expressions do indeed have meaning, there may not be any *things* that are the meanings of expressions.

Chapters 10 and 11 turn from the understanding of expressions to the understanding of utterances. They also trade in notions that, for all their importance in traditional epistemology, tend to be confined to the background in discussions in the philosophy of the cognitive sciences, if they figure at all. In Chapter 10 Elizabeth Fricker is concerned with justification; in the following chapter I am concerned with the objectivity of knowledge.

Fricker's focus on justification may appear beside the point, a traditional philosopher's misplaced concern with an explanatorily inessential feature of knowledge which is of no interest to theoretical linguists. But a broader perspective ought to dispel this impression. Epistemologists have always striven to understand how the various possible routes to knowledge—perception, memory, a priori knowledge, inference, and so forth—could deliver opinions to which we are epistemically entitled. One such (putative) route to knowledge is testimony. Much of the literature on testimony turns on the nature of trust, expertise, and authority of sources, on whether we should attach credence to reports of miracles, defer to scientists in public policy, and so forth. But a comprehensive theory of testimony will need also to include an account of how we come to understand the utterances we are called on to trust. From this perspective, a concern with justification lies at the core of the topic of linguistic knowledge. Our capacity to communicate with one another is an astonishing epistemic achievement, every bit as startling as, say, our capacity to perceive other features of the world around

us. (Indeed, allowing us to communicate is just one among several respects in which possessing a language is to our epistemic advantage.) Leaving justification out of the picture on the grounds that it is inessential to the explanation of linguistic competence misses something crucial: that we have an epistemic right to our linguistic judgements is one part of what we are trying *to explain*.

One could adopt a reliabilist line on the nature of this justification, insisting that all the epistemic entitlement we need is provided by our minds' reliably tracking the truth (regarding what our interlocutors are saying, for example, or regarding what the normal state of I-languages among salient adult speakers is). But simple reliabilism must face up to well-known difficulties that even most epistemological externalists recognize.[39] Fricker's application of this dialectic to the linguistic domain is therefore welcome, as is her attempt to develop a notion of understanding that respects these broader lessons.

Fricker defends a view that treats understanding an utterance as the exercise of a quasi-perceptual capacity. Like Schiffer in the previous paper, she notes that merely knowing what a person has said is insufficient for understanding what that person has said. (For example, A may know through an interpreter what B has said, and yet fail to understand what she has said.) What explains this deficit, she proposes, is that understanding must come through a characteristic form of experience, grounded in a reliable mechanism for the achievement of representations of the content and force of an utterance. But though reliability has a role to play, the key component of her account of understanding is a theory that has explicit affinities with the claim made by John McDowell that moral competence is a quasi-perceptual capacity.[40]

In the final contribution to Part Two (Chapter 11), I seek to establish both the need for and the availability of an intention-based account of the truth conditions of utterances. The need is driven by another consideration at the heart of traditional epistemology: objectivity of subject matter. A belief or an

[39] See e.g. Conee and Feldman (1998).

[40] McDowell (1985); McDowell himself proposes to think of understanding as a kind of perception in McDowell (1977), 165–9, and McDowell (1980). Hunter (1998) reaches a similar conclusion and also stresses the relevance to understanding of justification, as does Lepore (1983).

instance of knowledge is objective only if the condition for its correctness is independent of the fact of our holding that belief or possessing that knowledge. Resignation to the non-objectivity of our linguistic knowledge is not an option, since the subjectivity of our linguistic knowledge is hardly compatible with its manifest usefulness in understanding what others have said. Objectivity may seem to call for a realm of semantic facts that is so constituted as to be independent of the mental states of individual speakers: we are wrong when we depart from the norms governing some salient linguistic community. Against this conclusion I argue that for semantic knowledge to be objective—for it to possess the requisite independence of subject matter—we must treat the truth conditions of utterances as inherited from the intention out of which those utterances are performed (and not from expression meaning of a kind that floats free from each utterer's intentions).[41]

I then defend an account of the form of the relevant intentions. The intention on the part of the utterer that determines the truth condition of a given utterance is the intention to be recognized as performing an action with that truth condition. The notion of 'recognition' requires some chiselling before this suggestion becomes plausible. And it turns out that once this chiselling is finished, recognizing is equivalent to understanding. This fact connects my paper to the two preceding ones, since all three of us have as a subconcern the existence of a distinction, alluded to above, between knowledge of meaning on the one hand, and understanding on the other. Schiffer, Fricker, and myself all agree that there is a distinction to be drawn but differ, superficially at least, in where we locate the source of this difference.[42]

3 Linguistic Externalism

The papers in Part Three are concerned with linguistic externalism, central to over three decades of debate in the analytic philosophical tradition. Externalism is a multifaceted topic, relevant in more than one way to episte-

[41] This much is argued for in Barber (2001) and merely summarized in the present paper. Other discussions of objectivity are cited in n. 18 above.

[42] For more discussion of the topic of understanding and knowledge of meaning, see Dummett (1975; 1976); Peacocke (1976); Campbell (1982); Heck (1995); and Hunter (1998).

mology of language. One way of trying to frame the discussion is in terms of the *F*-schema introduced above in Section 1. Critics of conceptualism have often sought to find features that are essential to knowledge but missing from the relation we supposedly bear to linguistic theories. Is there a troublesome feature that can be generated out of externalist intuitions?[43]

Consider the thought that the extension of our term 'water' is H_2O, in part because of facts about our environment (specifically, that the stuff we happen to refer to when using the term has, to a close approximation, H_2O as its chemical composition). This does not seem to be compatible with treating the extensional properties of our terms as a function of our knowledge states. After all, for a speaker to know that the extension of 'water' is H_2O is for her to know a lot more than we would normally feel entitled to attribute to her on the basis of her linguistic competence.

It is true that many people today could be said to know the chemical composition of water. But what about those who lived before Cavendish and others showed, in the late eighteenth century, that water had a compound structure? Did these people's use of the term have a different extension? Intuitively not. Did they in fact know that they were referring to H_2O? Again intuitively not. Should we attribute to them only the weaker knowledge that 'water' refers to water? Maybe, but this attribution appears to suffer from being in one way or other unfit for our purpose, too modest to account for speakers' capacity to avoid speaking about superficially indistinguishable colourless liquids every time they use the term 'water'. Perhaps we can make a distinction between reference and a technical notion, semantic value, where it is knowledge of the latter that determines extension. But this is a promissory note until we are told more about what knowing the semantic value of a term amounts to.

Alternatively, we could leave the *content* of pre-1770 semantic knowledge untouched but regard it as a special *kind* of knowledge. But this does not seem a promising strategy for conceptualists to adopt either. Such knowledge would be very different from the tacit knowledge we ostensibly

[43] The two classic statements of content externalism are Putnam (1975) and Burge (1979). Moreover, Burge (1989) argues that semantics can be 'a social phenomenon' without this fact jeopardizing the conceptualist position that 'the study of language is a part of individual psychology' (p. 174). Larson and Segal (1995), ch. 13, provide a useful introduction to the topic of how externalism relates to conceptualism. See also Dummett (1991), ch. 4; Lycan (1986); and Peacocke (1994).

have of, say, the c-command condition on polarity items. Tacit knowledge plays a role in our cognitive processes, even if it does so unconsciously. The special knowledge pre-1770 speakers of English had of the semantic relation between 'water' and H_2O was not only unconscious, it played no cognitive role at all. This is in considerable tension with the individualist aspirations that typically lie behind conceptualist thinking. Linguistics is no longer a branch of individualist psychology if it must consider an individual's physical and social environment before it can identify the content of the theory supposedly known by speakers.

These reflections hint at a potential substituend—'being internal'—for '*F*' in the schema. But the incompatibility (if there is one) between externalism and conceptualism arises more naturally, not through the isolation of an objection to fit that schema, but as a challenge to conceptualists to formulate a policy towards the externalist intuition that 'meaning ain't in the head', a policy of either reconciliation or rejection.

Chomsky's attitude towards twin-earth thought experiments is dismissive.[44] He describes the intuitions allegedly mined from the entertainment of these scenarios as folk intuitions with no more than sociological interest, belonging to 'ethnoscience', specifically to the study of folk linguistics, where the folk in this case are late twentieth-century analytic philosophers. This is apparent, he suggests, in the way our intuitions about reference are contextually determined, and only occasionally accord with the essentialism that ties reference to chemical composition. We can be interested in externalist intuitions about reference as part of a sociological investigation, but we would be mistaken to subscribe to them ourselves in the expectation that doing so will contribute to a natural science of language.

Those wishing to defend conceptualism in the extensional sphere cannot simply replicate Chomsky's dismissal of externalist thought experiments, which is part and parcel of his rejection of extensionalist semantics in its entirety. The three discussions that make up Part Three of the present book help us to understand the options available to those who wish to reconcile externalism with the reality of semantic knowledge, narrowing down the possibilities in some areas and opening them up in others, often in unexpected ways.

[44] Chomsky (2000), ch. 5. For discussion of whether thought experiments have any role to play in sciences other than linguistics see Gendler (1998).

Probably the most unexpected is contained in Chapter 12, by Peter Ludlow. He discusses externalism with regard to a linguistic property other than semantic content, asking whether it might not be worth regarding the *logical form* of an utterance as sensitive to facts about the physical environment.[45] To the extent that differences in logical form can affect content, this carries implications for content externalism. But advocates of content externalism usually take content to be directly dependent on external circumstances, unmediated by any difference in logical form; logical form is tacitly assumed to remain unchanged. So Ludlow's proposition that a difference in the extra-cranial world can affect the logical form of an expression is a radical one.

Defending his 1905 account of the logical form of quantified noun phrases, Russell pronounced that a philosophical theory could be assessed according to how many problems it solved without generating new ones of its own. The same can be said for the proposal that logical form has the potential to vary according to external factors. Ludlow considers possible applications of the idea, the most striking of which deals with the capacity of proper names to be used meaningfully in the absence of any referent. The so-called problem of non-referring singular terms[46] has proven to be one of the most intractable in semantics. And most philosophies of mind face a clearly related conundrum: how it is possible for us to think about objects that do not exist. It is not often that a wholly new perspective emerges in this area. Ludlow is well aware that his suggestion risks creating more difficulties than it disposes of, and his conjecture should be taken in that spirit. But here, in brief, is how externalism about logical form could help.

Suppose that, were they to have a Russellian logical form, utterances involving *non-referring* proper names would present no semantic problem.

[45] Differing conceptions of logical form can be found in a recent collection of essays edited by Preyer and Peter (2002). The possibility of externalism about logical form raises the possibility that still other properties could depend on the speaker's environment. Chomsky (2000), 129, 177, lampoons talk of semantic value by introducing a parallel notion, phonetic value, noting its lack of theoretical value, and asking his reader to explain the relevant difference between the two notions. In the light of Ludlow's example, it would be interesting to reflect on whether phonetic form could ever usefully be regarded as an externalist notion, and if not why not.

[46] My hesitancy in accepting the label has to do with a preference for the view that it is *people* who refer, using language to do so. By this score, all singular terms are non-referring. I ignore this consideration in what follows.

Uses (in this world, now) of (31) and (32) would both be false, for a common reason: the emptiness of the domain of an existential quantifier belonging to the utterance's logical form.[47]

(31) The king of France is bald.
(32) Santa Claus is bald.

Suppose, moreover, that there are Kripkean reasons against assigning utterances containing *referring* proper names a logical form that treats them as disguised definite descriptions.[48] Granting these two suppositions, what is to stop us assigning the complex Russellian logical form to utterances containing non-referring proper names, and a simple non-Russellian logical form to utterances containing proper names that successfully refer? This would require treating logical form as externally determined, sensitive to the existence of a denotation. But it would also clear up a lot of difficulties.

Awkward questions come thick and fast, as Ludlow is willing to acknowledge. They turn mostly on the consequence that we could be *radically* ignorant of the logical form of our utterances. There is an already familiar sense in which we cannot know the logical form of our utterances in the traditional, Cartesian sense of 'know': logical form on any conception is unconscious, embedded at a level deep within our thought or our brains. That is why it takes a Russell or an entire empirical discipline to reveal it. But the lack of knowledge countenanced under Ludlow's envisaged solution is of an altogether different order: facts about logical form would depend on facts fixed outside the head. Limits to our powers of introspection could never account for our failure to know whether there was ever a real Moses.

One of the more bizarre apparent consequences of externalism about logical form is that whether an inference is valid would not always be something we can realistically know, since validity can depend on logical form and we can be radically ignorant of facts that determine logical form. Indeed, validity threatens to depend on contingent matters of fact. Ludlow raises these questions before asking to what extent they are simply special cases of the widely recognized tension between self-knowledge and exter-

[47] There are various ways of fleshing out the basic idea in Russell (1905), with the theory that quantified noun phrases refer to generalized quantifiers having widest currency today (see Neale 1990; Larson and Segal 1995).

[48] Kripke (1980); see also Soames (1998).

nalism about content (which is not to diminish their critical significance), or whether externalism about logical form gives rise to wholly new worries.[49]

Gabriel Segal's contribution is orthodox in its concern with content rather than logical form, but is no less provocative than Ludlow's. He offers an argument for an internalist position that is radically holistic in the following sense: no term—e.g. 'tiger'—can have the same content for different individuals if there is a sentence—e.g. 'Tigers are indigenous to Africa'—over which they disagree.

The argument works only for a certain species of content—*cognitive* content—that satisfies the following 'Fregean' principle of discrimination: two terms in an individual's idiolect will differ in such content whenever substitution of one for the other in an extensional context would lead that individual to withdraw assent. But he points out at the beginning of the paper that such fine-grained content is needed for us to make sense of equally fine-grained differences in behaviour. Lois Lane does not touch up her make-up when she hears 'Clark Kent is coming to lunch'; yet she does when she hears 'Superman is coming to lunch'. Explaining this difference requires assigning different content to her terms.[50]

Segal is persuaded by his own argument that cognitive content is radically holistic, but acknowledges the difficulties holism brings in its wake. For this reason, the paper can be thought of as throwing down a challenge to anyone who is persuaded—like Segal himself—by the arguments for the existence of cognitive content.

One consequence of holism that is particularly relevant to the present volume is its apparent incompatibility with our knowing the meaning of the expressions in our language. If nothing else, this would seem to threaten the conceptualist stance on semantic theory that Segal also happens to favour. The threat arises as follows. We do not suppose that the meanings of our words change every time we undergo a change of belief. Yet if holism is right, our meanings, like our beliefs, are in continual flux. Does this mean we do not know what our words mean? Segal carefully isolates some different senses in which we can and cannot be said to be ignorant of meaning—

[49] For work on the tensions between self-knowledge, a priori knowledge, and regular (content) externalism see McKinsey (1991); Brown (1995); and the essays in Ludlow and Martin (1998).

[50] Braun (2001) criticizes this argument.

alleging that these differences have been glossed over by Burge (1988) and others—and evaluates their relative importance.

Jessica Brown (Chapter 14) takes issue with Segal's starting point: the need to hypothesize a species of content satisfying the Fregean criterion of content individuation, as opposed to working entirely and solely with a social externalist notion wherein contents are partly individuated by the practices of a linguistic community. Indeed, the main burden of her paper is to argue against those who, like Tyler Burge, try to combine social externalism with a Fregean notion of content.

Brown's main argument against the wisdom of adopting a Fregean notion of content if you are an externalist is that externalism is committed to sameness of content being potentially opaque, something that undermines the main motivating argument for adopting the Fregean notion. Sameness of content is potentially opaque if it is possible for someone not to realize that two of her terms express the same concept. That social externalists are committed to this is fairly clear: I could fail to realize that 'guillemot' and 'murre' both refer to the same species of auk, yet they have the same content according to social externalists, because their content is tied to the identical use to which British and Canadian experts (respectively) put the terms. And granting this opacity undermines the classic Fregean argument for sense. The failure of Lois Lane to put together the respective contents of 'Superman' and 'Clark Kent' in inference and in behaviour can be put down to her ignorance of their sameness of content, rather than to an actual difference in content.

4 Epistemology through Language

Most discussion of linguistic knowledge in Parts One to Three focuses in one way or another on the nature of the relation holding between speakers/hearers and their language. The two papers in Part Four travel beyond this agenda, asking what reflecting on our epistemic relation to language can tell us about other topics in philosophy, specifically in epistemology.

Philosophy of language was once burdened with the task of dissolving the traditional philosophical problems by showing how they resulted from confusion about language. Most philosophers today would concur that this was harmful to philosophy; most philosophers of language would add that

it was especially harmful to the philosophy of language. Bad linguistic solutions to genuine philosophical concerns often depend on questionable claims about language. Because language is a challenging and interesting enough phenomenon in its own right, the strategy of approaching philosophical problems through language as a matter of routine is showing few signs of a renaissance.[51]

This is quite compatible with the practice of carrying over lessons learnt in thinking about language to other domains, and indeed of seeking out linguistic solutions to a philosophical problem where specific reasons exist for thinking this is an appropriate strategy. The papers reviewed so far are replete with instances of lessons of the first kind; the two papers in this section are concerned with more direct attempts to draw epistemological conclusions from independently plausible linguistic claims.[52]

In Chapter 15 Alexander Miller examines one of several arguments against semantic realism that have been developed by Michael Dummett and others, reviewing the current state of the debate before offering his own reasons for rejecting the argument.[53]

Semantic realism is committed to the view that understanding statements consists in knowing or 'grasping' their truth conditions, where truth, here, is to be thought of as potentially evidence-transcendent. The acquisition

[51] Gellner (1959) was an early opponent of the ordinary-language movement. Grice's 1967 lectures 'Logic and Conversation' (in Grice 1989, esp. essay 2, pp. 22–40) were a landmark for their contribution to our understanding of the difference between semantics and pragmatics, and to the analysis of the notion of meaning. This fact sometimes overshadows its originally intended purpose, which was to undermine the use of ordinary language as a beacon with which to approach various philosophical problems.

[52] Three papers illustrate the potential and variety of applications for epistemology of lessons drawn from linguistic theory: Davidson (2001) argues that there are limits to sceptical possibilities that spring from the possibility of interpretation; Dwyer (1999) applies poverty-of-the-stimulus reasoning to the case of moral knowledge, outlining a kind of principles-and-parameters moral psychology that explicitly parallels the linguistic case. And Botterell (forthcoming) follows Stainton (1998) in rejecting Russell's principle of acquaintance—crudely, that one can think about something only if one is in some way directly acquainted with it—because of its incompatibility with non-sentential uses (see ch. 8 of the present volume) of quantified noun phrases.

[53] Other arguments against semantic realism include the manifestation argument (which Miller discusses and responds to in this chapter since it is pertinent to his rejection of the acquisition argument) and the normativity argument. See the introduction to Wright (1986*a*) for an overview.

argument against semantic realism turns on the alleged impossibility of our ever being able to acquire understanding of this kind, at least for those fragments of language that can be used to make evidence-transcendent claims. The alleged problem is that acquiring an understanding of language involves being trained in its correct usage, and we cannot be subjected to such training for evidence-transcendent portions of language since we cannot possibly be exposed to definitively correct usage. (Rejection of semantic realism would be compatible with continuing to think of understanding in terms of grasp of truth conditions; but the relevant notion of truth would need to be epistemically constrained.)

A tempting reply to this argument is that the training needed to provide us with an understanding of our language could take place using statements that are subject to confirmation or disconfirmation. With that understanding in place, nothing stands in the way of making claims that, though not subject to confirmation or disconfirmation, are still comprehensible in the realist's sense: our understanding of these statements consists in appreciating what conditions must be met for the statements to be true, even if we can never in fact tell whether these conditions are met. Miller considers the virtues of this and related responses, as well as several variants of the acquisition argument, before rejecting it even in a far weaker form than it was originally intended to have.

It is not immediately clear what to make of the relation between an assumption at the heart of the acquisition argument, that language comprehension is a rational achievement, and the contrasting view that language acquisition consists, not in a rational process of hypothesis formation and confirmation or disconfirmation, but in the largely unreflective maturation of an innately specified language module, triggered and to some extent shaped by a particular linguistic environment. The 'data' in this environment, looked at rationalistically, underdetermine the adult languages of every actual speaker. Since we *in fact* acquire understanding in circumstances that would not enable a rational investigator to do so, why assume that acquisition must, *in principle*, be rationalistically viable?[54]

While this consideration may serve to undermine the acquisition argu-

[54] Antony (1997) uses this Chomskian claim about language acquisition to argue for the irrelevance of rationally reconstructing linguistic competence after the fashion of Foster (1976) or Wright (1986*b*).

ment, it is not obvious that it does so. For one thing, poverty-of-the-stimulus arguments are more plausible in the theory of the acquisition of syntax (or 'thin' semantics in the sense of Section 1, above) than they are for extensional semantics. There is a healthy debate on the extent to which the range of concepts available to us is innately specified, but the implications of this for the acquisition of semantic knowledge are by no means settled.[55] Second, to the extent that innate knowledge is acquired by a species, it may well be possible to replay the acquisition argument at a species level rather that at the level of an individual organism.

James Higginbotham's contribution (Chapter 16) has more positive claims to make about the way reflection on language can yield epistemological conclusions. He is interested in so-called *de se* knowledge (roughly: 'knowledge of self') and in judgements that are immune to error through misidentification, though his claims about the logical form of gerundive complements and related constructions will be of interest in their own right.[56]

De se knowledge, if there is such a thing, is that category of knowledge manifest in the contrast between these two scenarios:

> A is watching a police raid taking place live on television; he believes (correctly as it happens) that he himself is the person shown sitting on a sofa inside the targeted house.
>
> B is watching a police raid taking place live on television; he does not believe (what is in fact the case) that he himself is the person shown sitting on a sofa inside the targeted house.

Higginbotham is interested in the ways in which the contrast between A's and B's predicaments can be marked in our language, in a variety of ways:

(33) (*a*) A expects that he will be arrested (true).
(*b*) B expects that he will be arrested (true under at least one reading).

(34) (*a*) A expects that he himself will be arrested (true).

[55] See Cowie (1999) and the extensive reaction, for example.

[56] Contemporary discussion of these and related topics begins with Castañeda (1966) and Shoemaker (1968), usefully collected along with later work in Brook and DeVidi (2001).

(*b*) B expects that he himself will be arrested (false under all readings).

(35) (*a*) A expects himself to be arrested (true).

(*b*) B expects himself to be arrested (false under all readings).

(36) (*a*) A expects PRO[57] to be arrested (true).

(*b*) B expects PRO to be arrested (false under all readings).

What allows (33*b*) to be read in such a way as to tolerate B's relative ignorance, when no such reading is available for (34*b*), (35*b*), or (36*b*)? Higginbotham argues that the emphatic reflexive, the reflexive, and PRO respectively receive a special first-personal interpretation, an interpretation that is only optionally available in (33*b*).

Being immune to error through misidentification is a property of states such as my being in pain. I may wonder whether it is pain rather than repressed pleasure that I am feeling; but I cannot wonder whether it is really *me* who is feeling the supposed pain. This phenomenon has preoccupied epistemologists at least since Sydney Shoemaker coined the contagious phrase 'immunity to error through misidentification' in 1968; before him it provoked Wittgenstein into claiming, characteristically, that only confusion about language would lead a person into thinking that some especially robust evidence lies behind the knowledge we have of our mental states.[58] Higginbotham is hardly committed to Wittgenstein's view that philosophy occurs only when 'language goes on holiday'; but he does think that linguistic considerations can shed considerable light on this phenomenon.

Higginbotham claims that what underlies immunity to error through misidentification is a peculiar feature of perceptual states: when someone is in them (in pain, say), what she is in is the state of thinking that the subject of these very states is in them (i.e. in pain). This understanding of what underlies immunity to error through misidentification receives support in the way it gels with Higginbotham's account of what distinguishes (33) from (34)–(36). The key is his observation of a curious fact about gerundive complements. PRO constructions can be used to give voice to attitudes

[57] PRO = the understood subject, with no phonetic realization.

[58] Wittgenstein (1958), sect. 304, writing about our knowledge of pain, says of pain sensation that 'it is not a *something*, but not a *nothing* either! The conclusion was only that a nothing would serve just as well as a something about which nothing could be said. We have only rejected the grammar which tries to force itself on us here.'

that are immune to error through misidentification in certain gerundive complements, even though the parallel use of reflexives fails to do so—still less the parallel use of a simple pronoun. This is manifest in the fact that (38) seems to follow validly from (37), even though (39), like (40), does not.

(37) I remember someone saying that John should finish his thesis by July; my colleagues assure me that I was the one who said it.
(38) I remember my saying John should finish his thesis by July.
(39) I remember me myself saying John should finish his thesis by July.
(40) I remember PRO saying John should finish his thesis by July.

Higginbotham is led to suspect that 'the problems of the *de se*, immunity to error through misidentification, and the rest, call for a solution in terms of logical form', and makes a number of claims about logical form with this design in mind.

In this introduction I have glossed over the fact that contributors diverge from one another as much in methodologies and ambitions as they do over specific theses about language. Sometimes this divergence is explicit in a claim about how to do effective science; sometimes it is implicit in the use of a reasoning style that departs in some respect from the commonly acknowledged norms of naturalistic enquiry. Epistemology of language is unlikely ever to become a tightly circumscribed field of study. Much of this discrepancy can be put down to differences between traditions and disciplines. But another factor is that epistemological issues are always tangled up with ontological ones. How knowledge of language is possible is bound to turn on what the *object* of knowledge is, yet there is a paucity of agreement on what expressions are, what languages are, and what it is for them to have the properties they do. An optimal ontology is probably more readily available for the epistemology of language than it is for the epistemology of either morality or mathematics, also characteristically human domains. But if this is so, it does not show up in anything that could be called a consensus on ontology in the chapters that follow.

Despite all this, themes that recur throughout the present volume add to the integrity already implicit in works listed in the References below. Irrespective of whether one agrees with their conclusions, the contributors reshape and advance the field here dubbed 'epistemology of language' by

addressing issues that are absolutely basic in linguistics, in philosophy of language, and in epistemology.

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