

“KNOWLEDGE OF LANGUAGE AND LINGUISTIC COMPETENCE”¹

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Introduction

Commonsense, at least in the mouths of English speakers, has it that competent speakers *know* the languages they speak: They do not simply *know how* to speak these languages; they apparently also *know* them in a way that goes beyond practical know-how. Many linguists and quite a few philosophers sympathetic to the broadly Chomskyan program in generative linguistics have until quite recently embraced these deliveries of (English) commonsense. They have held that (i) knowledge of language is distinct from merely knowing how to speak a language, (ii) this knowledge constitutes a speaker’s linguistic competence, and (iii) this knowledge is what speakers acquire in acquiring a language and what they use in language production and understanding. These linguists and philosophers have further held that (iv) it is the task of linguistics as a scientific discipline to characterize this knowledge, its acquisition, and its use.² And because these linguists propose to specify this knowledge in terms of a grammar, it has become commonplace to assume that (v) the knowledge in question is *propositional* in character, i.e., a matter of *knowing that S*, where “S” takes as substitution instances the sentences that constitute the grammar proposed by linguists to characterize a speaker’s competence.³ From (iv) and (v), it would seem to follow that (vi) linguistics is a subfield of psychology, at least insofar as that field traffics in propositional attitudes and other intentional states.⁴

These seeming elaborations of (English) commonsense have been the source of considerable controversy over the years. Especially controversial have been the claims that competent speakers have propositional knowledge of their language and that such knowledge is constitutive of their linguistic competence. Critics have challenged both these claims. Some have argued

on purely epistemological grounds that intentional states may indeed be constitutive of linguistic competence, but they cannot be states of propositional knowledge because they fail to satisfy certain epistemological criteria for being such knowledge (e.g., they aren't available to consciousness; they don't enjoy the requisite epistemic warrant).⁵ If successful, these epistemological criticisms undercut claims to the effect that competent speakers have propositional knowledge that is constitutive of their linguistic competence; however, they leave intact the more general intentionalist claim that linguistic competence is a matter of possessing certain intentional states (and hence also the claim that linguistics is a subfield of intentional psychology).⁶ The intentionalist claim, after all, requires only that speakers possess certain intentional states constitutive of their linguistic competence, not necessarily that these states are states of propositional knowledge. Others critics, however, have challenged the intentional conception itself of linguistic competence, arguing that whatever propositional attitudes competent speakers may bear to the language they speak, whether the states be knowledge, belief, or whatever, these attitudes are simply *not* constitutive of speakers' linguistic competence.⁷

The challenge to the intentional conception of linguistic competence has recently received added impetus from Chomsky himself. He has argued variously over the last few years that (i) the so-called 'representational' states of speakers to which generative linguistic theories advert are not genuinely representational in the sense of being about something represented:

'representation' is not to be understood relationally, as 'representation of'.

(Chomsky, 2000, p. 159)

(ii) linguistic knowledge is not constitutive of linguistic competence, or at least that concepts such as 'knowledge of language' or 'knowledge of grammar' have no role to play in scientific linguistic inquiry:

... In English one uses the locutions 'know a language', 'knowledge of language', where other (even similar) linguistic systems use such terms as 'have a language', 'speak a language', etc. That may be one reason why it is commonly supposed (by English speakers) that some sort of cognitive relation holds between Jones and his language, which is somehow 'external' to Jones; or that Jones has a 'theory of his language', a theory that he 'knows' or 'partially knows' ... One should not expect such concepts to play a role in systematic inquiry into the nature, use and acquisition of language, and related matters, any more than one expects such informal notions as 'heat' or 'element' or 'life' to survive rudimentary stages of the natural sciences.

(Chomsky & Stemmer, 1999, p. 397)

and (iii) intentional attribution has no explanatory role to play in cognitive science:

If 'cognitive science' is taken to be concerned with intentional attribution, it may turn out to be an interesting pursuit (as literature is), but is not likely to provide explanatory theory or to be integrated into the natural sciences.

(Chomsky, 2000, p. 23)

If Chomsky is right, there would not seem to be much place, at least in linguistic theory, for an epistemic or intentional conception of linguistic competence.

Not surprisingly, philosophers who have long thought of linguistics as the poster child of intentional psychology cum computational cognitive science have been greatly distressed. They have been doing their best to turn aside this latest anti-intentionalist challenge, because if successful, it threatens to overturn the seemingly well-settled philosophical dogma regarding the fundamentally intentional character of contemporary cognitive science. Chomsky himself draws attention to this threat when he criticizes intentionalist construals of Marr's theory of vision:

It is . . . a misreading of informal talk to conclude that Marr's theory of vision attributes 'intentional states that represent objective, physical properties' because 'there is no other way to treat the visual system as solving the problem that the theory sees it as solving' (Burge, 1986a: 28–29). The theory itself has no place for the concepts that enter into the informal presentation, intended for general motivation.

(Chomsky, 2000, p. 161)

In an effort to counter this threat, Georges Rey (2003a, 2003b, 2005) argues that the grammatical 'representations' postulated by linguists *are* of the requisite sort to support an intentional construal of linguistic theory. Specifically, they are representations of linguistic entities such as nouns, noun phrases, traces, words, sentences, and phonemes. Rey does agree with Chomsky that the entities represented cannot be real things in the physical world (nor mental entities either, for that matter). Rather they are 'intentional inexistents'; i.e., they are objects of thought that don't exist.⁸ So contrary to what Chomsky says, the 'representations' in which linguist theory traffics are representations of the sort that an intentional conception of linguistic competence demands, they just aren't representations of the sort of thing one might first imagine. One might wonder whether being representations of such intentional inexistents is enough to make linguistic theory intentional, especially if, as seems to be the case, these inexistents are necessarily such. I don't wish to debate this point here. I wish only to call attention to the focus of the debate regarding the nature of the states constitutive of linguistic competence: Committed as they are to a representationalist construal of propositional attitudes in general,⁹ and knowledge in particular, parties to the debate presume that whether intentional states are constitutive of linguistic

competence turns on whether competent speakers have the right sort of mental representations of their language.

In what follows, I examine these challenges to what might be called the intentional and more specifically epistemic conceptions of linguistic competence. I argue that even if Chomsky is right that intentional state attribution will play no explanatory role in a (scientific) naturalistic theory of linguistic competence, commonsense nonetheless has it right when it holds that competent speakers of a language are such in virtue of *knowing* the language they speak. The commonsense epistemic (and hence intentional) conception of linguistic competence is fully compatible with a non-intentional, naturalistic theory of linguistic competence: Linguistic knowledge *is* constitutive of linguistic competence, and what speakers acquire when they acquire a language is *knowledge* of their language, and they use this knowledge in language production and understanding. That it should seem otherwise reflects in my view a misunderstanding of commonsense linguistic knowledge claims and their relation to the claims of a developed naturalistic theory of linguistic competence. I begin by examining the recent challenges to the intentional conception of linguistic competence and linguistic inquiry, focusing first on the considerations that have presumably driven Chomsky to his current non-intentional construal of linguistic competence.

Chomsky's Newly Discovered Anti-Intentionalism

For many years Chomsky embraced an epistemic conception of linguistic competence. At least he wrote as if he did. He repeatedly described competent speakers of a language as *knowing* that language, specifically as *knowing a grammar* for that language. He repeatedly defined linguistic competence in terms of the possession of such knowledge, language acquisition in terms of the acquisition of such knowledge, and language use in terms of the use of such knowledge. In the opening chapter of his book *Knowledge of Language* (1986), which was entitled appropriately enough “Knowledge of Language as a Focus of Inquiry”, Chomsky describes the shift of focus brought about by generative linguistics in precisely these terms:

The shift of focus was from behavior or the products of behavior to states of the mind/brain that enter into behavior. If one chooses to focus attention on this latter topic, the central concern becomes knowledge of language: its nature, origins, and use.

The three basic questions that arise, then, are these:

- (i) What constitutes this knowledge of language?
- (ii) How is knowledge of language acquired?
- (iii) How is knowledge of language put to use?

(1986, p. 3)

When pressed by epistemologists who complained that the ‘knowledge’ that he attributed to competent speakers didn’t satisfy certain accepted criteria for being genuine, Chomsky was willing to concede the term “knowledge” in favor of “cognize”,¹⁰ a neologism that designated an epistemic attitude that was presumably like knowledge except that it lacked just those features that supposedly distinguished genuine knowledge from the ‘knowledge’ possessed by competent speakers. Chomsky, it seemed, was thus willing to forgo the epistemic conception of linguistic competence, provided he could hold on to an intentional conception.

But then in a series of papers written in the late 1990s and collected in Chomsky 2000, Chomsky seemingly abandoned the intentional and hence epistemic conceptions of linguistic competence. At least, in those papers he rejects the notion that concepts such as ‘knowledge of language’ and ‘knowing a theory of one’s language’ have any role to play in systematic inquiry into the nature, use, and acquisition of language (see quotation, p. 201 above). Indeed, he rejects the notion that intentional attribution of any sort has any explanatory role to play in cognitive science. And against Burge’s claim that Marr’s (1982) theory of vision is intentional, Chomsky argues that Burge’s intentional construal of Marr’s theory is a misreading, based on a conflation of the theory proper with the informal presentation that Marr provides readers by way of motivating the theory. As Chomsky puts it, “The theory itself has no place for the [intentional] concepts that enter into the informal presentation, intended for general motivation” (2000, p. 161).

It is a question, I suppose, for Chomsky scholars to determine whether Chomsky’s recent writings do signal his abandonment of the intentional, and hence epistemic, conceptions of linguistic competence, which he apparently defended for many years,¹¹ and if so, what motivated it. Whether this abandonment is real or only apparent, there is at very least a clear change of emphasis in these recent writings, with much more consideration being given to what a theory of the language faculty capable of being integrated into the natural sciences would demand by way of an account of linguistic competence. And clearly Chomsky believes that an intentional (and hence epistemic) conception of linguistic competence is incompatible with such a theory. Several concurrent developments bear at least some responsibility for this change of conception or change of emphasis. First, as the grammars proposed by generative linguists progressively moved away from specifications of rule sets that generated the sound-meaning pairs that define a language, first to specifications of principles and parameters that define well-formedness constraints that these pairs have to satisfy, and finally to minimalist procedures that directly map (features of) lexical items into sound-meaning pairs, it became increasingly difficult to think of these grammars as propositional objects of knowledge. Talk of competent

speakers knowing a *grammar* for their language, the theoretical gloss that Chomsky had long given to the notion of knowing a language, became increasingly forced. For what exactly is the proposition that a competent speaker knows when he knows a minimalist grammar, specifically a procedure such as the minimalist theory's *Merge*? One can talk reasonably comfortably of the speaker knowing the sound-meaning pairing that the grammar effects, but presumably there is more to knowing a grammar than knowing just this pairing. One could perhaps talk of the speaker knowing that *Merge* maps (features of) lexical items into the sound-meaning pairs that define the speaker's language, but surely there is some question whether a competent speaker knows anything of the sort, and in any event such knowledge is presumably not the kind of knowledge that constitutes a speaker's linguistic competence. The relevant knowledge is rather more like knowing how to apply this procedure to derive the sound-meaning pairs that define a speaker's language. But this is not quite right either. The relevant know-how that competent speakers must possess is that of knowing how to map sounds into meanings, or meanings into sounds, depending on whether the competence being exercised is one of language understanding or language production. The problem here is that the farther that one gets away from the rule set format of early generative grammar, the more implausible it is to hold that what competent speakers know is a grammar.

This first development leads directly to the second. Whatever competent speakers know when they know a language, it must be something distinct from the knowledge state, i.e., the state of knowing, itself. The state is one thing, what's known something else altogether. But what could this something else be? In the past, there was an obvious candidate, namely, the public language that commonsense takes the speaker to share with certain other speakers. But as skepticism about the very notion of a shared public language has gained theoretical currency within generative linguistics, this option has become unattractive. One might suppose that the speaker's own idiolect could serve instead as the 'object' of knowledge. But it is unclear whether speakers could be said to know their own idiolect, precisely because an idiolect (or 'I-language'), as Chomskians construe it, is not something independent of the states constitutive of linguistic competence that the epistemic conception would presumably want to identify with the speaker's linguistic knowledge. Barber (2001) makes substantially this point when he notes that when one couples what I have been calling the epistemic conception of linguistic competence with a preference for idiolectal over shared public languages, linguistic knowledge fails to satisfy a fundamental independence principle on belief, namely that the correctness of a genuine belief cannot consist merely in its being held: "For it appears to be in the nature of idiolects that the beliefs one has about one's own idiolect are *ipso facto*

correct [simply in virtue of being held]" (p. 264). Collins puts the matter this way:

After the development of P&P [the principles and parameters approach] it really became transparent that grammars and/or languages could no longer be sensibly thought of as independent objects of knowledge. In bald terms, grammars, and so languages, ceased to be understandable as things which speaker/hearers know; they are simply states of the speaker/hearer.

(2004, p. 512)

A third development is related to the second. As skepticism about the notion of a shared public language has gained theoretical currency, the central notion of linguistic 'representations' as representations of some objective, external reality has also come under increasing pressure. If one construes this representation talk in intentional terms, then one finds oneself in the difficult position of not knowing what, consistent with the idea that one is studying idiolects, these representations represent. They aren't representations of some common language, since they are simply structures generated by the competent speaker's own grammar, irrespective of any relations that the speaker's idiolect might bear to the idiolects of other speakers. Lacking any obvious candidate for the things which the postulated 'representations' might be representations of, and not being attracted to Rey's proposal that what these 'representations' represent are intentional inexistents, it seems as if one should follow Chomsky's lead and simply abandon the notion that the 'representations' to which linguistic theory adverts are representations of anything at all. Talk of representations of, e.g., sounds or meanings would then be understood, not as representations of these things, but rather simply as computational states that are characterized as such in virtue of the particular sort of role, phonological or semantic, that they play in language processing. One might perhaps be tempted, as some have been, by some form of linguistic Platonism,¹² according to which, on analogy with a Platonistic construal of mathematical expressions, these 'representations' are representations of certain abstract entities (one could, of course, take the same view of knowledge of language or grammar), but there is an important disanalogy: there is a pervasive publicity in the use of mathematical expressions that provides some motivation for thinking that in using these expressions we are talking about things that exist independently of us. But this publicity and hence the attendant motivation is seemingly missing in the linguistics case once one embraces the notion that linguistics studies idiolects rather than shared languages.

A fourth development was the publication in the 1990s of several philosophical papers, some of which Chomsky discusses approvingly in Chomsky 2000, which argued that contrary to what Fodor, Burge, and others claimed, computational cognitive theories such as Marr's theory of vision were *not* intentional. Egan (1995), for example, argued for precisely Chomsky's claim

(see p. 202 above) that the theories proper were not intentional, but that intentional attributions did figure in the informal presentation of these theories as a means of motivating and justifying the explanatory claims made in their favor. Arguably this work lent some credibility to the idea that cognitive science was not, as many philosophers assumed, intentional, that commonsense propositional attitude explanation was not a kind of proto-cognitive scientific explanation.

One further development may have influenced Chomsky's changed view of the epistemic and intentional conceptions of linguistic competence. In the early years of generative linguistics, characterizing linguistic competence in terms of knowledge served to support Chomsky's claim that linguistics is a subfield of psychology. For if, as Chomsky argued, the task of linguistics is to characterize linguistic competence, and competence were a matter of knowledge, then because knowledge is a psychological state, linguistics is characterizing a psychological state of speakers and hence can properly claim to be psychology, at least of the commonsense propositional attitude sort. As time went on, this line of reasoning became less important, because Chomsky and others developed a construal of grammars that made the case for linguistics being a subfield of psychology, though *without* having to appeal to an epistemic conception of linguistic competence.

This construal seemingly first emerged explicitly in Chomsky (1980) in his response to Dummett's (1976) claim that his proffered theory of meaning was not a "psychological hypothesis" because "it is not concerned to describe any inner psychological mechanisms" (p. 70). Chomsky argued that Dummett's theory of meaning is indeed "a 'psychological hypothesis', though one that abstracts away from many questions that can be raised about inner mechanisms" (p. 111). Grammars, Chomsky argued, are psychological hypotheses articulated at the level of what Marr calls the "theory of the computation". They specify "conditions that the 'inner mechanisms' are alleged to meet" (p. 112); in particular, they specify *intensionally* the function computed by speakers in the course of language processing.¹³ Grammars provide such a specification inasmuch as they specify intensionally, i.e., by means of an effective procedure, the pairing of sounds and meanings that a given language effects and that a speaker of that language computes. The procedure that specifies this pairing is not, of course, one that the speaker computes in the course of language production and language understanding. Those functions are presumably mappings either from sounds to meanings or from meanings to sounds, whereas what the grammar specifies is a function that has as its range not sounds or meanings but sound-meaning pairs, i.e., specifically the pairing that the given language effects and a speaker of that language computes in the course of language use. Thus, for example, within the Chomskyan minimalist program, a grammar for a language specifies a function from (features of) lexical items into sound-meaning pairs <PHON, SEM> by means of a recursive procedure that includes the operation *Merge*. Such a grammar provides a specification of the speaker's competence to effect

a specific sound-meaning pairing, but it is clearly not a model of performance, precisely because the function specified intensionally by this grammar is not any of the functions actually computed by a speaker of that language in the course of language processing. But the one function does specify the others (under significant idealization and approximation), inasmuch as it specifies the domain and range of the function that the speaker computes in the course of language production and understanding. As Chomsky has emphasized time and again, the grammar specifies what speakers do in the course of language processing (again, under significant idealization and approximation), but not at all how they do it. And computational theorists, it seems, regard grammars in just the way that Chomsky's construal suggests that they should, viz., as specifying the pairing of sounds and meanings that their processing model must largely respect, modulo considerations of computational tractability, at least over the fragment of sentences that competent speakers might actually encounter.¹⁴

A common objection to the claim that grammars are psychological hypotheses, and hence that linguistics is a subfield of psychology, has been to point out, as Soames (1984) and Devitt (forthcoming) do, that in constructing linguistic theories, linguists are largely unresponsive to the sorts of psycholinguistic data to which one might expect them to be sensitive, if grammars were indeed psychological hypotheses about language processes. But this objection is clearly mistaken, if grammars are construed in the way that Chomsky proposes, viz., as specifying intensionally the pairing of sounds and meanings that a given language effects and that speakers of that language compute. Most of the psychological evidence to which it is often claimed linguists should be sensitive is simply not of the right sort: at best it bears on the computational procedures by which speakers compute the function that they do, rather than on the function computed. In effect, this evidence is at the wrong level of description, at what Marr (1982) called the level of algorithm and representation, rather than the level of the function computed (i.e., at the level of the theory of computation). Of course, there might be evidence to which linguists should be, but aren't, responsive, perhaps about the computational complexity of the functions that the grammars specify. But even here matters are not that straightforward: it is extremely difficult to know just how to bring such complexity considerations to bear on linguistic theory. Linguists, however, have become quite responsive to learnability considerations, which *are* articulated at the level of the function computed, a responsiveness that to my mind goes a long way towards establishing their claim to be doing psychology. If linguists were, as Devitt (forthcoming) claims, just providing a compact characterization of the products of linguistic competence, learnability considerations would be irrelevant.

Once one begins to think of grammars in the way Chomsky suggests, viz., as specifying intensionally the pairing of sounds and meanings that a given language effects and that speakers of that language compute, it seems

quite clear that grammars are empirical hypotheses about psychological mechanisms, albeit hypotheses articulated at a level of significant abstraction, inasmuch as there is no claim as to how speakers manage to compute the pairing specified by the grammar. But notice that the case for construing grammars as psychological processes and hence linguistics as a subfield of psychology is now made *without appeal to knowledge or other intentional states*. The case is made in strictly computational terms. Not only is the dialectical rationale for the epistemic and intentional conceptions now gone, but there seems to be no good scientific reason for embracing either conception, especially given the ‘epistemic’ objections mentioned earlier that have often been raised by philosophers. Intentional attribution will now figure in linguistic theory, if at all, in just the non-essential way that Egan (1995) argues that such attribution figures in other computational cognitive theories such as Marr’s theory of vision.

The conclusion that intentional attribution is not essential to linguistic theory proper is further strengthened by the observation that actual explanations of linguistic phenomena make no appeals to, i.e., do not advert to, intentional states of any sort. Collins (2005) points out that in explaining the differential acceptability of the two completions of (1) and (2), current linguistic theory makes no recourse to what he calls “propositional principles”:

- (1) It appeared [to the boys][that Harry likes himself/*likes each other].
- (2) It appealed [to the boys][that Harry likes himself/*likes each other].

Rather it explains these judgments in terms of certain features of the lexical items appearing in (1) and (2), specifically θ -role, Case, and EPP (the Extended Projection Principle). Collins concludes that “the concept of knowledge and its cognates have no substantive [role] to play within theoretical linguistics” (p. 1).

The considerations just discussed seem to provide a pretty good reason for thinking that in providing an account of linguistic competence linguists need not traffic in intentional, much less epistemic, attributions. These same considerations also provide a pretty good reason for thinking that the claim that linguistics is a subfield of psychology is not hostage to an intentional, much less epistemic, conception of linguistic competence. But these considerations *do not go any way at all* towards impugning the claim that knowledge is constitutive of linguistic competence, indeed constitutive of the very competence that linguistic theory undertakes to characterize. To think otherwise would be akin to thinking that because quantum physics doesn’t advert to tables, chairs, cars, and other middle-sized objects in its inventory of what there is, such objects don’t exist and are not constitutive of the very world that physics undertakes to characterize. And just as there are certain generalizations about the world, specifically about our actions

in that world, the explanation of which demands mention of these objects, so too there may be, and I shall argue are, generalizations about our use of language that demand mention of the knowledge constitutive of linguistic competence.

Why Knowledge Is Constitutive of Linguistic Competence

Suppose that linguistic competence, understood narrowly as a competence in pairing sounds in a speaker's idiolect with their meanings, can, as Chomsky assumes, be characterized in non-intentional terms. Just what form this characterization might take is unimportant here, though it seems plausible to suppose that it will take the form of a recursive procedure that intensionally specifies this pairing, under canonical representations of the paired sounds and meanings. The question then is this: on this supposition, what, if anything, would knowledge have to do with linguistic competence? In particular, would certain knowledge nonetheless be constitutive of linguistic competence? At first blush, it would not seem to be, since by supposition a theory of linguistic competence would not advert to knowledge or other intentional states possessed by the speaker. There would seem to be no role whatever for knowledge attributions beyond the informal role that Chomsky is prepared to grant to such attributions.

Someone sympathetic to the often repeated Chomskyan claim that knowing a language is a matter of knowing a grammar might be tempted to try to preserve the claim that knowledge is constitutive of linguistic competence by construing the hypothesized non-intentional theory of linguistic competence as a specification of the *content* of a competent speaker's linguistic knowledge. But such a construal seems to lack any independent motivation, except as a way of preserving the broader dogmatic claim that cognitive science is intentional. On its face, the construal seems implausible, and not simply because these contentful states supposedly constitutive of linguistic competence would fail to satisfy certain criteria for genuine knowledge (see p. 201 above). There would seem to be no sense in which content of linguistic theory is an object to which a competent speaker must bear some epistemic attitude, much less something that a competent speaker must know, at least not in the sense that linguists (*qua* linguists) might be said to know a linguistic theory. Competent speakers need not be linguists, much less linguistically omniscient linguists.

But competent speakers *do* know the pairing of sounds with meanings for their language, as evidenced by their judgments as to what utterances can (and cannot) mean. And just as certainly they do know a productive procedure for pairing sounds with meanings, as evidenced by their ability to both produce and understand utterances in their language. But in what sense do competent speakers really know these things?

At very least they know the pairing of sounds and meanings and know a procedure that effects this pairing in the sense that they are *competent* in pairing sounds in the language with their meanings. But again why should being competent involve knowing anything at all? The short answer to this question is that talk of “knowing” here *just is* the commonsense idiom that we use in characterizing competences. Competent individuals *just are* individuals with knowledge of whatever they are competent at. Competent speakers of English know English in just the way that competent doctors know medicine, competent auto mechanics know cars, competent politicians know politics, and competent football players know football. The knowledge in question in each of these cases is typically not a matter of knowing a *theory* of the competence in question. Competent individuals typically don’t know a theory of their competence; they simply *have* the competence (as might be described by a theory of competence), and in virtue of that competence, we speak of them as “knowing” something the knowledge of which is constitutive of that competence. Of course, having the competence in question might involve knowing both some of the generalizations that a theory of the competence might state and some of the facts that such a theory might explain. But it also typically involves knowing how to do various things that constitute exercising the competence in question. Mechanics aren’t competent mechanics, i.e., they don’t know cars, if they can’t fix them. Doctors aren’t competent doctors, i.e., they don’t know medicine, if all they know is certain medical facts; they also need to know how to do certain things, e.g., examine patients, make diagnoses, prescribe remedies, etc. Knowledge is constitutive of competence, but the knowledge in question is not typically of a single sort, say propositional as opposed to practical.

The more substantive answer to the question why being competent should involve knowing anything at all is this: Knowledge is the sort of epistemic state that enables us to accomplish certain acts that we would, in the usual course of events, otherwise be unable to accomplish.¹⁵ Knowledge is such a state because it can play the right sort of causal role in the production of the behaviors that we take to be exercises of competence. We *use* our knowledge in doing the things that we do, and the things we use our knowledge to do tend to be more successful than they would otherwise be in virtue of the fact that knowledge is epistemically warranted in one fashion or another. And such warrant is enjoyed by knowledge of all sorts, practical as well as theoretical. If I know how to drive nails, my nail-driving tends to be more successful in virtue of my know-how than it would otherwise be. Indeed, if I know how to drive nails, then nail-driving is something that I can do competently, something that I am competent at. My know-how enjoys a kind of practical warrant that typically comes with the acquisition of such knowledge, viz., through instruction, practice, and the like. That is precisely what makes it *know-how*, as opposed to both the lucky successes of beginners (so-called “beginner’s luck”) and the bumbling failures of practiced incompetents.

Knowledge is constitutive of competence because it is what we *use* in accomplishing competent acts, and without which we would not be able to act competently. But knowledge is not, conceptually speaking, so closely bound to the acts that manifest it that we cannot possess it yet not exercise it, indeed not be able to exercise it. Knowledge is a capacity for certain competent actions, which we may or may not have occasion to perform, indeed may or may not be able to perform, given the circumstances. And precisely because it is such a capacity, we are prepared to attribute knowledge to all sorts of creatures, based solely on their exhibiting a competence at one thing or another. Thus, for example, my colleague, the well-known cognitive ethologist Randy Gallistel (1990), describes the desert ant *Cataglyphis bicolor* as “knowing” at every point along its lengthy and very circuitous foraging expeditions the precise direction and distance back to its nest. This ant is said to know this, not on the basis of an epistemological investigation of its mental states, but simply on the basis of its exhibited behavior: When furnished suitable food, at any point along its foraging trajectory, sometimes at a point in excess of 100 meters from its nest, the ant takes a straight-line course directly back to its nest and then once in the immediate vicinity of the nest begins a search pattern that enables it to find the small opening to its nest. To say that the ant knows the direction and distance to the nest is not to say precisely what the ant knows (does it know the bearing to the nest relative to the sun, or only relative to its instantaneous course at just the point that it turns for the nest?), nor is it to say how the ant comes to know what it knows (does the ant perform some sort of continuous integration of its instantaneous velocity with respect to time?). These are matters for empirical investigation, just as it is in the case of the knowledge constitutive of linguistic competence.¹⁶ But it is to say that the ant has a certain navigational competence, *viz.*, a competence for finding its way *directly* back to its nest from any point along its foraging trajectory, and this competence involves, among other things, knowing at any point along this trajectory the direction and distance to its nest.

The basic conclusion here is that knowledge is indeed constitutive of linguistic competence, but not because of anything special about *linguistic* competence. The constitutive role of knowledge follows directly from the nature of knowledge as a capacity for the sorts of actions that competent individuals are capable of performing. Competent individuals, as I put it earlier, *just are* individuals with knowledge of whatever they are competent at, knowledge that enables their competent actions.

Given this conclusion, it is hardly surprising that knowledge attributions should be able to play the informal motivational role in the presentation of linguistic theory that Chomsky takes them to play. They can play this role precisely because they are our commonsense way of characterizing competences. These attributions can be used to provide an informal intentional gloss on a theory which, because of its non-intentional character,

might not be immediately recognizable as a theory of linguistic competence. The intentional gloss is constructed by taking an informal statement of the (non-intentional) theory and embedding this statement in the intentional context *knowing that* [...], thereby presenting the theory as an account of what the competent speaker *knows*. This gloss enables the theory to be seen for what it is, viz., a theory of competence, inasmuch as it repackages it in the epistemic terms characteristic of commonsense characterizations of competence. The gloss presents the linguistic theory as explaining what speakers *know* about their language, principally, the pairing of sounds and meanings effected by the language and computed by speakers, just as, e.g., Marr describes his theory of vision as explaining how normally sighted persons ‘know what’s where in their environment’. The gloss does this by attributing to the speaker knowledge of certain grammatical principles, rules, procedures, etc., which when taken together are sufficient to generate the pairings in question. This informal intentional presentation of the theory achieves its goal not by virtue of the particular epistemic attitude attributed to the speaker (viz., knowing, cognizing, or whatever), but by virtue of the attributed theoretical contents. As Chomsky has long emphasized by means of his willingness to abandon talk of “knowing” in favor of “cognizing”, the choice of epistemic attitude is really of little explanatory significance here. The crucial point of the gloss is to get the reader to see that *the content alone* of the non-intentional theory is sufficient to the explanatory task. It does this by getting him or her to see that if we were to think of the theory as the content of the appropriate epistemic attitude, then we would accept the theory as the theory of competence that it claims to be.

The aim, then, of dressing the non-intentional theory of linguistic competence in intentional garb is to get the reader to see that the theory is in fact an explanatory theory of linguistic competence. The risk, of course, is that the naïve recipient of the gloss will come to think of this intentional garb as essential to the theory itself, and not simply an informal way of presenting the theory. Misled by the intentional character of the informal presentation, the naïve recipient may begin to talk, as many philosophers have, of competent speakers having *tacit* knowledge of a theory of their linguistic competence, where by “tacit knowledge” here these philosophers mean some sort of unconscious, subpersonal epistemic state that in the usual course of events finds expression in the linguistic behavior that it supposedly enables. There is nothing wrong with this naïve way of talking, so long as one understands it for what it is, viz., a way of talking, so long as it does not become a way of preserving the dogmatic belief that linguistic theory, indeed all cognitive theory, is necessarily intentional. But explanatory appeals to tacit knowledge add nothing to the non-intentional theory that this tacit knowledge supposedly has as its content.

The knowledge attributed in informal, commonsense characterizations of competence is not easily identifiable as falling neatly into either of the two

well-worn categories of *knowledge-how* or *knowledge-that*. More often than not, the knowledge attributed in competence characterizations is specified by expressions of the form *knows NP*, where this object NP can range over all sorts of things, including objects, practices, procedures, and roles. Such specifications are quite inexplicit and vague about just what knowledge is being attributed. It is only when one endeavors to spell out just what sort of knowledge is being attributed that the distinction between knowledge-how and knowledge-that starts to have any bite at all. But even at this point, the distinction seems to do much less work than philosophers wedded to the distinction would be prepared to admit. The attributed knowledge is often formulated in ‘propositional’ terms, i.e., using the locution *knowing that*... After all, how else is it to be formulated? But given that this knowledge often gets expression only in action, such formulations can seem awkward or forced. Thus, we may talk of school children knowing *that* in adding numbers, if the numbers in a given column sum to a number greater than 9, then one carries all digits except the rightmost to the next column to the left. Similarly, we may talk of speakers knowing, e.g., *that* anaphors are subject to certain binding conditions, specifically, that they must be bound in the minimum domain of a subject. But we are quite aware that the knowledge in question is not simply a matter of knowing some fact about addition or language; there is an important procedural or practical aspect.¹⁷ This awareness may explain the pervasive tendency of philosophers and linguists alike to give a process interpretation to the generative grammars that were for decades the supposed content of speaker’s linguistic knowledge.¹⁸ Such an interpretation seemingly gives expression to the intuition that the knowledge in question is not merely factive, if by this one means propositional knowledge of certain facts. But even this way of putting the matter is rather unhappy, for when we undertake to specify in any detail what someone knows, we find ourselves forced to the *knows-that* locution, which certainly pushes us in the direction of thinking of what’s known as propositional knowledge of certain facts. And this in turn drives us towards a relational construal of knowledge, quickly raising the problem: what’s the object of knowledge, i.e., the entity, perhaps the fact, that the knower knows? An antidote of sorts might be to think of knowledge attributions not as attributing to the knower an epistemic relation to an entity of some sort, but rather as simply attributing to the knower a certain non-relational knowledge state, viz., one that is type-individuated by the attribution’s *that*-clause.¹⁹

The Knowledge Constitutive of Linguistic Competence

Once one has in hand a non-intentional theory of linguistic competence, perhaps of the sort that Chomsky proposes, it seems pointless to rephrase it in epistemic terms, except as an informal way of presenting it to those who might otherwise not recognize it for what it is, viz., a theory of linguistic competence.

But there does remain a compelling rationale for continuing to embrace a commonsense epistemic conception of linguistic competence *alongside*, and compatible with, the non-intentional one proposed by linguistic theory, a rationale that has nothing to do with what Chomsky disparagingly calls “ethnoscience”. This rationale has rather to do both with the reliance of members of a speech community on language as a reliable means of communication as well as with the reliance of linguists on the reliability of accepted linguistic methodology, both of which can seemingly be justified only on an epistemic conception of linguistic competence.

As competent speakers we are in most cases *authoritative* both about what we ourselves say and about what others with whom we converse say, and it is in virtue of our being authoritative in this regard that it is rational for us to rely on what we take ourselves and others to say, and others to rely on what they take us and themselves to say. Such authority is grounded in our linguistic competence, which we are presuming with Chomsky can be characterized in non-intentional terms. But when it comes to justifying our reliance on language as a reliable means of communication, i.e., explaining why it is rationale for us to rely on language as a reliable means of communication, any explanation of the role of linguistic competence as the ground of this authority is going to have to characterize this linguistic competence in epistemic terms. It is going to have to characterize the competence in these terms, because the only justification that we as competent speakers can have for so relying on language is one that rests on our *knowledge* of language, specifically and most crucially, on our *knowledge* of the pairing of sounds and meanings that our language effects. It is not enough simply that competent speakers can compute the pairing of sounds and meanings that a non-intentional characterization of linguistic competence would specify. There needs to be an epistemic relation that we as competent speakers bear to the pairing of sounds and meanings that we effect in order for us to be justified in so relying on language. We have to *know* this pairing, so that we can, in virtue of this knowledge, be in a position to know what is surely essential to any rationale reliance on language, namely, what it is we and others are saying in the course of our linguistic communications.

A similar point can be made about the reliance of linguists on accepted linguistic methodology. Accepted methodology presumes that linguists can rely on the expressed linguistic intuitions of native informants, e.g., as to what certain expressions can and cannot mean, in developing a theory of linguistic competence. But what is the justification for this presumption? It is not enough simply that linguists know that their native informants are competent speakers of their language and can therefore effect in the course of their language use the pairing of sounds and meanings that their language effects. After all, accepted methodology takes as its principal source of empirical data, not the language use of these informants, but the *judgments* by which they express their linguistic intuitions. This being so, linguists need

some justification for crediting these judgments as an accurate expression of the informant's linguistic competence. But there would seem to be no reason to credit these judgments unless these informants actually *know* certain things about their language, e.g., the pairing of sounds and meanings that their language effects, and furthermore their judgments actually express this linguistic knowledge.

Now neither of these considerations establishes that the requisite knowledge of language is constitutive of linguistic competence. They establish only that our rational reliance in these cases demands such knowledge. But presumably one could have such knowledge about a language only in virtue of being linguistically competent in that language. It is simply inconceivable that one could have such knowledge without being linguistically competent, indeed that one could come to have such knowledge except by becoming linguistically competent. Certainly the knowledge in question is something that no linguist who wasn't already competent in the language could hardly be thought to possess. But if this is so, there would seem to be little reason to deny that such knowledge is constitutive of linguistic competence, especially given that the commonsense conception of competence holds that competence just is, as I argued above, a matter of knowing certain things about whatever the competence is a competence for. We can of course imagine someone, a linguist perhaps, knowing a lot about a language that he or she did not speak or understand, but linguists constructing a theory of competence for that language would not accept the judgments of such a person as evidence for a theory of linguistic competence, precisely because the knowledge that such judgments expressed would not be constitutive of the competence in question. The knowledge would not have the right provenance, would not have the right sort of authority, precisely because it would not be constitutive of the competence being studied.

So what exactly is the knowledge that is constitutive of linguistic competence? To answer this question, let's remind ourselves just what we take ourselves to know about our own utterances. In most cases we take ourselves to know what we mean by our words. We know this not simply in the sense that when we say something, e.g., that it is cold outside today, we generally mean what we say, and we know what we mean. There is something more that we know, viz., that we uttered a particular form of words *and* that in our idiolect that form of words has a particular meaning that we know. And we know this for uncountably many possible utterances in our idiolect. Such knowledge presumes that we know the pairing of sounds and meanings that constitute our idiolect. We know this pairing not in the sense that we know a grammar for this idiolect, i.e., an intensional specification of the sound-meaning pairs that define our idiolect, but in the sense that, neglecting problematic cases like garden path sentences and multiply center-embedded sentences, we know for virtually every sentence that we might utter its associated meaning. We know this pairing, and don't simply believe it to

be such as it is, inasmuch as when challenged how we know the meaning of a particular sets of sounds, or form of words, we can simply reply, “because I know the language that I speak”. Our linguistic competence grounds our authority here in roughly the way that our visual competence grounds our judgments about what we see. (Consider: “I know what happened, because I saw it with my own eyes.”) The point here again is not simply that we know a language that enables us to express our thoughts and in uttering a form of words we succeed in the usual case in expressing the thought we intended to express. We actually know that in our idiolect a particular form of words expresses the particular thought that it does (or at least has the meaning that it does), and we often choose our words on the basis of this knowledge, something we could hardly do if we didn’t know the pairing in question.²⁰

Something similar is true on the language understanding side as well. On the assumption that others share our language, we can claim to know what someone said by virtue of knowing the form of words that he uttered, because we know the pairing of sounds and meanings that constitute his idiolect. It is an interesting question how we can come to know this pairing, but it seems to me clear that we really know it. Our knowledge is manifest in our language understanding. And we justify our claims to the effect that we know what another speaker said by assertions to the effect that we heard that speaker utter a particular form of words, a justification that would be pretty weak if we didn’t in fact have the knowledge in question, viz., of the pairing of sounds and meaning.

There are other things about which a competent speaker is authoritative in virtue of knowing the pairing of sounds and meanings that constitute his idiolect, e.g., that a certain utterance is ambiguous, that it can’t have a particular meaning, that certain expressions in an uttered sentence can (or cannot) stand in an anaphoric relation to none another. It is only in virtue of such knowledge that linguists have any warrant at all for their claims to the effect that the grammar that they construct characterizes the linguistic competence of this speaker. There are still other things about which a speaker is authoritative, e.g., that such and such an utterance is acceptable (or unacceptable) in his idiolect, presumably on the basis of knowing just which sounds get paired with meanings, that a certain pronunciation of a form of words is not that of his idiolect, presumably because he knows many of the phonological and phonetic characteristics of his own speech. Competent speakers can rely on this knowledge in drawing conclusions about what another speaker said, about whether the speaker is a native speaker of a given dialect or language, and so on.

The basic point here is that linguistic authority in these matters requires grounding, and the requisite grounding can be provided only by speakers’ linguistic competence, characterized in terms of the speakers’ knowledge of language. There is an obvious objection: if authority requires grounding in knowledge of language, what grounds these knowledge claims? Must we

attribute to speakers knowledge of a grammar? It seems to me not. There are prima facie reasons of the sort adduced by epistemologists for thinking that speakers don't know their grammar in any reasonable sense of that notion, but if as commonsense has it linguistic competence just is a matter of knowing certain things about one's language, then knowledge claims to this effect can simply be grounded in the observed competence. The competence, as it were, speaks for itself.

Conclusion

It seems plausible to presume that a developed theory of linguistic competence, like other high level theories in cognitive science, will turn out to be non-intentional; that is to say, it will not advert to intentional states of competent speakers, and hence not to epistemic states either. The failure of such a theory to advert to such states would not in itself impugn the existence of these states; nor would it impugn the epistemic conception of linguistic competence. Indeed, the very possibility of providing an informal intentional gloss on a non-intentional theory of linguistic competence presumes the existence of a commonsense intentional account of linguistic competence that takes intentional states as constitutive of linguistic competence. When we consider the explanatory burdens that such an account is expected to shoulder, e.g., explaining why speakers are rationale in their reliance on language as a reliable means of communication, it seems clear that this commonsense account will necessarily take certain knowledge as constitutive of linguistic competence. Commonsense therefore has it right when it holds that competent speakers of a language are such in virtue of *knowing* the language they speak

Notes

1. An ancestor of this paper was presented at a conference on the Philosophy of Linguistics, Dubrovnik, September, 2005. I profited greatly from the ensuing discussion. I also want to thank Alex Barber, John Collins, Frances Egan, Kent Johnson, and Barry Smith for helpful discussions of the issues addressed here.
2. See, e.g., Chomsky (1980, 1986).
3. See, e.g., Fodor (1981).
4. By 'intentional psychological states' I mean states that, like belief, desire, and other propositional attitudes, are *about* or *directed towards* certain describable (but possibly inexistent) states of affairs.
5. See, e.g., Pettit (2002), Barber (2001).
6. Some (e.g., Knowles, 2000) prefer to speak of this claim as 'cognitivist' rather than 'intentionalist', on the presumption, mistaken in my view, that cognitive psychological theories are necessarily intentional, i.e., they advert to certain intentional, and more specifically representational, states.

7. See, e.g., Devitt (forthcoming), who argues that competent speakers could be *completely ignorant* of their language. Proponents of translationalist semantics such as Fodor (1990) and Schiffer (1987), not to mention proponents of practical know-how accounts such as Hornsby (2005), take an equally dim view of the intentional conception of linguistic competence.
8. Rey (2005) explains the matter this way: “All that exists and does explanatory work are representational states with their intentional content. Talk of the entities themselves that are ‘projected’ from that content is merely *façon de parler* (and *penser*)” (p. 6). One wonders what explanatory work intentional content really does on this view.
9. On this construal, having an attitude A towards some propositional content p (say, e.g., believing that it’s sunny outside today) is a matter of having a mental representation that both expresses p and furthermore plays the right sort of causal role in the production of thought and behavior. See, e.g., Fodor (1987).
10. See Chomsky (1975, pp. 164–65; 1980, pp. 69–70).
11. Collins (2004) argues, unconvincingly to my mind, that there has in fact been no change in Chomsky’s conception of linguistic competence over the years, that he never embraced either of these conceptions.
12. See, e.g., Higginbotham (2001).
13. For discussion, see Matthews (1991).
14. Knowles (2000) claims that “competence theories cannot be seen as a higher level theory, in Marr’s or Haugeland’s sense, of a mental mechanism” (p. 328), that “grammatical competence must be seen as a discrete capacity lying behind linguistic behavior” (p. 333). But this is to misunderstand the relation just described that competence theories bear to processing theories, a relation that enables Chomsky to hold both that competence theories are higher level theories of psychological mechanisms and at the same time deny that competence theories are models of linguistic performance.
15. London cabbies, I am told, term the competence that enables them to navigate successfully the streets of London, avoiding congestion, road construction, and the like, as simply “the Knowledge.”
16. For a fascinating discussion of the navigational skills of these ants and other animals including honey bees and various species of bird, see Gallistel (1990).
17. This observation is quite compatible with Stanley and Williamson’s (2001) argument to the effect that knowing how is a species of knowing that. Their analysis of “knowing how to x”, as “there being a way w in which one can x such that one knows that w is a way in which one can x”, leaves it open to proponents of the notion that there are two mutually exclusive kinds of knowledge, knowledge-how and knowledge-that, to redraw the supposedly crucial metaphysical distinction as between two different kinds of knowledge-that. For them, the crucial point is that knowledge-how demands that the knower, as Stanley and Williamson themselves put it, “entertain the way of x-ing under a *practical* mode of presentation” (p. 133, emphasis mine).
18. Thus, for example, Collins (2004) describes the I-language that generative grammar undertakes to characterize as at once a state and a procedure: “A I-language is simply a state of the mind-brain: a procedure from a lexicon to a <PF,LF> pair” (p. 525).

19. I explore such a non-relational construal of propositional attitudes in Matthews (forthcoming).
20. For a good discussion of this point, see Stanley (2005).

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