

The Role of Psychology in the Philosophy of Language¹

Robert J. Stainton

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I. Introduction

Does scientific psychology have a legitimate role to play in the philosophy of language? For example, is it methodologically permissible for philosophers of language to rely upon evidence from neurological development, experiments about processing, brain scans, clinical case histories, longitudinal studies, questionnaires, etc.? If so, why? These two questions are the focus of this survey.

I address them in two stages. It may seem obvious that the science of psychology is relevant. I thus begin by introducing arguments against relevance, to motivate the discussion. I will urge that these arguments ultimately fail, and that the appearance of relevance should be taken at face value. Next, I introduce positive arguments for relevance, with examples. To foreshadow the main conclusion, the methods and results of contemporary cognitive psychology are relevant because there are non-obvious connections, both constitutive and contingent, between language and human psychology.²

II. An Ontological Argument for Irrelevance

Let me begin by setting aside two standard arguments for irrelevance. I dismiss as unworthy a global suspicion of contemporary scientific psychology. And I will not address a general metaphilosophical view according to which philosophy owes no empirical, or anyway no scientific, debts. The latter merits discussion, but is too sweeping to deal with here.

My focus, instead, will be on a family of arguments based upon the ontology of language. Keeping things purposely vague for the time being, we may schematize it as follows:

P1: Languages are not psychological ontologically speaking.

P2: If languages are not psychological ontologically speaking, then the tools and results of scientific psychology are not relevant to philosophy of language.

C: The tools and results of scientific psychology are not relevant to philosophy of language.³

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² As is typical in philosophy, this survey is structured dialectically. It should not be inferred that the argument presented is balanced. What's more, exegesis is kept to a minimum. The inevitable oversimplification and unfairness are, I hope, justifiable – on the grounds that a more exacting treatment would render the article less effective as an introduction.

³ More exactly, the view tends to be that only such-and-such evidence will be *directly* relevant. This more circumspect claim merits consideration. See Soames 1984 and Devitt and Sterelny 1989 for related ideas, and Antony 2003, 2008 for critical discussion. However, for the sake of expository simplicity, I (mostly) set it aside in

There are numerous arguments for P1. I have singled out three as representative. Though exegesis is not my aim, I will call them **F**, **K** and **S**, since they are inspired by certain writings of Frege, Katz and Soames respectively.⁴

F. According to a long-standing philosophical tradition, words are the primary locus of meanings; what they mean are ideas, i.e., items in the mind; and logic describes the mental rules for manipulating ideas. Gottlob Frege revolutionized logic and philosophy of language in the late 19th Century by insisting, instead, that theorists look first at complete sentences. Doing so, we find that meanings are formally structured propositions. (For instance, the content of the sentence ‘It’s not the case that Aristotle is alive’ can be decomposed into three quite different semantic parts, none of which has to do with images, sensations, etc.) And logic describes not mental operations, but truth-theoretic relations among such contents. Frege also played a key role in the development of artificial logical languages. Such languages were designed to capture perspicuously both the meanings of individual symbols, and the inference rules which link them. (Their invention also allowed mathematicians to formalize proofs rigorously.) Both developments support conclusion C insofar as syntactical rules, meanings and inferential relations are not “creatures of psychology”. Given this, introducing psychological considerations can only confound matters.

K. Consider a perfectly commonsensical distinction between an object O, and the human cognizing of O. Mathematics and artificial logical languages provide paradigm examples: geometry, for instance, is by no means the same as human cognition of geometry. By the same token, Katz (1984: 193) would have us draw “a fundamental distinction between the *knowledge* speakers have of their language and the *languages* that speakers have knowledge of.... [T]he subject-matter of linguistics is, in this sense, independent of psychological sciences – just as the subject-matter of logic and mathematics is independent of the sciences concerned with people’s logical and mathematical ability”. It is only by running these together that languages appear to be ontologically psychological.

S. Beings with very different psychologies can use the same language. For instance, a machine, a Martian and a human can use the predicate calculus. Thus any psychological differences, even if interesting for their own sake, are orthogonal to the nature of a shared language: they pertain only to a “lower level” of implementation in software/hardware. (See Soames 1984: 164 and 171.) Thus, once again, languages are ontologically distinct from human psychology, and in a way that makes brain scans, error rates, etc., irrelevant to their nature.

Though I will abstract away from this, readers should know that the “non-psychological ontologies” come in at least two variants. According to Platonism, languages are abstract objects. They are set-theoretic entities. Not only are they non-psychological, they aren’t even part of the spatio-temporal physical world. The proponents of this view include David Lewis (1972, 1975),

what follows. For a more thorough treatment of both traditions, see Stainton 2001 and Iten, Stainton and Wearing 2007.

⁴ Many of the arguments canvassed below, both for and against, emerged in debates about the status of linguistics: specifically, what linguistics is about, and whether it is a branch of psychology. Nonetheless, they carry over to the related methodological issues in philosophy of language.

Richard Montague (1974), Jerrold Katz (1977, 1984), and Scott Soames (1984). The other tradition, which for lack of a better label I will call ‘Empiricism/Pragmatism’, takes languages themselves to be cultural practices. Its proponents include W.V.O. Quine (1960), and some followers of Ludwig Wittgenstein. Because of their views on the metaphysical status of languages, both traditions agree that scientific psychology will not be relevant. They disagree about what the relevant evidence will be. Platonists hold that we know about languages through intuition and reason, so that the data are linguistic judgments. Those in the Empiricism/Pragmatism camp hold that there is nothing more to language than what ordinary observation of linguistic activity reveals, hence the data consists in (something like) speech acts.

III. Replies to the Ontological Argument

Before responding, a preliminary distinction will be crucial. I purposely phrased P1 vaguely, to capture the general form of the family of arguments. In particular, I couched the premise so as to equivocate between two claims:

P1a: Languages are not themselves psychological items. (E.g., unlike pains and hallucinations, they do not “dwell in the mind”.)

P1b: Languages can be metaphysically individuated without reference to human psychology.

Which of these should be at issue in the overarching argument? P1a is necessary for C. If languages just were mental entities, then scientific psychology would patently be relevant to their nature.⁵ But the truth of P1a is clearly not sufficient for C. Though even this will be questioned below, what *might* be sufficient is P1b. Let us therefore set to one side the issue of whether languages “dwell within the mind”, and, in what follows, interpret P1 and P2 as pertaining merely to metaphysical connections between language and human psychology.

I am prepared to grant that artificial logical languages “are not ontologically psychological” in the relevant sense. But does this afford an argument against psychological methods in the philosophy of language? Consider the very deep differences between logic/mathematics and spoken language.⁶ In contrast to mathematical facts, it stretches credulity to suppose that the properties of natural languages are independent of us. (I am not yet claiming that natural languages depend on our internal psychology. That would beg one of the crucial questions.) Moreover, while artificial logical languages depend on us, the nature of spoken languages does so in much more complex, non-obvious, ways. This means that the grammars of Urdu, Swahili, French, etc., need to be discovered using quite sophisticated empirical tools. In particular, and in contrast to artificial languages, we have to use inference to the best explanation to find the syntax of natural language expressions, because of performance errors. Equally, abduction is required to find the meaning of natural language expressions. No such epistemic

⁵ Indeed, some philosophers, following Noam Chomsky, would reject C on this basis: taking off from our pre-theoretical understanding of language, goes the idea, theorists have found a natural kind, a mental faculty. This is what languages have turned out to be. See Pietroski 2003, Stainton 2006a and references cited therein for further discussion and defense.

⁶ See Moravcsik 1998 and Jackendoff 2002 for extended discussion. The general contrast traces back, of course, at least to Wittgenstein 1953.

challenges arise with the predicate calculus or Peano arithmetic. (A case in point. There is no substantive question about what the iota operator means in Russell and Whitehead's *Principia* system. They laid down its meaning, and anyone who wants to discover it need only consult their stipulative definition. In sharp contrast, there has been a sustained debate about what 'the' means in English. Is it a device of reference, or a quantifier word? Does it entail uniqueness, semantically presuppose it, or merely pragmatically suggest it? The meaning of English 'the' is non-obvious because, recognizing the intrusion of other constraints on usage, a number of competing semantic hypotheses have been argued to be consistent with our talk.)

In sum, the ontology and epistemology of artificial logical languages turn out to be something of a red herring. Having eschewed such formal systems as our methodological model, and being clearer about what 'ontologically psychological' should involve, we can now ask whether K and S still seem to support the first premise. To begin with, as Barbara Partee (1979) has stressed, some contents are out-and-out mentalistic: consider propositional attitude sentences, and terms for pain, dreams, mental images, emotions, etc. What's more, natural languages are constrained by our psychology in the sense that, whatever languages are, our minds must be able to grasp them. (This suggests, for example, that because our minds are finite, syntax must be recursively specifiable and semantics compositional.)

But ontological mind-language connections run still deeper. Specifically, linguistic symbols have at least two aspects, namely a "meaning" and a "sounding". I want to urge that, not just exceptionally but in general, both are metaphysically individuated in terms of human psychology. Thus, P1 on the relevant reading is root-and-branch false.

As Chomsky (2000) and Jackendoff (1983, 2002) often insist, many linguistic contents pertain to "objects for us". The things they mean are individuated by our properly human interests and points of view. Beginning with two obvious cases, human languages contain words for complex social entities: mortgages, Bollywood, Tuesday; they also include words for fictional and mythical entities. (For example, being an atheist, I think it will prove impossible, wholly independently of human psychology, to give the meanings of: 'venal sin', 'purgatory', and 'transubstantiation'; 'nirvana', 'Navaratri' and 'Ganesh'; 'Qiyamah' and 'Ramadan'; etc.) Other expressions, while picking out ordinary physical objects, nonetheless have contents which are response-dependent. Consider 'cloud', 'tea', 'pet', 'green', 'rainbow', 'sunset', 'weapon', 'Uruguay', and 'bush'. A collection of water droplets is a cloud only if it is perceptible by humans using the naked eye; a pet is an animal that humans treat as such; not all green things share a physically-specifiable reflectance property, but instead are those items treated "greenly" by the human visual system; and so on. Such "objects for us" are what many, maybe even most, of our quotidian substantives denote, and what our demonstratives are prone to pick out in context. To be clear: the point is not that clouds and pets, mortgages and Bollywood, or even sins, religious holidays and gods, dwell within the human mind. Nonetheless, as per P1b, all are metaphysically tied to human psychology: their individuation conditions make ineliminable reference to human minds.⁷

⁷ I promised to eschew exegesis. It is worth remarking, however, that even Frege (1884, 1892), the prototypical enemy of psychologism, thought of his Senses as "the way that objects are given to us", their "mode of presentation" – if you will, ways of *thinking about* or *perceiving* a thing. And Frege tested for different Senses in terms of their contrasting cognitive values: e.g., can one believe that Hesperus is now visible, while disbelieving that Phosphorus

Equally, the “sounding” side of language cannot be individuated independently of human psychology. The philosophical tradition notwithstanding, linguistic expressions are not really pairings of acoustic patterns, or waves, with meanings – they are, rather, pairings of something more like clusters of contrastive phonological features with meanings. And the latter are products of human psychology. Given space constraints, the details must be set aside. But the point can be made by means of common sense examples. Think of the various pronunciations of ‘cotton’ – by a child, a woman, someone with a cold, someone whose larynx has been removed, a second-language learner, or a computer. These are acoustically quite different from one another. What unites such signals is how human minds process them: we hear them as the same word. Or again, to the ears of an Anglophone ‘va’ and ‘ba’ are different sounds. But for Spanish speakers, these are the same linguistic sound – because ‘v/b’ is not a meaning-carrying contrast in that language. By the same token, the very same acoustic wave can realize various linguistic sounds, in different contexts, because of varying semantic import. And acoustic patterns *per se* do not have word boundaries, syllables, vowels, an onset-coda contrast, intonation contours, etc. (See Isac & Reiss 2008: 30-32, 109-114 for introductory discussion.)

With all this in mind, let’s revisit argument **K**. Katz’ distinction blocks a genuinely fallacious slide: from the relevance of psychology to knowledge of language, to how one ought to study language itself. However, this distinction is impotent given independent arguments that languages are psychologically constituted. (Compare: once convinced that colours are individuated psychologically, granting the distinction between colours themselves and knowledge of them cannot diminish the relevance of scientific psychology.)

As for **S**, the worry about computers and Martians, the argument rested on our intuition that creatures lacking anything like our psychology could nonetheless speak our languages. But, upon reflection, is this really nomically possible? Could a Martian – who lacking our psychology, is unable to identify pets, clouds, onset-versus-coda, and vowels, let alone mortgages and Ramadan – really speak as we do? Maybe not. (For extended discussion, see Laurence 2003.)

There is a natural rebuttal. Consider, following Soames (1984), two *humans*, X and Y. X processes actives (‘Joan drove the car’) faster than passives (‘The car was driven by Joan’), while Y does just the reverse. X makes more mistakes with passives, while Y is more error-prone with actives. X acquired actives first, while Y learned them after passives. Surely this would not bar them from sharing exactly the same language. This possibility alone seemingly shows that psychological facts are not constitutive of language itself. The point is well taken. But consider, first, that this at best shows that linguistic facts are ontologically autonomous with respect to certain psychological differences. Conclusion C, however, is the sweeping claim that no tools of scientific psychology are relevant to philosophy of language. Besides, once we move away from the model of artificial logical languages, it becomes less clear what it would mean for X and Y to “share exactly the same language”. In an artificial logical system, it is perfectly determinate what

is? Thus, though Frege certainly did not take Senses to *be* mental items, it may be that even for him they weren’t ontologically independent of our minds.

the symbols of the language amount to, namely the conventionally agreed upon set of well-formed formulae. As a result, it makes perfect sense to imagine different rules that converge on just this set, so that agents using different rules would nonetheless both be speaking the same language. But grammaticality in English and other human tongues comes in degrees. Meaningfulness shades off too: some grammatically marginal expressions have meanings and stand in logical relations, while others are “word salad” (Compare: ‘The child seems sleeping’, ‘John is disallowed leaving’ and ‘at if wonders doesn’t arcadish’. The first does not entail that the child is sleeping; the second seems to entail that there is something that John is not allowed to do; the last is gibberish.) Given this, a natural language seems to be a collection of rules, not symbols – rules which generate expressions that run the gamut from perfectly well-formed to highly ungrammatical and semantically very anomalous (Higginbotham 1983). In which case, it is unclear what it means to say that speakers are “deploying different rules, but nonetheless speaking the same language”.⁸

IV. Intermission: The Dialectic

I pause for a brief review, and two comments about the dialectic.

Our question, recall, is whether scientific psychology has a role to play in the philosophy of language, and if so, why. I have been considering a family of “ontological arguments” for irrelevance. I have maintained that what matters methodologically is not so much whether languages are mental things, in the way pains and tickles are, but whether languages can be individuated without reference to human psychology. I then argued that, on both the “meaning” and “sounding” side of language, they cannot be. This leaves us with the null hypothesis, viz. that evidence from scientific psychology will be relevant. (Let me clarify the back-and-forth with a comparison. Suppose someone argued that, because languages are wholly internal to the mind, only narrowly specifiable psychological evidence can be relevant. Though not showing that “methodological internalism” was incorrect, it would be perfectly appropriate to reject this particular argument on the grounds that, as Tyler Burge, Saul Kripke, and Hilary Putnam have argued, languages cannot be metaphysically individuated without reference to external natural kinds, social norms and practices, etc.)

⁸ A related remark. The thought experiment takes it for granted that we know what, say, English and Swahili consist in. There is then merely the matter of whether X and Y are both using it – a question which can allegedly be settled without appeal to their internal psychology. Again, this is a natural view when one takes artificial logical languages (or simple games) as the model. But there are legitimate questions about what belongs within a natural language. Do natural languages consist solely of sentences, or also of sub-sentential phrases? Are abbreviations like ‘LMAO’ or ‘DIY’, chemical compound names like ‘CO₂’, and geographical or zoological terminology elements of English? What about grammatical sentences containing outright nonsense, such as ‘*Elego* is not a word in French’, or culturally variant exclamations such as ‘Ick’, ‘Yippee’, ‘Ouch’ and ‘Umm’? Barring answers to these difficult questions, it once again remains unclear what it would amount to for two people, each following different rules, to “speak the very same language”. (And too, insofar as one could delineate the boundaries around natural languages, it seems, contra C, that doing so would require scientific psychology!)

The “state of play”, then, is that the burden of proof is back on those who would deny that scientific psychology has a legitimate role. This speaks to the ‘whether’ part of our question. We have also made some progress on ‘why’: insofar as there are deep and abiding ontological connections between language and human psychology, it would be very surprising if they were nonetheless epistemically disconnected – so much so that a huge swath of scientific evidence is barred.

A second point about the dialectic. It may be felt that my strategy so far rather misses the point. I have been considering whether scientific psychology is relevant to the nature of actual human languages. But, continues the worry, philosophy of language has never been about human language. Instead, philosophy of language is about all possible languages. Or alinguistic propositions. Or what language should be like, so as to serve the needs of science or clear reasoning.

A thorough response would require an entire paper. I will content myself with making three brief points. First, the issue is not whether philosophy of language is *about* actual spoken languages, but rather whether it is beholden to empirical results about them. Second, philosophy of language has long paid attention to facts about actual, spoken languages. Historically, philosophers from Plato and Aristotle through Hobbes and Locke were concerned with actual language, and they adduced evidence (as they saw it) from that domain. Similarly for more recent theorizing: think of recent debates about compositionality, inferentialism in semantics, and the semantics-pragmatics boundary. The question has not been whether a language could have, or should have, such-and-such properties; the concern in these cases has been whether human languages actually exhibit them. And nowadays, a great deal of philosophy of language makes use of evidence from theoretical syntax. Third, and finally, I think the tradition has it right: philosophy of language *should be* beholden to empirical facts about human language. Reflection upon what philosophy of language is used for makes this clear. Here are three example applications, chosen essentially at random. Philosophers of language have argued about whether ‘know’ is context sensitive in a way that would address skeptical puzzles. They’ve asked whether ‘*S* saw a green apple’ entails ‘It seemed to *S* that something was green’, or whether it is even consistent with the latter. Finally, philosophers of language have debated endlessly about whether ethical sentences such as ‘Abortion is immoral’ have truth conditions. Though I cannot argue the point here, what seems to matter to these larger debates in epistemology, philosophy of mind and ethics is *not* merely whether there could be, or should be, sentences (or alinguistic propositions) with the requisite features.

I will thus take as given that the nature of actual human languages is relevant to philosophy of language. I have been arguing that scientific psychology is likely relevant to the former. Hence, by the transitivity of ‘relevant to’, scientific psychology plausibly has a legitimate role to play in philosophy of language.

The next section moves the argument forward in two ways. Rather than merely setting aside an argument for irrelevance, it provides positive grounds for expecting psychology to play a role. It also brings out another reason why.

V. Confirmation Holism and Contingent Connections

Because the literature ties the ontology of languages so closely to issues of evidential relevance, I have addressed the former at length. My own view, however, is that the metaphysical status of languages as abstracta, social practices, or mental items, is something of a distraction. That's because, though languages being mental things may be sufficient for the relevance of scientific psychology, it is not necessary. More than that, even the metaphysical constitution of languages is, in my view, less important than is typically assumed. Put in terms of the overarching argument above, while P1 (especially when read as P1a) has been the locus of most of the literature on the topic, P2 deserves equal scrutiny. I will now argue, by appeal to confirmation holism, that it too is false.

Confirmation holism says that any hypothesis is inevitably tested in conjunction with others. The picture is this. It is not hypothesis H on its own which yields prediction P, but rather H plus some ancillary commitments C. Crucially, H+C may entail P even when H and P are not logically, conceptually or metaphysically connected. The relevance of this precept to our question is this: an abiding evidential link may exist between philosophy of language and scientific psychology because of merely contingent, including nomic, connections.

To illustrate the point, I present three examples: names, commonsense knowledge attributions, and the nature of assertion.

Proper names. Philosophers have considered at great length the meaning of proper names. In particular, to introduce our first H, it has been suggested that names share the content of descriptions of persons. There are clear philosophical motivations for H, both metaphysical and epistemology. Very roughly, if proper names are synonymous with descriptions, then non-referring ones can have meaning without undue ontological commitment; they won't embed *salva veritate* in certain modal contexts; and personal identity will presumably depend upon the retention of the descriptive properties. What's more, turning to epistemology, deploying a name can afford knowledge of the person absent acquaintance with its bearer; and propositional attitudes will not pertain to "persons themselves", but rather to descriptive contents. (In my view, it is precisely because H is motivated philosophically in these ways, that it is a hypothesis within philosophy of language.) Now, H itself is not a claim about human psychology. It may even be, *pace* the discussion above, that the truth or falsity of H is metaphysically independent of human psychology. Nonetheless, I will suggest, the methods and results of scientific psychology are relevant to its evaluation. That is because, given confirmation holism, H can be (dis)confirmed in conjunction with ancillary commitments C, including postulated laws.

As Valentine, Brennen and Bredart (1996) explain at length, proper names are psychologically special.⁹ Processing them is notoriously slow (Young, Ellis and Flude 1988; Johnston and Bruce 1990); they are especially vulnerable to brain damage (Semenza and Zettin 1988, 1991); and, as experience of "tip of the tongue" moments makes intuitively clear, names are hard to remember. (Experiments confirm this: when subjects are presented with unfamiliar faces, and taught various facts about the people shown, including their names, the latter prove

⁹ My discussion here is indebted to Segal 2001. He is far more careful about the details.

significantly harder to recall. See Cohen and Faulkner 1986.) It seems, and this is another element of C, that the best explanation of this “specialness”, is some kind of psychological law pertaining to the content of names; that, rather than their form, seems to be why they pattern this way.¹⁰ H and C together yield a prediction P, namely that a synonymous description of a person will exhibit the same psychological profile as the corresponding name. However, as experimental, clinical and other work shows, this is not the case. Thus, a hypothesis in philosophy of language is called into question by evidence from scientific psychology.

Knowledge attributions. There has been much philosophical debate about the conditions under which knowledge attributions are strictly speaking true. One motivation for the debate is a Moore-style argument against external world skepticism. Goes the idea, as ordinary speakers use the sentence ‘Rob knows that Hitler is dead’, the sentence is true; and, so used, the truth of this sentence entails that Rob has knowledge of the external world. So, such knowledge exists. A natural reply to this argument is to insist that, appearances notwithstanding, the sentence is false. This is H. Of course, one cannot just stop there: one must explain away the strong intuition that the sentence is true. The reply thus continues: ‘Rob knows that Hitler is dead’ strikes people as true because they confuse what it literally says with things that its usage merely conveys pragmatically, e.g., that Rob’s belief is warranted, that one can safely proceed on his say-so, etc. This explanation of the appearances is C. Again, H is not a claim about the human mind. Maybe its truth is not even conceptually, logically or ontologically connected to psychological facts. Nonetheless, H conjoined with C yields a prediction: that people who treat sentences literally will reject everyday knowledge attributions as false. This prediction, P, is disconfirmed by evidence from speakers with Autism Spectrum Disorders (ASDs): despite exhibiting good formal language abilities, people with ASDs suffer from serious pragmatic impairments, including in particular being notoriously literal. Yet, *pace* P, they do not present as external world skeptics.¹¹

The import of the foregoing examples is not, of course, that considerations from scientific psychology have established that names are directly referential rather than descriptive, or that external world skepticism is false. The point is that, even barring metaphysical constitution, confirmation holism yields links between philosophical hypotheses about language and evidence from the cognitive psychology. A closely related lesson is this. It might be thought that, while scientific psychology is relevant to certain features of language, it cannot reveal anything about those aspects of language which interest the philosopher. The foregoing suggest, to the contrary,

¹⁰ When certain subjects are taught ‘baker’ as a property of the unknown person, while others are taught ‘Baker’ as her name, that the unfamiliar person was called ‘Baker’ proved harder to remember than that she was a baker. See McWeeny *et al.* 1987.

¹¹ A philosophically accessible discussion of pragmatics in ASDs may be found in de Villiers, Stainton and Szatmari (2007). Similar deficits should yield related (dis)confirmation, by the way – specifically Semantic-Pragmatic Disorder and Right Hemisphere Dysfunction. For a useful survey, see Asp and de Villiers (forthcoming) and Cummings (2009). Incidentally, ASDs afford another interesting evidential link between clinical psychology and philosophy of language. Linguistically able people with ASDs famously have trouble attributing complex mental states to others. This would seem to call into question the Gricean (1957) idea that meaning something, e.g., making a statement, of necessity involves higher-order intentions. See Andrews 2002 and Gluer and Pagin 2003 for discussion.

that because of diverse and unimagined contingent (including nomic) connections, “properly philosophical” hypotheses about language give rise, in unpredictable ways, to empirical predictions about the mind.

Assertion. A final example illustrates just how far removed the background philosophical issues can be from the psychological evidence. In the context of defending metaphysical antirealism, it has been proposed that truth be explicated in terms of warranted assertion. Doing so, of course, means that assertion itself cannot be analyzed in terms of truth: that would be circular. A promising way out is to explain the speech act of assertion socially/formally, specifically in terms of the use of declarative sentences in conventionally specified conditions. This is H. Now, if H is true, then, appearances notwithstanding, sub-sentential words and phrases cannot be used to assert. Instead, for instance, when someone displays a letter and says of it ‘From Chomsky’, what they produce must be an elliptical declarative sentence. This attempt to explain away a seeming counterexample to H yields P: someone who cannot engage in sentential ellipsis cannot make such an assertion. But P is open to psychological (dis)confirmation. In particular, people who cannot yet, or can no longer, form or comprehend elliptical sentences, can nonetheless make and understand assertions with bare words and phrases. (See Stainton 2006b for extended discussion.) Granted, it seems outlandish that antirealism and the nature of truth could be tied to aphasia and child language. And yet, the former have been connected, by hypothesis, to the speech act of asserting; and thence to a formative of a certain kind, the declarative; and this philosophical line of thought necessitates endorsing a linguistic conjecture about ellipsis; and so, by a long and winding road, the whole account becomes subject to psychological evidence.

VI. A Parting Shot: Irrelevance In Practice and In Principle

My contention in this paper has been that scientific psychology has a legitimate evidential role in practice, specifically because of both constitutive and contingent connections. I have not restricted myself to the issue of whether such evidence is irrelevant in principle. Surprisingly, certain philosophers have endorsed the latter view as well. So, I will end with a word about it.

It does remain epistemically possible that natural language is neither nomically nor constitutively connected to psychology. Hence it could still turn out, in the long run, that MRIs, error rates, etc., are of very little use. Then again, it equally remains epistemically possible that language and human psychology are so connected. And, as Fodor (1981) has stressed, as long as we do not know what linguistic facts supervene on, and as long as we do not know what is in fact connected to what, we should not rule out psychological evidence *a priori*. (Put otherwise: at best, only an omniscient creature could have a handle on what “the considerations relevant to philosophy of language” are.)

Consider again in this light the examples above. What rebuttals are rationally permissible in response? It would be natural and appropriate to insist that the alleged psychological data is incorrect, or at least oversimplified. For example, one might scrutinize more carefully the speech of people with ASDs, and counter that they actually do use ‘know’ as the anti-Moorean predicts. Or again, one could grant that the data is accurate, but reply that it can be accommodated to, or even supports, the philosophical account at issue. For instance, maybe names and descriptions do indeed share the same meaning, but behave differently with respect to processing for some other

reason. And maybe, as Stanley (2000) has argued, some apparent uses of words and phrases are elliptical after all, while others simply do not amount to assertions. What would emphatically not be accepted as rational is dismissing the whole thing: “That’s all very fascinating. But I refuse even to offer a response – because those are psychological findings, and I already know full well that such facts cannot pertain to the philosophy of language”. This alone shows that, even if at the idealized end of inquiry there turned out to be no connection between philosophy of language and psychology, nonetheless the methods and results of scientific psychology cannot be dismissed out of hand.

VII. Summary

Our question, recall, was whether scientific psychology has a legitimate role to play in the philosophy of language, and if so, why? The answer came in two parts. First, because natural languages seem to be metaphysically connected to human psychology on both the “sound” and “meaning” sides, the ontological status of languages poses no obstacle to relevance. More than that, it would be very surprising if psychology proved methodologically unimportant. Second, as the three examples showed, even if natural languages were not so constituted, scientific psychology will in practice prove relevant because there are ancillary commitments, including presumptive laws, connecting the two. Finally, because we do not yet know how philosophy of language and psychology connect, even someone who suspects that there aren’t bridges between the two should not exclude psychological evidence in principle.

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