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THE ROLE OF PSYCHOLOGY IN THE PHILOSOPHY OF LANGUAGE

Robert J. Stainton

1 Introduction

Are psychological facts relevant to philosophy of language; and, in particular, does scientific psychology have a legitimate role to play? 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.

Psychology may seem obviously relevant. I thus begin by introducing arguments against relevance, to motivate the discussion. I will urge that these ultimately fail, and that the appearance of relevance should be taken at face value. In this first section, the focus is on the possible relevance of psychological evidence available to the lay person. Next, I introduce positive arguments for relevance, from examples—shifting the spotlight to recherché evidence drawn from scientific psychology. To foreshadow the main conclusion, psychology, including specifically the methods and results of contemporary cognitive psychology, are relevant because there are connections, both necessary and contingent, between language and the human mind.

2 Two Arguments for Irrelevance and Why They Fail

The negative portion of the paper will focus on two arguments with the same conclusion. Here is the first:

P1: If philosophy of language is not beholden to facts about natural languages, then empirically discovered facts about human psychology are irrelevant to philosophy of language.

P2: Philosophy of language is not beholden to facts about natural languages.

C: Empirically discovered facts about human psychology are irrelevant to philosophy of language.

P1 requires little comment. It is hard to see how human psychology could be probative, if facts overtly about human language are not. What reasons can be given for P2? One might urge that philosophy in its entirety is a priori. Let us ignore this sweeping, radical idea. More promising is the view that philosophy of language is not "about" natural language. It is about all possible languages, one might say. Or alinguistic propositions. Or how to construct a more perfect language. A thorough response would require an entire chapter. 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 the Cartesians, 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. Nowadays, a great deal of philosophy of language makes use of empirical evidence from theoretical syntax. Third, and finally, I think the tradition has it right: Philosophy of language *should be* beholden to facts about human language. Reflection upon why philosophers care about language makes this clear.

Here are examples of philosophical appeals to language, chosen essentially at random. Arguably, the most central debate in 20th-century philosophy of language has been about which expressions are definite descriptions, and what definite descriptions mean. Are descriptions devices of reference, or of quantification? Do sentences containing definite descriptions entail existence, semantically presuppose it, or merely pragmatically suggest it? Philosophers have also argued about whether 'know' is context sensitive in a way that would address skeptical puzzles. They've asked, in the context of analyzing perception, 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, concerned with the nature and existence of moral facts, they have debated 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.

The first argument fails because the antecedent of the major premise is too sweeping to be plausible. The second tries to get by with something weaker. It also adds an "ontological twist":

P3: If philosophy of language is beholden to facts about natural languages, but not to psychological facts, then empirically discovered facts about human psychology are irrelevant to philosophy of language.

P4: Natural languages are not psychological entities.

P5: If natural languages are not psychological entities, then philosophy of language is not beholden to psychological facts.

C: Empirically discovered facts about human psychology are irrelevant to philosophy of language.

To understand the argument, a bit of background will be useful. According to a longstanding 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. Thus, as per P4, neither lexical meanings nor semantic

relations are ideas or mental processes. Frege also played a key role in the development of artificial logical languages. This provided further support, by affording an alternative model for the ontology of languages: languages are abstract entities, not psychological ones.

Jerrold Katz offers another argument for P4. Consider a perfectly commonsensical distinction between an object O and the human cognizing of O. Mathematics provides 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.

Having explained the second argument, let us now evaluate it. I purposely couched P4 and P5 so as to equivocate between two issues. One is whether languages dwell within the mind in the way that dreams, pains, and hallucinations do. This is the issue that Frege and Katz's arguments pertain to. These notwithstanding, many philosophers and linguists follow Noam Chomsky, and insist that languages are mental things in just this sense. (If so, it is plain why psychology would be relevant.) However, we may set that entire debate to one side: The relevance of psychology does not require that languages *be* ideas. Let's focus on another reading of 'psychological entity'—namely, an entity with some kind of necessary connection to (human) psychology. For, the argument's soundness requires that P4 be sustained on that sense as well.

Are languages "psychological entities" in this weaker sense? Languages have both a meaning and sounding side, and they are psychological on both counts. Beginning with the combinatorial aspects of language, the requirements that the rules of syntax be recursive and those of semantics be compositional are driven by psychological considerations, specifically by the empirical fact about human psychology that our minds are finite. That is, natural languages are constrained essentially by our psychology in the sense that, whatever their nature, our limited minds must be able to grasp them. (A similar lesson can be drawn from the fact that no *truly massive* list of sentences could be learned by minds like ours, in the time available.) Turning from combinatorial rules to particular expressions, as Barbara Partee (1979) has stressed, some contents are outand-out mentalistic: propositional attitude sentences; terms for pain, dreams, mental images, emotions; etc.

What's more, not just exceptionally but in general, linguistic contents are linked necessarily with human psychology. As Chomsky (2000) and Jackendoff (1983, 2002) often insist, many linguistic contents pertain to "objects for us." The things they mean are essentially connected to 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 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', 'weapon', 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. 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. (That is the reading of P4 which we set aside.) Nonetheless, the content of all these words is essentially tied to human psychology. Such are what many, maybe even most, of our quotidian substantives express, and what our demonstratives are prone to pick out in context. Thus P4 properly construed is not so much subject to a few scattered exceptions but is root-and-branch false.

Equally, the "sounding" side of language cannot be individuated independently of human psychology. The philosophical tradition notwithstanding, linguistic expressions are not 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 creatures of human psychology. Given space constraints, the details must be set aside. But the point can be made by means of commonsense 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. Or again, to the ears of an Anglophone 'van' and 'ban' 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. And English speakers treat the 't' of 'table', 'tea', and 'writer' as the same sound, though their articulation and acoustics are different. Conversely, the very same acoustic wave can realize various linguistic sounds, in different contexts, because of varying semantic import. Finally, 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.) In short, not just meanings but "linguistic sounds" are necessarily connected to human psychology.

3 A Positive Case for Relevance: Three Examples

I began with two arguments for irrelevance. These helped motivate the questions of whether psychology is relevant to philosophy of language and, if so, why. Roughly speaking, the first very sweeping argument failed because of some of the ends that philosophy of language serves. The second, more circumspect, ontology-based, argument failed because it equivocated on 'psychological entity': Reading that phrase such that P4 is *prima facie* plausible, P5 is not; reading it such that P5 is *prima facie* plausible, P4 is not. Those having been rebutted, we may now revert to the null hypothesis, namely that psychological facts are indeed relevant. This speaks to the matter of "whether." With respect to "why," insofar as there are necessary connections between natural languages

and human psychology, it would be surprising indeed should evidence about the latter prove irrelevant to the former.

I will now provide a positive case for relevance on the basis of three examples. Notably, they illustrate not just that ordinary, everyday psychology is relevant to philosophy of language, but that recherché evidence from advanced scientific psychology is. This,

of course, further buttresses the positive answer to our first question. The examples also show that, *pace* P5 even on its weak reading, evidential relevance does not require a necessary connection among (a) a background philosophical issue; (b) a corresponding question about actual human language; and (c) evidence from psychology. This yields a second answer to our "why" question, in terms of merely contingent connections.

Proper Names

In laying out the examples, it will be useful to recall a thesis which traces, via W.V.O. Quine, to Pierre Duhem. They note that it is not merely a hypothesis all on its own which yields predictions but rather a hypothesis taken in conjunction with ancillary commitments. Now, hypotheses of philosophical interest are no exception to this rule. In particular, a properly philosophical hypothesis, conjoined with the right ancillary hypotheses, can yield a prediction which is verified or falsified by scientific psychology.
For instance, to introduce our first hypothesis H, it has been suggested that *names share the content of descriptions of persons*. There are clear philosophical motivations for H, both metaphysical and epistemological. Very roughly, if proper names are synonymous with descriptions, then nonreferring 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. (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, the methods and results of scientific psychology are relevant to its evaluation. That is because H can be (dis)confirmed in conjunction with ancillary commitments A, including postulated laws.

As Valentine et al. (1996) explain at length, proper names are psychologically special. Processing them is notoriously slow; they are especially vulnerable to brain damage; 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 significantly harder to recall. See Cohen and Faulkner 1986.) It seems, and this is another element of A, 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. H and A 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 sophisticated scientific psychology. (See Segal 2001 for detailed and careful discussion.)

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 conversationally implicates, for example, that Rob's belief is warranted, that one can safely proceed on his say-so, etc. This explanation of the appearances is A. Again, H is not a claim about the human mind. Maybe its truth is not even conceptually, logically, or ontologically connected to cognitive scientific facts. Nonetheless, H conjoined with A yields a prediction: that people who cannot grasp conversational implicatures 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 failing to notice conversational implicatures. Yet, *pace* P, they do not present as external world skeptics. (Other 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 (2010) 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, for example making a statement, of necessity involves higherorder intentions. See Andrews 2002 and Gluer and Pagin 2003 for discussion.)

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 necessary connections, Duhem's Thesis yields links between philosophical hypotheses involving language and evidence from cognitive psychology: 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 curious psychological findings. 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* (Dummett 1973). This is H. Now, if H holds, then, appearances notwithstanding, subsentential 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 2006 for extended discussion.) Granted, it seems outlandish that antirealism and the nature of truth could be tied to aphasias 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 arcane psychological evidence.

4 A Parting Shot: Irrelevance In Practice and In Principle

My contention in this chapter, with respect to our first question, has been that psychology, including advanced scientific psychology, does have a legitimate evidential role in practice. With respect to the second question, namely why this should be so, the main lesson is this: The actual nature of human language is relevant to certain properly philosophical questions; and, because of both contingent and necessary connections, human psychology is relevant to the actual nature of human language; that is why, by the transitivity of 'relevant to', psychology is relevant to philosophy of language. I have not restricted myself to the issue of whether such evidence is irrelevant *in principle*. Surprisingly, certain philosophers have rejected the latter view as well. So, I will end with a word about it.

It does remain epistemically possible that philosophy of language is disconnected from psychology in general, and scientific psychology in particular. Hence it could still turn out, in the long run, that MRIs, error rates, etc., are of no use. Nonetheless, as Fodor (1981) has stressed, as long as we do not know what is in fact connected to what, and do not know in particular what linguistic facts supervene on, we should not rule out psychological evidence a priori. Consider again in this light the three examples above. What rebuttals are rationally permissible? It would be natural to insist that the alleged psychological data are incorrect, or at least oversimplified. Or again, one could grant that the data are accurate but reply that it can be accommodated to, or even supports, the philosophical account at issue. 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. 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. All these rebuttals are appropriate. However, they involve bringing in more psychological evidence, not less. In contrast, what should emphatically not be accepted is simple dogmatic defiance: "That's all very fascinating. But I refuse even to offer a response. Those are psychological findings, and I already know full well, on the basis of metaphilosophy and the metaphysics of language(s), that such results *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 latter should not now be dismissed out of hand. Put otherwise, only an omniscient creature

could have a handle on what "the considerations in principle relevant to philosophy of language" are. Not being such creatures, we are well advised to pursue evidence which seems relevant—even when it comes from psychology.

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