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Margolis on Quine: Naturalized Epistemology and the Problem of Evidence

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1. Introduction

In his recent *Pragmatism's Advantage*, Joseph Margolis locates W. V. Quine's work within the set of failed projects found in analytic philosophy or what he alternatively labels 'scientistic reductionism' or 'analytic scientism' (2003, 2, 7–8; 2010, 14–16). He further explains that analytic scientism rests on three basic commitments: first, the world is independently determinate and knowable in such terms, second, this determinate world can be correctly captured in physical terms alone, with the rest of our 'human world' fully described in such terms, and lastly, given these first two commitments, human beings are viewed as in principle no different from inanimate objects (2003, 13–14; 2010, 26–27). In contrast to this failed perspective, Margolis offers pragmatism as a viable alternative that rejects these three commitments by emphasizing that the determinate world is a human construction where the mental, linguistic, cultural and historical elements of the human world cannot be reduced to physical terms. He further emphasizes the key pragmatist insight that what is taken as true about the world is epistemically and practically dependent on the active human community of inquiry (2003, 13–14; 2010, 26–27).¹

This paper offers some reasons for questioning this general characterization of Quine's philosophy as a form of analytic scientism by developing

¹ Margolis also takes these commitments to inform his understanding of 'continental philosophy' (2003).

a reply to Margolis's more specific criticisms of Quine's naturalized epistemology.² By examining these detailed criticisms we will further see that Quine's overall view has much in common with the pragmatist position that Margolis himself favors. It will also become clear that Margolis's critical interpretation of key Quinean passages is largely correct when these passages are taken at face value. Responding to his criticisms will then involve some careful interpretive reconstruction concerning what Quine should have said, especially once we highlight other important features of his mature epistemological view.

The breakdown of this paper is as follows. The next section outlines Margolis's main criticisms of Quine's scientific conception of epistemology, focusing especially on his claim that Quine's use of sensory stimulation cannot account for the evidential support of scientific theories. Section three looks more carefully at the motives behind Quine's use of sensory stimulation and its connection to the central role that observation plays within his account of how evidence supports scientific theory. Section four then examines the connections between observation and theory in order to demonstrate the specific ways in which Quine's naturalized account of knowledge remains concerned with the normative view of evidence that Margolis finds missing in Quine's account. Finally the last section attempts to synthesize these conclusions about Quine's constructivist view of knowledge arguing that it has a greater affinity with Margolis's pragmatism than he may think. If I am right about these shared pragmatist affinities then there remains some questions concerning what explains their apparent disagreement. I conclude by briefly suggesting that there remains a basic disagreement concerning the proper scope and function of pragmatist philosophy, indicating how this is reflected in Margolis's criticism of Quine's naturalism. This disagreement is so profound as to make neutral adjudication of this dispute unlikely.

2. Margolis on Quine's epistemology

Since Margolis's most important criticisms focus on some alleged gaps in Quine's naturalized account of knowledge, it will be helpful to begin with a brief characterization of Quine's position.³ Quine's philosophical

² It may well be that Margolis assigns these scientific commitments to Quinean inspired positions rather than to Quine's view itself. He claims that Quine favors a form of scientism, but also states that he affirms a scientism of 'conviction' rather than commitment (2003, 6; 4).

³ I will pass over his detailed critical discussion of Quine's indeterminacy argument, which I think is unhelpfully intertwined with his criticisms of Quine's epistemology. Mar-

treatment of the "problem of knowledge" is offered as a scientific account of how humans have developed a systematic scientific understanding of the world. Here is a late passage where he summarizes his conception of epistemology:

The business of naturalized epistemology, for me, is an improved understanding of the chains of causation *and implication* that connect the bombardment of our surfaces, at one extreme, with our scientific output at the other. 1995c, 349, my emphasis

Quine's account of knowledge then seeks to provide a better scientific account of the connections between the activation of our sensory surfaces and our theoretical discourse about the world. His core epistemological project gives a detailed, if still speculative, genetic account of how our cognitive discourse about the world is systematically related to sensory stimulation. In addition, his emphasis on the logical implications between sensory stimulation and scientific theories suggests that he maintains an interest in scientifically clarifying what he himself describes as the "the question of evidence for science" (Quine 1992, 2).

Margolis, if I understand him correctly, cannot see how such a project could ever work. The central issue concerns Quine's use of stimulation at our sensory surfaces as a stand in for the empiricist's favored use of the term 'experience'. The problem is most readily seen with the following passage also highlighted by Margolis:

We were undertaking to examine the evidential support of science. That support, by whatever name, comes now to be seen as a relation of stimulation to scientific theory. Theory consists of sentences, or is couched in them; and logic connects sentences to sentences. What we need, then, as initial links in those connecting chains, are some sentences that are directly and firmly associated with our stimulations. . . The sentence should command the subject's assent or dissent outright, on the occasion of a stimulation in the appropriate range. . . a further requirement is. . . the sentence must command the same verdict from all linguistically competent witnesses of the occasion. I call them *observation sentences*. Quine 1992, 2-3

In this passage (which we will revisit in later sections) Margolis explains that Quine "assigns occasions of stimulation (of our sensory organs) an ev-

golis thinks Quine's entire project stands or falls with the viability of his thesis of the indeterminacy of translation (Margolis 2003, 111). However there is reason to think that very little of Quine's overall project would be affected by whether indeterminacy holds or not, see Hylton 2007, 225-230.

identitary role that captures ‘empirical content’ of some kind” but then proceeds to “erase. . . altogether anything like empirical (or “empiricist”) sensory evidence” severing his possible links to, for example, Carnap’s logical empiricism (2003, 111). Quine’s project then takes on the appearance of an epistemological account with an apparent interest in the evidential status of physical stimulation, but fails to explain how such sensory stimulation “acquires” any evidential standing (2003, 112). Margolis’s more detailed critical points build on this general theme. Quine is further presented as offering sensory stimulation or ‘stimulus meaning’ as a replacement for the protocol sentences of the logical empiricists (roughly first person reports of sensory experience). Here Quine seeks to preserve the objective empirical basis needed for science and common-sense, what Margolis further describes as having “cognitive force prior to and without benefit of, any interpretive or theoretical intervention” (2003, 111).

The problem is that on Quine’s own account this pristine pretheoretical empirical basis cannot be located without the prior use of resources officially disallowed by his theory. Here, the key issue turns on the assigning of sensory stimulation to reports of sensory observation (what Quine calls observation sentences). Margolis wonders about the rationale for such assignments and their bearing, if any, on the problem of perceptual evidence? More pointedly, he wonders why such identifications are thought to be more reliable than the ordinary perceptual resources already needed to identify them in the first place (2003, 119). If I read Margolis’s main critical line correctly, or at least, one crucial thread in his overall argument, he thinks Quine’s needed retreat from the cognitive privilege afforded by empirical givenness suffers from restrictive, scientific constraints that have no evident advantage over our ordinary perceptual resources. There is then a general worry concerning the evidential status of Quine’s appeal to neural input and observation sentences and a more specific concern over the rationale and motives of this approach especially when compared with the resources found in what Margolis refers to as ‘ordinary observation’ (2003, 126). Like Kim and Davidson before him, Margolis isolates what appears to be a serious problem for Quine’s naturalized account of knowledge, where Quine seems to confusingly (and inexplicably) mix the causal with the evidential (Kim 1988; Davidson 1982; 1990; 1997). The challenge set by Margolis is then the central one of clarifying the precise roles of the causal and evidential within Quine’s epistemology. As we will soon see, this involves defending an alternative interpretation of Quine’s remarks, one that requires clarifying a few of Quine’s own misleading statements of his account.

3. Stimulation, observation and evidence: some preliminaries

In responding to Margolis's worries, it is useful to focus on Quine's attitude to the problem of sensory evidence and how it is related to his more general scientific viewpoint. This will help to explain the motives behind his appeal to, for example, sensory stimulation and also, and perhaps more significantly, indicate why his framing of key issues is often so misleading and at times somewhat inaccurate.

Briefly stated, Quine's specific standpoint in philosophy, his so-called 'naturalism', rejects any kind of knowledge other than that found in common sense and science. As a result, philosophers have no epistemic standards available other than those found in our most successful science, and no standpoint external to science from which to question scientific standards for knowledge. This further means for him that philosophy (as a knowledge producing activity) must adhere to the same standards of clarity, evidence, and justification to be found in science more generally (Hylton 2007, 2–3; Quine 1970b, 2–3; 1981b, 72).

Given this perspective Quine proceeds to treat the philosophical question of the evidential support for science as a scientific question. We can frame the initial question in these terms: how do we come to know anything about the world? Quine's general answer is because of relations to sensory stimulation or more specifically, because of the way language is related to such stimulation. But why focus on sensory stimulation? He claims that our only source of information about the world is found with the energy that impacts our sensory surfaces. For example, the sensory stimulations I receive right now are themselves correlated with my surrounding environment at this moment. It is, Quine thinks, a scientific finding itself that we come by information about our surroundings through sensory stimulation of our nerve endings (Quine 1957, 228–230). He takes this claim as a well-confirmed scientific fact, even a scientific vindication of empiricism. It is something that we know in a relatively straightforward way and more abstractly by appeal to well confirmed scientific theories (like perhaps psychology and neurophysiology) (Hylton 2007, 12–15; 87–89; Quine 1981c, 39–41).

How does this then bear on the problem of evidence and observation? 'Observation' remains central for Quine's epistemology since it gives us whatever evidence we have for the support of our theories (Johnsen 2014a, 333; Quine 1974, 37–38). But Quine further explains that observations themselves prove unhelpful in the attempt to scientifically clarify

how observation plays this central evidential role. The problem and its solution are outlined in this lengthy passage:

What are observations? They are visual, auditory, tactual, olfactory. They are sensory, evidently, and thus subjective. Yet it was crucial to the use of observations, both as evidence and as semantical starting points, that they are socially shared. Should we say then that the observation is not the sensation after all, but the shared environmental circumstances? No, for there is no presumption of intersubjective agreement about the environing situation either; two men will assess it differently, partly because of noticing different features and partly because of entertaining different theories.

There is a way out of this difficulty over the notion of observation. . . I propose that we drop the talk of observation and talk instead of observation sentences, the sentences that are said to report observations: sentences like 'This is red', 'This is a rabbit'. No matter that sensations are private, and no matter that we may take radically different views of the environing situation; the observation *sentence* serves nicely to pick out what witnesses can agree on. 1974, 38–39 ⁴

Understanding the relationship between theory and evidence requires that we specify *both* in sentences and as we can see here, Quine suggests that it is observation sentences that state the evidence. Despite Quine's occasional references to experience, observations and even stimulations as evidence, in attempting to spell out the connections between evidence and theory, evidence needs to be formulated in terms of sentences (Johnsen 2014a, 334; Quine 1997, 575–576).

Quine then focuses on how our knowledge arises from the stimulation of our sensory receptors, responses to these stimulations and observation sentences which are closely related to these responses (roughly, observation sentences are those we are willing to accept or reject simply on the basis of present stimulation). Here, once again, we see the way Quine interprets the question of evidence in what he takes to be scientifically acceptable terms. We are faced with the following question: How do we acquire information about the world? And the answer will be informed by what science teaches us about our contact with world, namely, we come to know about our surroundings through stimulation at our sensory surfaces. By framing the issue in this way Quine has, I suggest following Hylton, redefined the basic question (2007, 89). Much of traditional epistemology offers a conception of sensory evidence where it has a kind of epistemic

⁴ For more detailed discussion of this and related passages see Johnsen 2014a, 333–340.

priority, which then supports other types of knowledge. Quine's account offers no such starting point, he, of course, thinks that there is no such independent epistemic perspective available (Hylton 2007, 89). Epistemology becomes science self-applied, where scientific resources are brought to bear on a scientific question concerning how we create theoretical knowledge on the basis of meager sensory contact with our surroundings.

So, one way to think about Margolis's worry about the motives for the use of sensory stimulation is to recognize the scientific outlook that informs the question. Quine's rationale for using stimulations and observation sentences is a scientific one. From that perspective it is, for him, a straightforward finding of science that the world impacts us through our senses. If one is interested in understanding how theories are related to observation, or how utterances come to be about the outside world, then this mundane scientific finding concerning the main source of information about our surrounding environment has epistemological significance.

Nevertheless, Margolis key critical concern remains. How can the stimulation of our senses provide evidence for our theories? Margolis rightly expresses serious reservations concerning Quine's emphasis on the idea that such sensory stimulation constitutes our evidence for what we know about our environment. The problem is highlighted when Quine claims that "The stimulations of his sensory receptors are all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world" (1969, 75). This comment is even more puzzling since we have seen that it is observation sentences that must state our evidence for our theories. In addressing this problem we can begin by borrowing a key interpretive insight from Johnsen in his recent defense of Quine's theory of knowledge (Johnsen 2014b). We have noted that Quine describes sensory experience, neural input and observations all as evidence. As a naturalized epistemologist or scientific philosopher he sees these as three manifestations of a basically unitary phenomenon, our sensory contact with the world. As his discussion shifts from one context to another he then moves from one aspect to another.⁵ However, empiricism as the scientific view that emphasizes that information comes through the triggering of our sensory equipment is compatible with different philosophical views about what constitutes evidence. Johnsen further notes that except relative to a specific context of inquiry, Quine is uninterested in adjudicating between these three theories. The key point for him, is the truth of empiricism,

⁵ For further examples and discussion of this point see Johnsen 2014b.

and he further recommends that we then think of stimulations, observations and sensory evidence as three different way our senses 'evidence' our local environment (Johnsen 2014b, 981).

While this helps us understand why Quine makes these various claims concerning evidence it still does not explain why he thinks stimulation can count as evidence for theories. We must, I think, agree with Johnsen on this point and conclude that Quine's own view shows this claim to be untenable. Consider Quine's Humean view of inductive inference. Here observations, or observed facts, cannot by themselves provide evidence for our theories. It is only by taking these observations as evidence (in conjunction with theory) that they can serve this role, but in order to do so we must be aware of those observed facts. But as Quine acknowledges we are not aware of our sensory stimulations and so cannot take such stimulations as evidence for our theories (1981c, 40; 1993, 413). On Quine's own view stimulations or neural input cannot then serve as evidence for our theories (Johnsen 2014b, 983).

But what could Quine then mean when he claims that sensory stimulation is the evidence anyone has for their picture or theory of the world? To make this statement consistent with Quine's view we need to take it as speaking solely of physical objects. Human beings when considered as physical objects only have resource to physical stimulation in coming to cope with their local environment.⁶ Here, Quine is not discussing how we theorize about the world given the evidence but only how a human physical object when stimulated responds to this sensory input. Quine then misspeaks when he mentions evidence in this context.⁷ The stimulation of John's receptors is not evidence for his theory but they are the inputs to his sensory equipment from his local environment. They are assigned to him by scientific researchers or the naturalized epistemologist as they investigate the question of the sensory contact with a subject's surrounding environment. This sensory stimulation is the concern of these investigators but is of no concern to John who is unaware of them (Johnsen 2014a; 2014b).

We are thus lead to wonder about the relationship between this sensory stimulation, the causal physical impact on sensory receptors, and the

⁶ Johnsen also makes this point. For further discussion see his 2014b. Quine's perspective is perhaps best captured in the starting paragraphs from his 'The Scope and Language of Science' (Quine 1957, 228–229).

⁷ As we will see below this interpretation is also supported by Quine's response to Davidson's criticism of his use of 'evidence' in (Quine 1997, 575–6).

evidential support for our viewpoint. Does Quine offer a unified account of the causal and evidential aspects of his theory of knowledge? The problematic passage cited by Margolis and quoted in part in section 2 is Quine's somewhat awkward attempt to do so. We can however state the connection in this brief way.⁸ Our evidence consists of observable knowledge of facts about our immediate environment expressed in the form of observation sentences. Sensory input consists of the physical events of which we are unaware but which are causally responsible for the beliefs which get expressed in observation sentences, and which then further serve as support for such beliefs (Sinclair 2007, 464).

This details, provide, I think, a compelling response to Margolis's criticism of Quine's characterization of sensory stimulation as evidence. Quine departs from standard philosophical approaches to perceptual evidence in favor of his scientific reformulation of the question. As I have indicated he thinks there is nothing especially controversial about his use of sensory stimulation since he takes it as a well confirmed scientific claim concerning our source of information about the world. And despite some occasional missteps in characterizing his view, he does not equate this stimulation with observation or evidence. Evidence must be stated in sentences, specifically observation sentences since we are aware of them and can use them as evidence for our theories. Given Margolis's emphasis on the way Quine's use of sensory stimulation is unavoidably theoretical, it may be useful to wonder if his scientific rendering of 'evidence' is, in any way, independent from theory (2003, 127). In a fairly straightforward way it is, since regardless of whether we possess a theory about sensory stimulation, it remains that case that energy bombards our sensory surfaces further activating our sensory receptors. Here, stimulations are independent and prior to our current theory about them, but, of course, our knowledge about them is not (Hylton 2007, 89). This knowledge takes the form of a scientific theory couched in sentences which is further supported by evidence that consists of observed facts that are also expressed in sentences.

⁸ For more detailed accounts see Hylton 2007 and Johnsen 2014a; 2014b. Johnsen's view offers a surprising but still plausible defense of Quine's needed endorsement of introspective knowledge. He further defends a corresponding distinction between subjective observation sentences based on introspective evidence and objective observation sentences based on observed facts.

4. Observation, theory and evidence⁹

In responding to Margolis's criticisms, the previous section provided a preliminary discussion of the motives behind Quine's use of sensory stimulation, further clarified his claim that it be viewed as evidence, and provided a summary sketch of the way observation in the form of observation sentences should be properly seen as the evidence for our theories. However, skepticism may remain concerning whether Quine's view can adequately account for the evidential support of science. In order to then provide a more developed response to Margolis's criticisms, this section further builds on the details seen in the last section by giving an account of Quine's later treatment of the evidential support of scientific theory.

While not central to his later work, Quine does at time consider the relation between theory and evidence in more abstract, logical terms. From this standpoint he claims that our theory implies its evidence (1975). Here, like many others, he is accepting hypothetico-deductive method as central to science (1992, 9). We have seen that evidence must, for Quine, be couched in sentences, leading to observation sentences as the prime candidates for playing the role of evidence within Quine's account. When Quine considers the implications between theory and observation he comes to realize that he cannot simply appeal to observation sentences as evidence since they cannot be implied by theory (1975).¹⁰ This is because observation sentences are also 'occasion sentences', true on some occasions and not others, while our theory consists of standing sentences that are true regardless of time or place. There are then no direct inferential relations between our theoretical claims and observation sentences, so in terms of theory implying its evidence, observation sentences cannot by themselves count as evidence for our theory (Hylton 2007, 178; Quine 1981a). But observation sentences are causally linked to sensory stimulation, so whatever sentence is to play this evidential role, must be closely connected to observation sentences.

Quine addresses this inferential gap between theory and observation with what he calls 'observation categoricals':

⁹ This section draws on previously published material found in Sinclair 2014.

¹⁰ This is related to an additional problem that Quine would later acknowledge: Observation sentences cannot be simply responses to sensory stimulation (Hylton 2007, 135). Margolis is then right when he questions the claim that stimulation is enough to learn the proper use of an observation sentence (2010, 125). Hylton argues that mastery of a response to stimulation while only a beginning can through additional learning progress to the point where something close to adult mastery is achieved (Hylton 2007, 135–143).

An observation categorical is a generalization built onto observation sentences, to say that fulfillment of the one observation sentence is invariably attended by the fulfillment of the other. Examples: "Whenever it rains, it pours". "Wherever there's smoke, there's flame"... The observation sentences... were occasion sentences directly linked to sensory stimulation. The observational categoricals, now, are standing sentences directly linked to observation sentences.

Quine 1986, 330-331

Each observational categorical then contains observation sentences as parts, which themselves are directly linked to sensory stimulation. But the categorical itself is a standing sentence and so can be implied by background scientific theory. The inferential gap between observation sentences and the standing sentences of a given theory is then bridged with the implication of a categorical that through its parts is linked to observation sentences. The importance of these categoricals for Quine's attempt to capture the logical relations between theory and observation is highlighted when he describes them as the "lifeline of science", since they serve as "the ultimate empirical checkpoints of science generally" (Quine 1995a, 44).

These categoricals further epitomize what happens in experimental situations when a hypothesis is being tested. What is crucial here is their ability to express the general expectation that whenever one observation sentence holds, the other will also (Quine 1995a, 25). Theories can then be tested through deducing an observational categorical. The categorical is itself put to the test by setting up the first observable situation and then waiting for the second to materialize. If it does then the observation categorical is tentatively accepted as true and becomes part of our existing theory. If not, then it is rejected.

Quine offers as an example, a team of mineralogists deliberating as to whether a newly found mineral is litholite (1992, 9). A hypothesis concerning its chemical make-up is established, which further allows them to infer that if this hypothesis is true, then this piece of litholite should emit hydrogen sulfide when sufficiently heated. Here we have the two observables that make up the categorical and illustrate the test of a hypothesis: If this pinkish piece of mineral is litholite then it should emit hydrogen sulfide when heated above 180 degrees Celsius. The mineralogists can then make the necessary observations and then proceed to test their colleague's hypothesis. Observation categoricals both bridge the inferential gap between theory and observation and further show how evidence

and justification is found for a respective scientific hypothesis implied by our background theory: "The scientist deduces from his hypotheses that a certain observable situation should bring about another observable situation; then he realizes the one situation and watches for the other. Evidence for or against his set of hypotheses ensues, however inconclusive" (2000b, 411). The consequences predicted by the observation categorical indicate how observation sentences through their conditioning to stimulus conditions yield evidence for our hypotheses about the world. In response to critics, Quine elaborates on this point in these terms:

Some of my readers have wondered how expressions that are merely keyed to our neural intake, by conditioning or in less direct ways, could be said to convey evidence about the world. This is the wrong picture. We are not aware of our neural intake, nor do we deduce anything from it. What we *have* learned to do is to assert or assent to some observation sentences in *reaction* to certain ranges of neural intake. It is such sentences, then, thus elicited, that serve as experimental checkpoints for theories about the world. Negative check points.

1993, 413

This passage provides further support for the interpretation sketched at the end of the previous section when it was emphasized that sensory input consists of physical events that we are unaware of but which are causally responsible for the beliefs that get expressed as observation sentences. Observation sentences are able to provide support for hypotheses in virtue of their connections to neural input and by serving as the needed components of a categorical that is the logical implication of prior theory. This then, for Quine, clarifies the basic idea that prediction of observed events is what permits the testing of scientific theories.

These various points can be brought together by considering one of Quine's most explicit response concerning the location of 'evidence' within his naturalized account of knowledge in this case directed at Davidson:

'Evidence' is a term that I have used informally in introductory or summary formulations. I have not found it useful in more detailed inquiry. But let me now see what, more precisely, I would make of it. My stated overall problem has been the quasi-epistemological problem, within natural science, of man's construction of natural science on the datum base of neural intake. The intake is not what we are aware of and infer from, but it does encompass our 'information', in the computer engineer's sense, as to what is going on around us. It is perhaps a candidate for the title of evidence, but it does not meet

Davidson's dictum that only a belief can be evidence for a belief. The runner-up for the title is the observation sentence that has been conditioned to that neural intake. Evidence in this sense meets Davidson's condition. Quine 1997, 575–6

This statement confirms what we have seen in earlier sections. First, in attempting to provide a scientific-philosophical account of the connections between sensory stimulation and scientific pronouncements, the term 'evidence' is too unclear to serve as part of a well formed, if still speculative, empirical hypothesis about human knowledge¹¹ Similar to the concepts of 'knowledge' and 'belief', Quine rejects it because it fails to meet the standards of clarity required for genuine scientific explanation.¹² However, in contrast to his critics, Quine maintains that his scientific analogues of 'sensory input' or his more recent use of 'neural input' can be thought of as evidence in terms of the causal source of information present in our local environment. Here, as we have seen, he must be describing the standpoint of the scientific epistemologist who proceeds to examine subjects solely as physical objects in a physical world. He also notes that neural intake does not serve to justify our beliefs, because we are not aware of this sensory input, nor can we then infer anything from it. This type of 'evidence' is of a piece with Quine's naturalistic rendering of the causal connections between our sensory surfaces and theory. While it remains quite central for his own genetic account of the route from stimulus to science, his debates with Davidson have made clear to him that it fails to address other worries about 'evidence'.¹³ He then clearly shows that he does not confuse the causal links between theory and stimulation with an

¹¹ This explains Quine's agreement with Davidson that in his theory of evidence 'evidence' is not clarified and plays no role (Quine 1990). We have seen that it is such considerations that motivate his discussion at the start of *Pursuit of Truth* when he claims that we can examine the evidential support of science without appealing to 'evidence' as a technical term (1992, 2).

¹² This is brought out in this passage: "My position is that the notions of thought and belief are very worthy objects of philosophical and scientific clarification and analysis, and that they are in equal measure very ill suited for use as instruments of philosophical and scientific clarification and analysis. If someone accepts these notions outright for such use, I am at a loss to imagine what he can have deemed more in need of clarification and analysis than the things he has thus accepted" (1981d, 184). For Quine's rejection of the concept 'knowledge' on similar grounds, see his 1984, 322.

¹³ In response to Gibson, Quine notes that Davidson's critical remarks on his use of evidence led him to "fight shy of the word" (1994, 502). He makes similar comments in a reply to Grayling (2000a, 411).

evidential relation since he is well aware that sensory stimulation cannot stand as a reason for a belief.¹⁴

An additional type of evidence, one that better conforms to Davidson's and Kim's standards, and what Quine himself describes as evidence in the "strict sense" (Quine 2000b) is found with observation sentences since, as we have seen, they can serve as experimental checkpoints that test theory. We remain unaware of our neural input, or sensory stimulation, but this neural activity causes us to assert *that* something is the case, which is then fully expressed with the utterance of an observation sentence. Once uttered observation sentences become objects of awareness from which inferences can be made where such inferences allow the respective test of a prediction and hypothesis. Davidson's strictures on evidence are than addressed by Quine's use of observation sentences, which are conditioned to sensory stimulation. While observation sentences then meet Davidson's standards for evidence, we have seen that by themselves they cannot properly address Quine's interest in the logical implications between theory and observation. Observation sentences can serve as evidence and experimental checkpoints only once they have the appropriate logical connections to theoretical sentences. In meeting this demand, Quine then further articulates the logical implications of scientific theory in terms of observation categoricals that, as we have seen, contain observation sentences as parts. Evidence is then found in observing, or failing to observe, the conjunction of the truth of observation sentences, as they are described within the appropriate categorical (Hylton 2007, 186). Given these details, Quine then thinks that observation remains the locus of evidence (2000b, 412).

5. Conclusions: Quine's pragmatism

Previous sections have clarified Quine's view of evidence and further indicated how this informs his recent remarks on the logical implications between theory and observation. The result is a more plausible account of the relations between theory, observation and evidence that acknowledges much of the force of Margolis's critical remarks. The result is, I think, a better overall interpretation of Quine's leading claims demonstrating why he finds epistemological significance in sensory stimulation,

¹⁴ Quine makes a distinction between neural input as strictly causal and observations sentences as containing processed information in his 'Grades of Theoreticity' (1970a, 3). He further notes the difference between the causal and evidential in Quine and Ullian 1978 (14–15).

and how, despite some misleading statements, he can be interpreted as offering a plausible attempt at normative epistemology.

In this concluding section, I want to briefly suggest how this interpretation of Quine's view draws him closer to Margolis's kind of pragmatist constructivism.¹⁵ This view is offered as a viable alternative to analytic scientism and emphasizes the key pragmatist insight that what is taken as true about the world is epistemically and practically dependent on the active human community of inquiry. This active constructive role of the human community in establishing truth theories of the world is a basic component of Quine's epistemology. In accounting for the pragmatist's place in empiricism, Quine largely endorses the idea that truth is a human creation rather than something found. He elaborates on this view in the following way:

Popper and the rest of us who celebrate the hypothetico-deductive method depart from Schiller's humanism, it may be supposed, in thinking of it as a method of finding truth rather than making it. *But I cannot agree.* Despite my naturalism, I am bound to recognize that the systematic structure of scientific theory is man-made. It is made to fit the data, yes, but invented rather than discovered, because it is not uniquely determined by the data.

Quine 1981e, 32, my emphasis

This human made character of true scientific theories carries over to their evidential connections. One way to see this is to recognize Quine's claim that there are no logical connections between theory and its evidence (neither deductive nor inductive), and if we want to understand how they are related, we should examine how we are capable of constructing theories from the available evidence. By learning the psychological truth about how we relate evidence to theory through the use of scientific method, we are learning the philosophical truth concerning how evidence is related to theory by the use of scientific method (Johnsen 2005, 84; 87; 2014b). In other words, evidential connections to theory are ones that humans have actively constructed. More specifically, the connections that exist between theory and evidence are ones that we have made through our following the set of norms that loosely make up what is called 'scientific method'.

Given these affinities between Margolis's and Quine's pragmatism we might wonder if there is any remaining point of disagreement between

¹⁵ This connection is perhaps less surprising if we remember C. I. Lewis's influence on Quine's developing views. For recent accounts of this connection see Sinclair 2012 and 2015.

them. Margolis's criticisms show resistance to Quine's scientific formulation of philosophical issues routinely claiming that it remains unclear why these formulations are needed in addressing the philosophical issues in question. Here is where I suggest, in a rather brief exploratory way, we can locate a fundamental divergence between Quine and Margolis. Consider Margolis's following claim:

Put in the simplest terms: Quine has no use for the idea that human persons are 'second-natured,' transformed by the processes of enculturation. But then, there's no point to a philosophical rapprochement through strengthening naturalism's hand, if naturalism doesn't return us to the analysis of the puzzles of cultural life. 2010, 43

This I think is right, or very close to being right. Quine is not interested in the puzzles of cultural life; indeed, he advocates a conception of philosophy that takes its main problems as distinct from, perhaps even devoid of, any larger social, cultural import. Put more specifically, he is interested solely in understanding human theoretical activity but not human culture more generally (Hylton 2007, 7). Margolis's criticisms are informed by a view that is interested in understanding these broader features of human culture, and that sees Quine's account as clearly far too impoverished to address such concerns (Margolis 2015). On its own terms, Quine may be able to show how it is possible to move from stimulus to science, but not from stimulus to culture, or the emergent cultural self. I want to suggest that the key dividing line here is not Quine's specific scientific constraints, or his 'scientism' because we have seen that with regard to the issue of 'evidence' these constraints do not remove any of those considerations that Margolis takes as central to the evidential support of science. Rather it is the question of whether philosophical concerns can be properly handled exclusively in scientific terms that is the basic dividing point between them.

Seen with this question in mind, the dispute between Margolis and Quine involves a basic disagreement over the aims of philosophy, where this is further and more deeply linked to a conflict between scientific and cultural conceptions of philosophy or philosophical practice. Margolis argues that philosophy needs a rejuvenated naturalism that addresses the cultural dimensions of human life. My portrayal of his disagreement with Quine suggests a more fundamental issue, which wonders if philosophical reflection should be confined to the professional, scientific and intellectual

demands of philosophers or should play a more explicit cultural role in addressing current social and moral concerns.¹⁶

Look at from Quine's perspective, Margolis's own cultural view of philosophy itself lacks an independent argument for why the demands of these cultural concerns must be met by philosophy. While Margolis would perhaps claim, rightly I think, that Quine's technical, scientific vision simply places such issues outside the purview of professional philosophy. How are we to then adjudicate this fundamental metaphilosophical disagreement? I don't know. However it appears that the acceptance of these contrasting conceptions of philosophy is so basic and thorough as to make any neutral adjudication unlikely.¹⁷

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¹⁶ For further relevant discussion concerning the metaphilosophical perspective informing Margolis's position see Hildebrand 2015.

¹⁷ I would like to thank Joseph Margolis and my co-editor Dirk-Martin Grube for their comments on earlier drafts of this paper.

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