STROUD ON NATURALIZED EPISTEMOLOGY

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Introduction

In his book, *The Significance of Philosophical Scepticism* (1984), Barry Stroud includes a long chapter entitled “Naturalized Epistemology” (Chapter VI, pp. 209–254). The chapter deals exclusively with Quine’s version of naturalized epistemology. The first part of the chapter (pp. 209–228) provides a really excellent overview of Quine’s conception of naturalized epistemology. Nevertheless, it is not without its flaws, two of which are: (1) no account of Quine’s doctrine of the reciprocal containment of ontology and epistemology is provided, and (2) no account of Quine’s genetic approach toward answering the epistemological problem is provided. As we shall see, these two omissions have serious consequences for what Stroud has to say later by way of criticizing Quine’s conception of naturalistic epistemology.

In the remainder of his chapter, Stroud focuses on Quine’s claim that, compared to traditional epistemology, naturalized epistemology “is no gratuitous change of subject matter, but an enlightened persistence rather in the original epistemological problem” (Quine, 1974, p. 3). Stroud construes “the original epistemological problem” to be one of explaining how knowledge is possible, in the face of the sceptical challenge. He argues that insofar as Quine’s naturalized epistemology purports to be “an enlightened persistence . . . in the original epistemological problem” it is a failure, for it does not answer the sceptic (pp. 228–243). Furthermore, he argues that naturalized epistemology cannot answer the sceptic (pp. 243–254).

Stroud has a pretty good understanding of Quine’s epistemology, and Stroud himself is a pretty good philosopher. Thus his criticisms of Quine ought to be taken seriously. Nevertheless, I believe his arguments are flawed. In the next two sections, I shall recount Stroud’s arguments, and I shall explain why I remain unconvinced by them.

Naturalized Epistemology As Epistemology

Quine has argued that though it has been widely recognized in philosophical circles that scepticism gave rise to the quest for a theory of knowledge, it has been little recognized that knowledge gave rise to scepticism:

1 That chapter is an updated version of Stroud, 1981, which is an updated version of Stroud, 1979.
Doubt prompts the theory of knowledge, yes; but knowledge, also, was what prompted the doubt. Scepticism is an offshoot of science. The basis for scepticism is the awareness of illusion, the discovery that we must not always believe our eyes. Scepticism battens on mirages, on seemingly bent sticks in water, on rainbows, after-images, double images, dreams. But in what sense are these illusions? In the sense that they seem to be material objects which they in fact are not. Illusions are illusions only relative to a prior acceptance of genuine bodies with which to contrast them.

Rudimentary physical science, that is, common sense about bodies, is thus needed as a springboard for scepticism. It contributes the needed notion of a distinction between reality and illusion, and that is not all. It also discerns regularities of bodily behaviour which are indispensable to that distinction. The sceptic's example of the seemingly bent stick owes its force to our knowledge that sticks do not bend by immersion; and his examples of mirages, after-images, dreams, and the rest are similarly parasitic upon positive science, however, primitive. (Quine, 1975, pp 67–68)

Now, the philosophical significance of recognizing that scepticism is prompted by scientific (and common sense) knowledge about bodies is the following:

The crucial logical point is that the epistemologist is confronting a challenge to natural science that arises from within natural science . . . Clearly, in confronting this challenge, the epistemologist may make free use of all scientific theory. His problem is that of finding ways, in keeping with natural science, whereby the human animal can have projected this same science from the sensory information that could reach him according to this science. (Quine, 1974, p. 2)

Quine refers to such a naturalized epistemology as enlightened empiricism: it is enlightened because the new epistemologist is now free to use the findings of science in constructing his/her defense of scientific knowledge:

A far cry, this, from old epistemology. Yet it is no gratuitous change of subject matter, but an enlightened persistence rather in the original epistemological problem. It is enlightened in recognizing that the skeptical challenge springs from science itself, and that in coping with it we are free to use scientific knowledge. The old epistemologist failed to recognize the strength of his position. (Quine, 1974, p. 3)

Stroud does not deny Quine's logico-historical point that scepticism is prompted by knowledge, but he argues that if naturalized epistemology is to be understood as Quine suggests, as "an enlightened persistence . . . in the original epistemological problem", as attempting to answer the sceptic, then it must be seen as having failed to do so. His argument turns on Quine's admission that the sceptical challenge to science is a
legitimate enterprise, which, if carried out, would be a straightforward argument by *reductio ad absurdum*.

I am not accusing the sceptic of begging the question. He is quite within his rights in assuming science in order to refute science; this, if carried out, would be a straightforward argument by *reductio ad absurdum*. I am only making the point that sceptical doubts are scientific doubts. (Quine, 1975, p. 68)

According to Stroud, this admission by Quine is an important concession, and amounts to a very powerful point in the traditional philosopher’s defence. If there is nothing logically peculiar or self-defeating in starting with some scientific knowledge and ending up by rejecting or doubting it all, what becomes of ‘the crucial logical point’ that the traditional epistemologist is said to have missed? If the ‘only’ point Quine is making is that ‘sceptical doubts are scientific doubts’, does it follow that epistemology, ‘then’, is part of natural science, and that ‘clearly’ the epistemologist may make free use of all scientific theory? Once it is granted that the sceptic might be arguing by *reductio ad absurdum*, I think it does not follow. (Stroud, 1984, p. 228)

Stroud concludes:

If I am right, the fact that ‘sceptical doubts are scientific doubts’ does not put the epistemologist who raises such doubts in the stronger position of being free to use scientific knowledge of the world in his effort to answer those doubts and explain how knowledge is possible. (Stroud, 1984, p. 229)

The putative issue between Stroud and Quine can be summarized as follows: Quine argues that epistemological scepticism presupposes scientific knowledge about the world. Once this fact is recognized it is clear that the defender of science is free to use scientific knowledge in defending science against the sceptical challenge. Furthermore, the sceptic’s challenge is not illegitimate: the sceptic may argue by *reductio* that scientific knowledge (so-called) is false. This being conceded, Stroud concludes that the naturalized epistemologist has not answered the sceptic, for the epistemologist cannot use the now discredited science in constructing his/her defense of science.

As Stroud reports, in reaction to this apparent problem, Quine emphasizes his naturalism:

in keeping with my naturalism, I am reasoning within the overall scientific system rather than somehow above or beyond it. The same applies to my statement, quoted by Stroud, that “I am not accusing the sceptic of begging the question; he is quite within his rights in assuming science in order to refute science.” The skeptic repudiates science because it is vulnerable to
illusion on its own showing; and my only criticism of the skeptic is that he is overreacting. (Quine, 1981b, p. 475, note omitted, my emphasis)

But what does Quine mean here by “the skeptic is . . . overreacting”? Stroud understands Quine to mean “that the sceptical ‘theory’ is not yet as well-confirmed as some other views. Perhaps it will become so, but for the moment it lacks sufficient justification” (Stroud, 1984, p. 232). And, as Stroud rightly protests, this “is a far cry from the position reached at the end of Descartes’s First Meditation” (Stroud, 1984, p. 232). It certainly does seem ludicrous that Cartesian scepticism could be shown to be correct or incorrect by making further observations and experiments! Unmoved by Quine’s appeal to naturalism, Stroud reasserts his conclusion that “if the sceptic can be seen as arguing by reductio to the conclusion that all of that science nevertheless provides no knowledge of the world, the consolations of naturalism will not be enough” (Stroud, 1984, pp. 233–234).

Is Stroud correct? Is Quine’s appeal to naturalism beside the point? I do not believe that Stroud is correct. I believe he misunderstands what Quine has in mind when he accuses the sceptic of “overreacting”. Furthermore, I believe this misunderstanding is the consequence of Stroud’s failure to appreciate how epistemology and ontology reciprocally contain one another in Quine’s thoroughgoing naturalism. Let us pause to consider the nature of this reciprocal containment.

The locus classicus of Quine’s “reciprocal containment” metaphor is the following passage from “Epistemology Naturalized”:

The old epistemology aspired to contain, in a sense, natural science; it would construct it somehow from sense data. Epistemology in its new setting, conversely, is contained in natural science, as a chapter of psychology. But the old containment remains valid too, in its way. We are studying how the human subject of our study posits bodies and projects his physics from his data, and we appreciate that our position in the world is just like his. Our very epistemological enterprise, therefore, and the psychology wherein it is a component chapter, and the whole of natural science wherein psychology is a component book – all this is our own construction or projection from stimulations like those we were meting out to our epistemological subject. There is thus reciprocal containment, though containment in different senses: epistemology in natural science and natural science in epistemology (Quine, 1969, p. 83, my emphasis)

Natural science (ontology) is “contained” in epistemology in the sense that the evidence for science is just what our epistemology, our theory of method and evidence, tells us it is. This mode of “containment” is well understood by Stroud (even though, as we shall see in the next section, he believes such “containment” makes naturalized epistemology impossible). On the other hand, epistemology is contained in natural science (ontology) on at least three grounds: (1) epistemology pre-
supposes the existence of the external world; (2) epistemology's contact points with the world are (physical) nerve endings; (3) the two cardinal tenets of naturalized epistemology ("One is that whatever evidence there is for science is sensory evidence. The other . . . is that all inculcation of meanings of words must rest ultimately on sensory evidence" (Quine, 1969, p. 75).) are findings of natural science (ontology). It is this latter containment that is not well understood by Stroud. And, because of this, he arrives at his mistaken interpretation of what Quine means by accusing the sceptic of "overreacting."

The relevant point of the latter containment (of epistemology by ontology) just is that transcendental epistemology is incoherent. The sceptic may indeed use a portion of science to bring doubt to bear upon science, but only by presupposing the truth of other portions of science. For example, the sceptic may show that some scientific posits are epistemologically unwarranted, but his epistemological deliverances presuppose his interim acceptance of other scientific posits, namely, those presupposed by his own theory of evidence: "our questioning of objects can coherently begin only in relation to a system of theory which is itself predicated on our interim acceptances of objects. We are limited in how we can start even if not in where we may end up" (Quine, 1960, p. 4).

Now, how does all this relate to Quine's remark about the sceptic "overreacting"? Just so: the sceptic who "repudiates science because it is vulnerable to illusion on its own showing" is "overreacting" in the sense that his position is a transcendental one and, thus, an incoherent one. Scepticism, like epistemology, presupposes some further ontology: "we might reasonably doubt our theory of nature in even its broadest outlines. But our doubts would still be immanent, and of a piece with the scientific endeavor" (Quine, 1981b, p. 475). Never can all ontological commitments be coherently doubted simultaneously; one would be "overreacting" if one thought otherwise.

To sum up: I have argued that Stroud's claim that naturalized epistemology does not answer the sceptic because Quine acknowledges that the sceptic's reductio is a legitimate undertaking is mistaken. Because he overlooks or ignores Quine's "reciprocal containment" metaphor, Stroud focuses only on how epistemology "contains" ontology, thereby failing to notice that ontology contains epistemology. Thus is he led into his misinterpretation of what Quine means by saying that the sceptic is "overreacting." Contrary to Stroud's interpretation, Quine is not claiming "that the sceptical 'theory' is not yet as well-confirmed as some other views. Perhaps it will become so, but for the moment it lacks sufficient justification". Rather, Quine is pointing out that epistemology does not occur in an ontological vacuum (i.e.,

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2 For more on this business of the reciprocal containment of ontology and epistemology, see Gibson, 1986.
transcendentally), that the sceptic’s “doubts would still be immanent, and of a piece with the scientific endeavor,” and to think otherwise is “overreacting.” What now of Stroud’s second criticism?

As we have seen, Stroud argues that naturalized epistemology, construed as “an enlightened persistence . . . in the original epistemological problem,” does not answer the sceptical challenge, because it does not answer the sceptic’s reductio. But Stroud has an even stronger claim to make against naturalized epistemology, namely, that it cannot answer the sceptic, regardless of the outcome of the sceptic’s reductio:

Quine’s naturalistic study of knowledge proceeds in terms of a general distinction between what we get through the senses and everything we believe about the physical world on the basis of those data. I would now like to argue that that conception of knowledge and of the epistemological task not only tolerates scepticism, as I have just been suggesting, but is actually committed to it. It would make it impossible for us to understand, even on its own terms, how our knowledge of the external world in general is possible. (Stroud, 1984, p. 234)

Before we can understand Stroud’s argument for the above position we must first come to understand his view of what knowledge amounts to within the Quinian problematic:

In the kind of experimental situation Quine is imagining . . . I can explain the subject’s knowledge in the right way only if I know that the world around him is as he says it is, and that its being that way is partly responsible for his saying or believing it to be that way. Only then would I be doing more than explaining the origin of a belief that happens to be true. (Stroud, 1984, p. 238)

Stroud’s view is that, as a Quinian epistemologist, I can witness a human subject’s nerve endings being stimulated (input) and I can observe his subsequent behavior, including his verbal behavior (output). And, if I know that his beliefs “are true, and I can explain how they come to stand in the proper relation to the facts they are about, I can understand how the person knows what he does. If they are not true, I can see that he lacks knowledge” (Stroud, 1984, p. 239). It is doubtful that Quine would accept this characterization of knowledge as it stands, without further elaboration, for Quine does not see knowledge as a matter of individual beliefs (or sentences) as “corresponding” to worldly facts. Thus, a certain amount of “talking past one another” is to be expected in this exchange between Stroud and Quine.

The next step in Stroud’s argument is to show that this view of knowledge (possessed by the human subject of our epistemological study) cannot be applied on one’s self:
The position we find another human subject in, on Quine’s view, is that of ‘positing’ bodies or ‘projecting’ all of physics from the ‘meager’ sensory data to which he is restricted in his contact with the world he believes to exist. If each of us, in thinking of himself, must ‘appreciate that our position in the world is just like his’, each of us will have to appreciate that we too are restricted to ‘meager’ sensory data, and that all of our beliefs about the physical world around us go far beyond, or are grossly underdetermined by, those data. (Stroud, 1984, p. 242)

However, Stroud does not believe that we can actually perform this act of “appreciation”: “we cannot see all our own beliefs about the world as a ‘construction or projection from stimulations’ – while still explaining how our own, or anyone else’s, knowledge of the world is possible” (Stroud, 1984, p. 242). But why is this? Why can’t we perform the Quinian act of “appreciation”? Stroud explains further:

What happens when I try to take up the view that all my beliefs about the external physical world amount to a ‘construction or projection’ from ‘meager’ sensory ‘data’? I know what all my beliefs about the world are, but I do not have any independent access to the world those beliefs are about on the basis of which I could determine whether or not they are true. In the normal case in which I am studying another person in interaction with the world, I can do that. I know what his beliefs are, and I can know, independently of the fact that he has those beliefs, what is the case in the world those beliefs are about. That is what enables me to explain how his knowledge is possible in that situation. In my own case, if I regard all my beliefs about the world as ‘posits’ or ‘projections’ from sensory data, I would not be in that position. My . . . point is that I could not check my beliefs about the physical world against the facts of the world . . . if I at the same time regarded all my beliefs about the physical world as nothing more than a ‘construction or projection from stimulations’ in the way Quine intends. I would have no independent information about that world that I could use as a test or a check. (Stroud, 1984, pp. 243–244)

I think we must grant Stroud his claim that “we cannot perform that act of ‘appreciation’ – we cannot see all our own beliefs about the world as a ‘construction or projection from stimulations’ – while still explaining how our own, or anyone else’s, knowledge of the world is possible”. However, as a criticism of Quine’s position this point misfires, for “that act” described by Stroud is not Quine’s proposed act of “appreciation”:

Stroud finds difficulty in reconciling my naturalistic stance with my concern with how we gain our knowledge of the world. We may stimulate a
psychological subject and compare his resulting beliefs with the facts as we know them; this much Stroud grants, but he demurs at our projecting ourselves into the subject's place, since we no longer have the independent facts to compare with. My answer is that this projection must be seen not transcendentally but as a routine matter of analogies and causal hypotheses within our scientific theory. True, we must hedge the perhaps too stringent connotations of the verb 'know'; but such is fallibilism. (Quine, 1984, p. 474, my emphasis)

Quine's chief point is that the act of "appreciation" takes place within science, not transcendentally. Contrary to Stroud's belief, the recognition that one's beliefs are projections from one's data does not force one "to repudiate the ontology in terms of which the recognition took place" (Quine, 1981c, p. 21). Of course, one could repudiate that ontology, but only by relying on some other ontology (cf. Quine, 1981c, pp. 21-22).

Why does Stroud fail to accept this "answer"? The obstacle appears to be the same old difficulty: failure to acknowledge that epistemology is contained in ontology, that epistemology does not exist in an ontological vaccuum. For Quine,

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\text{[t]ranscendental argument, or what purports to be first philosophy, tends generally to take on rather this status of immanent epistemology insofar as I succeed in making sense of it. What evaporates is the transcendental question of the reality of the external world -- the question whether or in how far our science measures up to the } \textit{Ding an sich}. \text{ (Quine, 1981c, p. 22)}
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On this point, I believe -- in Rorty's terms -- that we have a classic confrontation between a philosopher who has given up the idea that the mind is a mirror of nature and a philosopher who has not. The former acquiesces in "the robust state of mind of the natural scientist who has never felt any qualms beyond the negotiable uncertainties internal to science" (Quine, 1981a, p. 72), the latter takes philosophical scepticism far more seriously.

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However, Stroud is not through; he concludes:

What I have meant to deny, with Kant, is that we can regard all beliefs about the world as 'projections' or as 'theoretical' relative to some 'data' or bits of 'evidence' epistemically prior to them, while at the same time explaining how our knowledge of the world is possible ... Quine's project of naturalized epistemology has the interest and the apparent connection with traditional epistemology that it has only because it contains and depends on just such a bi-partite conception of human knowledge of the world. That is what I have argued cannot succeed in explaining how knowledge is possible. But without that conception, 'naturalized epistemology' as Quine describes
it would be nothing but the causal explanation of various physiological events. (Stroud, 1984, p. 253)

In short, Stroud argues that naturalized epistemology either fails as epistemology or it fails to be epistemology.

Relative to the first of these points, I have argued that Stroud really has not proven that epistemology fails as epistemology, for his argument that naturalized epistemology does not answer the sceptic’s reductio, and his argument that naturalized epistemology cannot answer the sceptic because the Quinian account of knowledge cannot be applied to one’s self, are both flawed insofar as they both overlook the fact that for Quine epistemology is contained in ontology, the ontology of natural science. Transcendental sceptical doubts, like transcendental epistemology, are incoherent.

The second of Stroud’s points, that naturalized epistemology fails to be epistemology, is something new. Quine has claimed that “[t]he relation between the meager input [viz. stimulations] and the torrential output [viz. theory of nature] is a relation that we are prompted to study for somewhat the same reasons that always prompted epistemology; namely, in order to see how evidence relates to theory, and in what ways one’s theory of nature transcends any available evidence” (Quine, 1969, p. 83). However, Quine has also claimed that by appealing to stimulations rather than to, say, sense data or to Gestalten we avoid debates about awareness and epistemic priority. Now, Stroud’s claim is that Quine cannot have it both ways. Here’s his argument:

Something happens at a sensory surface, and then a coming-to-believe-something-about-the-world occurs. The relation between those two events is simply that the former causes the latter (along with the help of those in between). But ‘underdetermination’ speaks of a relation between something that is ‘meager’ relative to something else that is ‘torrential’; the latter ‘transcends’ the former. If we think only about the events involved – the events at the sensory surface and the events closer to ‘our cognitive mechanism’ that result in our believing what we do – and we drop all talk of ‘meagerness’, ‘underdetermination’, ‘torrential output’, and so on, what becomes of Quine’s question about our knowledge of the world around us? We are left with questions about a series of physical events, and perhaps with questions about how those events bring it about that we believe what we do about the world around us. But in trying to answer those questions we will not be pursuing in an ‘enlightened’ scientific way a study of the relation between ‘observation’ and ‘scientific theory’, or of the ‘ways one’s theory of nature transcends any available evidence’, or of ‘the domain within which [man] can revise theory while saving the data’. We will be studying the connection between one kind of event and another. (Stroud, 1984, pp. 251-252)

What are we to make of this claim that naturalized epistemology fails to be epistemology, that nerve hits cannot be evidence? I believe Stroud
is led to perceive a difficulty where there is none because he has ignored or overlooked Quine's genetic approach toward resolving the epistemo-
logical problem. Quine's genetic approach amounts to reconstruing the epistemological problem — the problem of explaining the evidential relation between observation and theory — as the problem of explaining the evidential relation between observation sentences and theoretical sentences. And, surely, there is no difficulty with saying that observation sentences can be true or false and, therefore, can serve as repositories of evidence for theoretical sentences: "It's green" may be evidence for "It contains copper". There is, however, another relation that needs explaining, and that is the relation between observation sentences and stimulus conditions. And Quine's account of this relation is well-known: observation sentences are learned by the method of ostension, they are linked to their stimulus conditions by the psychological mechanism of conditioned response. Why can't nerve hits serve (sometimes unconsciously) as evidence for holophrastically acquired observation sentences? The stimulus conditions under which a child, say, would assent to a queried observation sentence are just the conditions under which the sentence is true. By Quine's lights, "[a]ny realistic theory of evidence must be inseparable from the psychology of stimulus and response, applied to sentences" (Quine, 1960, p. 17).

Conclusions

I have argued that Stroud's claim that Quine's version of naturalized epistemology does not answer the sceptic and his claim that it cannot answer the sceptic are unjustified. In both cases, Stroud has failed to see that for Quine epistemology (empiricism) is contained in ontology (natural science). This failure is indicative of a deeper disagreement between Stroud and Quine having to do with the nature of epistemology and the philosophical importance of scepticism. Quine has rejected first philosophy, the quest for a non-scientific basis upon which to justify science. He believes that science requires no justification beyond measuring up to observation and the hypothetico-deductive method. Furthermore, he is a fallibilist, making no claim that knowledge entails certainty or incorrigibility. Thus, unlike Stroud, he is not much moved by the sceptic's doubts about science.³

I have also argued that Stroud's claim that naturalized epistemology is rightly considered as merely the physiology of belief formation is mistaken because it overlooks Quine's genetic approach toward dealing with the epistemological problem. On Quine's approach the question of the relation between the "meager input" and the "torrential output"

³ For an examination of Quine's argument for naturalism, i.e., against first philosophy and for scientism, see Gibson, 1987.
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becomes two questions: How are observation sentences acquired on the basis of sensory stimulation? and How do observation sentences serve as evidence for theoretical sentences? Indeed, I believe that this externalizing of empiricism that Quine’s genetic approach requires is one of Quine’s major contributions to philosophy.

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References

—— [1974]: The Roots of Reference (La Salle, IL: Open Court Pub. Co.).
Stroud, Barry. [1984]: The Significance of Philosophical Scepticism (Oxford).
—— [1979]: ‘The Significance of Scepticism”, in Transcendental Arguments and Science, eds. Peter Bieri, R. Horstmann, L. Kruger (Dordrecht: Reidel).