

# QUINE'S ARGUMENT FROM DESPAIR

## 1. INTRODUCTION

According to W.V. Quine, naturalism can be characterized negatively as the abandonment of a 'first philosophy' prior to science. The Quinean naturalist argues that all inquiry starts from within our scientific conceptual scheme and that we ought to repudiate "the Cartesian dream of a foundation for scientific certainty firmer than scientific method itself" (1990, 19). Where traditional epistemology aspired to contain science by attempting to "construct it somehow from sense data", the naturalist rather sees epistemology as "contained in natural science" (1969a, 83). But what exactly are Quine's reasons for rejecting first philosophy? Why, in other words, does Quine believe that he is bound to evaluate our epistemic practices from within, that he "is the busy sailor adrift on Neurath's boat" (1975a, 72)? In the present paper, I will examine Quine's ideas about first philosophy and reconstruct his surprising argument for dismissing the project.

Prima facie, Quine's argument against first philosophy seems to be pretty straightforward: we ought to abandon traditional epistemology because, historically, all attempts to ground our beliefs have failed. In his seminal "Epistemology Naturalized", for example, Quine divides traditional epistemology into a doctrinal and a conceptual program and argues that neither of them can be carried out satisfactorily. On the doctrinal side, Hume's problem of induction prevents us from deducing our beliefs about the world from basic observation statements. On the conceptual side, Quine criticizes the epistemologist's attempts to translate our theoretical concepts in

sensory terms. In particular, he criticizes Carnap's project of rational reconstruction, arguing that it fails to "offer any key to *translating* the sentences of science into terms of observation, logic, and set theory" (1969a, 77). As an alternative to these projects, Quine proposes his naturalized epistemology, the study of how theory and evidence are *actually* related:

If all we hope for is a reconstruction that links science to experience in explicit ways short of translation, then it would seem more sensible to settle for psychology. Better to discover how science is in fact developed and learned than to fabricate a fictitious structure to a similar effect.

(ibid., 78)

Where the traditional epistemologist rejects such a naturalism as circular, Quine believes that he is free to use scientific knowledge in his inquiries: "scruples against circularity have little point once we have stopped dreaming of deducing science from observations" (ibid., 76).

Let me call this the *standard conception* of Quine's argument against first philosophy. In the standard conception, we are justified in adopting a naturalized epistemology only after we have established that all attempts to reduce our knowledge to sense experience have failed. Quine's argument, in other words, is construed as a conditional argument: we can legitimately take on a naturalized epistemology only when we have demonstrated that we ought to "stop dreaming of deducing science from sense data" (1969a, 84) and that we ought to "despair of being able to define theoretical terms generally in terms of phenomena" (1975a, 72). The Quinean naturalist is not a 'busy sailor' from birth, but "someone who later elects to

enlist, perhaps in reaction to some deep disappointment” (Maddy 2007, 85). Quine’s argument, in short, is pictured as an *argument from despair*.<sup>1</sup>

The standard conception is widespread among both Quine scholars and critics. In “The Key to Interpreting Quine”, for example, Roger F. Gibson summarizes Quine’s arguments against the doctrinal and the conceptual program and concludes that “[t]he thesis that there is no first philosophy is a comment on the failure of traditional epistemologists to find a foundation outside of science upon which science [...] can be justified” (1992, 17). Similarly, Peter Hacker claims that “[t]he failure of the Carnapian enterprise seemed to Quine to warrant the naturalization of epistemology” (2006, 236), and Penelope Maddy argues that the Quinean naturalist seems to be “driven to her position by ‘despair’ at the failure of any or all attempts to ‘ground’ science” (2007, 85).<sup>2</sup>

Still, there seems to be something odd about the standard conception. For one thing, Quine’s argument from despair only occurs in “Epistemology Naturalized” (1969a) and in “Five Milestones of Empiricism” (1975a).<sup>3</sup> The argument is strangely absent in Quine’s work before and after these two papers, even when he discusses the distinction between traditional and naturalized epistemology. This gap is particularly apparent in *From Stimulus to Science* (1995). In the first chapter of this book, Quine gives an extended summary of the traditional quest for certainty, starting with sceptical worries about our knowledge of the external world and ending with Carnap’s project of rational reconstruction. Yet in the second chapter, which deals

---

<sup>1</sup> This apposite phrase is David Shatz’s: “Quine arrived at [his] proposal by route of an argument we might term the argument from despair. The traditional project of validating common sense and scientific beliefs in the face of skeptical challenge has been, and is doomed to be, a failure; therefore, the project is best dropped” (1993, 117). According to Shatz, the alternative to an argument from despair is a dialectical naturalism, which aims to “confront the problem of skepticism and of circularity head on”. Shatz believes that Quine in some places “provides a partial defense of dialectical naturalism” (ibid., 120).

<sup>2</sup> See also, for example, (Roth 1999, §2), (Kertész 2002, §3), and (Fogelin 2004, 19-27).

<sup>3</sup> In the latter paper, Quine claims that the argument is only “one source” of naturalism (p. 72).

with his naturalism, Quine nowhere uses the traditional epistemologists' failure as an argument for adopting a naturalistic perspective. Rather, he reflects about the "phenomenalistic orientation" of the traditional project, i.e. about "[t]he idea of a self-sufficient sensory language as a foundation for science" (1995a, 15).

Second, if the argument from despair were all he had to offer, Quine would not have made a particularly strong case for his naturalized epistemology. For, as many epistemologists have objected, it is one thing to dismiss the traditional quest for absolute foundations, it is quite another thing to reject the search for justification *tout court* and to claim that "[e]pistemology, or something like it, simply falls into place as a chapter of psychology and hence of natural science" (Quine 1969a, 82).<sup>4</sup> Quine only shows that we cannot *completely* ground our beliefs on sense experience, an argument that is too weak to convince any first philosopher who shares the former's scepticism about the Cartesian dream. In response to Quine's despair, traditional epistemologists could easily adopt a "*moderate* first philosophy, which eschews certainty but which allows for the independence (of epistemology from science) sought by the traditionalist" (Siegel 1995, 53). They could, for example, require "of our basic beliefs only some degree of initial credibility rather than Cartesian certainty" (Kim 1988, 388).

In this paper, I will argue that the standard conception is mistaken. I will show that Quine's argument against the first philosopher is considerably stronger than the standard conception suggests. In his work both before and after "Epistemology Naturalized", Quine does not abandon traditional epistemology out of despair but because the project is demonstrably flawed from the beginning. According to Quine, it is a mistake to believe that one can develop a self-sufficient sensory-language,

---

<sup>4</sup> The *loci classici* of this argument are (Putnam 1981) and (Kim 1988).

independent of our best scientific theories of the world. The first philosopher does not fail because he aims at Cartesian certainty, but because he presupposes that he can adopt some science-independent perspective. I will argue, in short, that “Epistemology Naturalized”, when considered in isolation from the rest of his work, misrepresents the strength of Quine’s position.<sup>5</sup>

What I will offer, then, is a reconstruction of Quine’s actual argument against first philosophy, focusing on his work both before and after “Epistemology Naturalized”. This paper will be structured as follows. I will start by outlining the standard conception and examining Quine’s argument from despair (§2), after which I will introduce his stronger argument (§3) and show how he uses it to dismiss both the traditional epistemologist (§4) and the sceptic (§5). Next, I will analyze Quine’s positive views about the theory-evidence relation, which underlie his argument, and show that his position is more nuanced than it might initially seem to be (§6-7). I will end this paper with some recommendations as to how we might better read “Epistemology Naturalized” in the light of these findings (§8).<sup>6</sup>

---

<sup>5</sup> In this paper I will focus exclusively on Quine’s *negative* claim, i.e. on his argument *against* traditional epistemology. My claim that Quine’s position is stronger than what is suggested by “Epistemology Naturalized”, therefore, only applies to his argument against first philosophy, not to his positive views about what a post-first-philosophical epistemology should look like.

<sup>6</sup> A great deal of the confusion on the part of the standard conception seems to be triggered by certain phrases in “Epistemology Naturalized”. I am not the first to point at the somewhat problematic relation between this paper and the rest of Quine’s work. See, for example, (Putnam 1981, 244) and (Johnsen 2005). Johnsen concludes that Quine himself is to blame for this confusion: “the fault lies not in the universal incompetence of the essay’s readers, but rather in a disastrous failure of its author’s outsized gifts as an expositor of his own views” (ibid., 79). For the purposes of this paper, it should be noted that Johnsen focuses almost exclusively on Quine’s positive claim that epistemology becomes a chapter of psychology; a claim that, according to Johnsen, wrongly implies that Quine comes to reject normative epistemological questions. I take it that my reading of Quine in this paper is compatible with Johnsen’s interpretation and see my main claim as complementary: not only does “Epistemology Naturalized” fail to delineate Quine’s positive views, as Johnsen claims, it also misrepresents the arguments that are available to him in rejecting traditional epistemology.

## 2. FROM CERTAINTY TO STRAIGHT PSYCHOLOGY

Although we seem to know a great many things about ourselves and the world around us, we can never be absolutely sure that our beliefs are true. Even our best scientific theories might turn out to be false or to rest on misguided assumptions. According to Quine, traditional epistemology starts from a deep dissatisfaction with this situation: “the theory of knowledge has its origin in doubt, in scepticism. Doubt is what prompts us to try to develop a theory of knowledge” (1975b, 257). In order to restore confidence in both our everyday convictions and our scientific theories, traditional epistemologists seek to ground our beliefs upon something more secure. Quine often refers to this project as ‘the Cartesian dream’, the dream of an indubitable foundation for our beliefs about ourselves and our surroundings.

In his analysis of the epistemologists' quest for certainty, Quine has focused almost exclusively on *empiricist* attempts to ground our knowledge.<sup>7</sup> In his discussion of empiricist epistemology, Quine distinguishes two projects: one doctrinal and one conceptual. The doctrinal project is concerned with truth and aims at inferring our beliefs about the world, especially our well-established scientific theories, from basic observation statements. The conceptual project, on the other hand, is concerned with meaning and aims at translating our scientific concepts in sensory terms. The two projects are connected: if one succeeds in defining all scientific concepts in sensory terms, then one's scientific beliefs and one's basic observation statements will be couched in the same sensory language, an accomplishment that will enable one to examine whether the former can be derived from the latter (Quine 1969a, 69-71).

---

<sup>7</sup> An exception is (Quine 1946, 54-9), where he explicitly discusses epistemological rationalism before rejecting it. Most notably, Quine questions whether the rationalist can be certain that her innate ideas are true, even if they seem self-evident.

According to Quine, the classical empiricists failed in both respects. On the conceptual side of epistemology, Locke, Berkeley, and Hume were unable to indicate how our complex ideas about the world can be constructed out of indubitable simple ones; defining even the very notion of an enduring physical body turned out to be problematic (1946, 57-77). Still, their problems were worse on the doctrinal side. For Quine, it was Hume who showed that it is impossible to establish a deductive relation between theory and evidence even if both are couched in the same sensory language; neither general statements nor singular statements about the future can be deduced from any finite set of sensory evidence (1969a, 71-2).

Quine is convinced that there is no progress to be made with respect to the doctrinal project: “The Humean predicament is the human predicament” (ibid., 72). Although the value of inductive reasoning in science can hardly be underestimated, the traditional epistemologist simply has to admit that we are never strictly entitled to rely on induction (1994b, 231-3). Still, there was progress to be made with respect to the conceptual project. Quine argues that some major advances in the eighteenth and nineteenth century breathed new life into the empiricists’ program. Both Jeremy Bentham’s method of contextual definition and the development of set theory revived the conceptual project. Quine credits Carnap as the philosopher who actually attempted to carry out the project by using these formal tools to construct our beliefs about the world out of primary sense experiences. According to Quine, the latter’s *Der Logische Aufbau der Welt* (1928) constituted “a masterful construction” of the external world from the data of sensation “using the sophisticated devices of mathematical logic” (1987, 144).

Although Quine has always applauded the ingenuity of Carnap’s constructions, he is convinced that the *Aufbau* ultimately failed to provide a truly satisfactory

reduction. According to Quine, Carnap's constitutional system collapsed when he attempted to assign the subjective sense qualities in our visual field—i.e. the colors in our two-dimensional visual space—to points in the three-dimensional physical space order, a manoeuvre that Carnap believed to be “one of the most important steps in the constructional system” (1928, §124). The idea, as Quine notes, was to translate sentences of the form “Quality  $q$  is at point-instant  $x;y;z;t$ ” in terms of the fundamental notions that Carnap allowed in his constructional scheme (1951, 40). Instead of providing a full translation of our color-assignments, however, Carnap was only able to provide a list of desiderata that any assignment of colors to space-time points should satisfy “as far as possible”, while being aware that they can never be “precisely satisfied” (§126).

It is important to see why Carnap's reduction broke down at this point. Carnap's desiderata for assigning colors to world points only prescribe a complete assignment, not a point-by-point allocation. The reason for this is that one needs to distinguish between genuine information from the outside world and subjective color experiences such as hallucinations and disturbances of the eye (*ibid.*). The problem for Carnap is that one can only judge whether some experience is hallucinated, when one examines whether it fits in one's total allocation of visual experiences over time. One cannot judge whether a single experience is hallucinated on the basis of that very experience alone; “the assignment of sense qualities to public place-times has to be kept open to revision in the light of later experience, and so cannot be reduced to definition” (Quine 1966, 85). In consequence, one cannot assign one color to a particular space-time point without considering its place holistically in the total color-to-world



allocation. Carnap's construction broke down, in other words, because he failed to take into account the holistic nature of the theory-evidence relation.<sup>8</sup>

In response to his failure to develop a satisfactory criterion of empirical significance, Carnap radically altered his views after the *Aufbau*. In his "Testability and Meaning" (1936/1937), Carnap gave up on the idea that theoretical sentences should be strictly translatable into the observation language if they are to be empirically significant. Instead, he introduced a liberal form of reduction that allows theoretical sentences to be correlated with lower level sensory sentences in a way short of translatability. Rather than demanding strict reductions such that theoretical sentences are eliminated in favor of observation sentences, Carnap now also admitted *reduction sentences* that define new theoretical terms only relative to certain specified experimental conditions.<sup>9</sup>

In "Epistemology Naturalized", Quine argues that Carnap's adjustments were fatal for traditional epistemology. For, in dispensing with reduction by elimination, "the empiricist is conceding that the empirical meanings of typical statements about the external world are inaccessible and ineffable" (1969a, 78-9). That is, in allowing a more liberal form of reduction, Carnap acknowledged that he would never be able to completely specify the empirical meanings of isolated theoretical sentences. "Epistemology Naturalized", in other words, construes Carnap's concession as a natural endpoint for traditional epistemology. Where Hume had already demonstrated that we cannot hope to fulfill the doctrinal project, Carnap's *Aufbau* showed that the

---

<sup>8</sup> See also (Quine 1984, 125-6): "[a] typical single sentence of a theory has no distinctive empirical content of its own; it can be singled out for testing, but only by agreeing meanwhile to hold other sentences of the cluster immune [...] in the *Aufbau* the very mechanism of [this] Duhem effect is strikingly and imaginatively depicted."

<sup>9</sup> See (Carnap 1936/1937, §8) for a definition of reduction sentences. Shortly after "Testability and Meaning", Carnap recognized that even these partial definitions were not yet liberal enough. Again the problem was the holistic character of the theory-evidence relation. See (Carnap 1956, 68). In response, Carnap proposed an even more liberal criterion of empirical significance. Yet, even this definition did not fully implement the lessons of holism as Quine shows in his (1984, 125).

conceptual project is too demanding as well. Quine argues that to “relax the demand for definition, and settle for a kind of reduction that does not eliminate, is to renounce the last remaining advantage that [...] rational reconstruction [had] over straight psychology; namely, the advantage of translational reduction” (ibid., 78). We ought to “stop dreaming of deducing science from sense data” (ibid., 84) and we ought to “despair of being able to define theoretical terms generally in terms of phenomena” (1975a, 72). Hence, we are better off studying the actual relation between theory and evidence.

### 3. TWO STRATEGIES

The argument outlined above is mainly concerned with the empiricists’ ideas about the *relation between* theory and evidence, with their attempts to *connect* our scientific beliefs with our primary sense experiences. Quine argues that we are unable to ground our beliefs on sense experience and that we cannot translate our theoretical vocabulary in observational terms. Schematically, the problem is that we have (A) our primary sense-experiences, and (B) our best scientific theories, but that we do not seem to be able to relate (A) and (B) in an epistemologically satisfying way. The holistic character of the theory-evidence relation prevents us from establishing an epistemologically satisfying connection between the two because a typical single (B)-sentence “has no distinctive empirical content of its own” (Quine 1984, 125).

Still, criticizing the epistemologist’s ideas about the relation between theory and evidence is not the only way to challenge the traditional project. There remains a second option. Instead of showing that all attempts to base our scientific beliefs on some science-independent foundation have failed, one can also attempt to criticize the

very idea of a science-independent foundation itself. That is, instead of challenging the nature of the relation between (A) and (B), one can also call into question the epistemological value of connecting (B) with (A) in the first place. One could, for example, dismiss the traditionalist's ideas about the epistemological status of (A) and argue that sense experience does not constitute a truly science-independent foundation.

In his "Epistemology Naturalized", Quine does not discuss this second option.<sup>10</sup> That is, he does not question the idea of a self-sufficient sensory language presupposed in the epistemologist's attempts to reduce science to sense experience. Quine only argues that *once* we have adopted a naturalized epistemology, we can substitute our talk about sense data with talk about its scientific analogue: the physical stimulation of our sensory receptors:

one *effect* of seeing epistemology in a psychological setting is that it resolves a stubborn old enigma of epistemological priority. [...] In the old epistemological context [...] we were out to justify our knowledge of the external world by rational reconstruction, and that demands awareness. Awareness ceased to be demanded when we gave up trying to justify our knowledge of the external world by rational reconstruction. What to count as observation now can be settled in terms of the stimulation of sensory receptors.

(Quine 1969a, 84, my emphasis)

---

<sup>10</sup> At least, Quine does not discuss this second option when it concerns the empiricist program of reducing science to sense data. Quine *does* use the second strategy when he dismisses the logicist program of reducing mathematics to logic and set theory. Quine argues that the logicists failed because their foundations were not truly mathematics-independent. According to Quine, set theory is itself a branch of mathematics, and so the logicists failed to do "what the epistemologist would like of it", i.e. revealing the ground of mathematical knowledge (Quine 1969a, 70).

In the remainder of this paper, I will argue that both before and after “Epistemology Naturalized”, Quine argues exactly the other way around. Quine does not give up on sense data because of his naturalism. Rather, he naturalizes epistemology because of his doubts about the idea of “a self-sufficient and infallible lore of sense data” (1995b, 462). That is, Quine's doubts about ‘epistemological priority’ are not a consequence of his naturalism, they are the very reason he adopts a naturalized epistemology in the first place. Both before and after “Epistemology Naturalized”, in short, Quine *does* use the second strategy; he criticizes the traditional project because he believes that attempts to connect (A) and (B) are futile from an epistemological perspective.

#### **4. THE IDEA OF A SELF-SUFFICIENT SENSORY LANGUAGE**

From the very beginning of his philosophical career, Quine has thought about the relative benefits of phenomenalist ontologies. Already in “On What There Is” (1948), for example, Quine posed the question of whether we should adopt a phenomenalist or a physicalist conceptual scheme. His position was a pragmatic one: we want an ontology that is as simple as possible, but both conceptual schemes are simple in their own respects. A phenomenalist ontology posits only subjective events of sensation, whereas a physicalist scheme can be said to offer conceptual simplicity (1948, 17).

Despite this pragmatic attitude, however, Quine was already aware that we cannot reduce our theoretical vocabulary to sensory terms, that the idea of a complete rational reconstruction is an idle dream: “there is no likelihood that each sentence about physical objects can actually be translated [...] into the phenomenalist

language” (ibid., 18). A few years later, in his “Two Dogmas Empiricism”, Quine of course explained why such a strict reduction is impossible: “our statements about the external world face the tribunal of sense experience not individually but only as a corporate body” (1951, 41).

As a result, the main ingredients of “Epistemology Naturalized” were already in place in the early 1950s: Quine was already familiar with the possibility of adopting a purely physicalistic conceptual scheme, and he had already shown that the traditional epistemologists’ attempts at reduction were fruitless. Still, Quine had not yet adopted a naturalized epistemology at this point. He still believed that there might be epistemological reasons for adopting a phenomenalist conceptual scheme:

From among the various conceptual schemes best suited to [...] various pursuits, one—the phenomenalist—claims epistemological priority. Viewed from within the phenomenalist conceptual scheme, the ontologies of physical objects and mathematical objects are myths. The quality of myth, however, is relative; relative, in this case, to the epistemological point of view.

(1948, 19)

This situation had not changed in *Two Dogmas*, where Quine continued to talk about “sense data” in describing the evidential boundaries of his newly developed holistic empiricism (1951, 44).<sup>11</sup>

Between *Two Dogmas* (1951) and *Word and Object* (1961) however, Quine *did* switch exclusively to a naturalistic conceptual scheme. Looking back on this period, Quine has referred to the ten years between these two works as the decade in which

---

<sup>11</sup> See also Quine's *Methods of Logic* (1950, xi), where he claims that “[t]he seeing of a green patch, and the simultaneous utterance ‘Green patch now’, constitute the sort of composite event which, in its rare occurrences, gladdens the heart of the epistemologist”. Cf. (Murphey 2012, 89).

he became “more consciously and explicitly naturalistic”; as the period in which he “stiffened up his flabby reference to ‘experience’ by turning to our physical interface with the external world: the physical impacts of rays and molecules upon our sensory surfaces” (1991, 398). That is, in the decade following *Two Dogmas*, Quine switched from a Carnapian tolerance concerning the question whether to adopt a phenomenalist or a physicalistic conceptual scheme to talking exclusively about ‘the stimulation of sensory receptors’.

So why did Quine abandon phenomenism? Did Quine give up on sense datum languages out of despair? Did he, in other words, come to regard the traditional perspective as hopeless because we cannot reduce science to sense experience? No he did not. What changed is that he became convinced that the very idea of a sense datum language is *not epistemologically prior to* but *dependent on* our best scientific theories of the world; that “[s]ense data are posits too” (1955, 252). Quine came to believe that the traditional project was flawed from the beginning; in appealing to a phenomenalist language as a starting point for her inquiries, the epistemologist already presupposed a good deal of science:

[t]alk of subjective sense qualities comes mainly as a derivative idiom [...] Impressed with the fact that we know external things only mediately through our senses, philosophers from Berkeley onward have undertaken to strip away the physicalistic conjectures and bare the sense data. Yet even as we try to recapture the data, in all their innocence of interpretation, we find ourselves depending upon sidelong glances into natural science.

(1961a, 1-2)

Traditional epistemology builds on the idea that sense data are independent of our basic theories of the world. This is why a reduction of our beliefs to sense data would constitute a major epistemological achievement. Quine, however, became convinced that this presupposition is incorrect.<sup>12</sup> Not our talk of sense data but our talk of physical objects is prior; the epistemologists' starting point is dependent on our scientific conceptual scheme.

As an example of this dependence relation, Quine discusses the idea that our elementary experiences are two-dimensional; an idea that Carnap also presupposed in the *Aufbau* when he wanted to assign the sense qualities in our bidimensional visual field to points in the three-dimensional physical space order. According to Quine, however, the idea that our elementary visual experiences are two-dimensional is itself based on rudimentary science:

The old epistemologists may have thought that their atomistic attitude toward sense data was grounded in introspection, but it was not. It was grounded in their knowledge of the physical world. Berkeley was bent on deriving depth from two-dimensional data for no other reason than the physical fact that the surface of the eye is two-dimensional.<sup>13</sup>

(1973, 2)

Even the very empiricism that underlies the traditional attempts to construct science from sense data depends on our scientific picture of the world. We only know that we

---

<sup>12</sup> This is not to claim that the early Quine defended this presupposition. As I have argued above, the early Quine did not maintain the traditional epistemologist's perspective. Rather, he defended something like a Carnapian tolerance concerning the question whether or not to adopt a phenomenalist or a physicalist conceptual scheme.

<sup>13</sup> See also (Quine 1961a, 2) and (Quine 1975b, 258).

have sense organs because we use them in examining the way in which we obtain our information:

The champions of atomic sense data were seeking the unscientific raw materials from which natural science is made, but in so doing they were being guided, all unawares, by an old discovery that was the work of natural science itself [...] It is the discovery that all our information about the external world reaches us through the impact of external forces on our sensory surfaces [...] This is a scientific finding, open, as usual, to reconsideration in the light of new evidence.<sup>14</sup>

(1986, 328)

As a result, sense data are theoretical posits as much as the physical objects that the traditional epistemologist attempts to construct from them. The only epistemological difference between the two is that our physicalistic conceptual scheme is what *actually* ties our experiences together: “[t]he memories that link our past experiences with present ones and induce our expectations are themselves mostly memories not of sensory intake but of essentially scientific posits, namely things and events in the physical world” (Quine 1995a, 15). We construct sense data only after we have acquired an object-based conceptual scheme. This is why painters have to be trained to reproduce their three-dimensional view of the world into a two-dimensional picture (Quine 1970, 1).

The standard conception presupposes that traditional epistemology fails because we ought to despair of deducing science fully from sense data. The present reflections show, however, that Quine’s rejection of traditional epistemology beyond

---

<sup>14</sup> See also (Quine 1952, 225).



“Epistemology Naturalized” is guided by the second strategy distinguished above. For Quine, the epistemologists’ quest for foundations was misguided from the beginning; there is no epistemologically prior sense datum language, no transcendental science-independent perspective from which to validate science:

There is every reason to inquire into the sensory or stimulatory background of ordinary talk of physical things. The mistake comes only in seeking an implicit sub-basement of conceptualization, or of language. Conceptualization on any considerable scale is inseparable from language, and our ordinary language of physical things is about as basic as language gets [...] If we improve our understanding of ordinary talk of physical things, it will not be by reducing that talk to a more familiar idiom; there is none.

(1961a, 3)

## **5. QUINE’S RESPONSE TO THE SCEPTIC**

The idea that Quine’s rejection of first philosophy is guided by an argument against transcendence, against a science-independent perspective, is confirmed by his response to the sceptic. Recall that, for Quine, traditional epistemology starts from a deep dissatisfaction with the problem of error, with “worries about our knowledge of the external world” (1995a, 1). Now, if the standard conception were correct, and if Quine’s argument against traditional epistemology were indeed an argument from despair, his naturalism would constitute a surrender to the sceptic. For, in despairing of reconstructing science from sense data, Quine would be despairing of the epistemologist’s attempt to provide our beliefs with a foundation. In waking up from his Cartesian dream, in other words, Quine would be forced to admit that the sceptic

was right all along; we simply ought to despair of providing our beliefs with the kind of justification the sceptic demands.

In reality, however, Quine does not admit that the sceptic has been right from the beginning. Instead of despairing of being able to answer the sceptic, he makes a move similar to the one discussed above: he argues that the sceptic *too* presupposes a good deal of science in her inquiries. Where the traditional epistemologist inadvertently relied on scientific knowledge in her talk about sense data, the sceptic cannot question science without presupposing science:

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. In a world of immediate sense data with no bodies posited and no questions asked, a distinction between reality and illusion would have no place. The positing of bodies is already rudimentary physical science; and it is only after that stage that the sceptic's invidious distinctions can make sense.<sup>15</sup>

(Quine 1975b, 258)

Sceptical questions are thus questions internal to science. According to Quine, it is science itself that shows that our evidence for science is meager; the sceptic needs to presuppose at least some theory in order to question it. The sceptic too is misguided

---

<sup>15</sup> See also (Quine 1973, 1-3).

when she believes that she can coherently doubt the reality of our beliefs from some ‘implicit sub-basement of conceptualization’, from some self-sufficient science-independent perspective. Her terms too are only intelligible within a more inclusive theory of the world: “the term ‘reality’, the term ‘real’, is a scientific term on a par with ‘table’, ‘chair’, ‘electron’, ‘neutrino’, ‘class’, [...] all these are part of our scientific apparatus, our terminology, so that the only sense I can make of scepticism is that somehow our theory is wrong” (1994a, 252).<sup>16</sup>

The question of how theory relates to evidence is an open question, but it is a question internal to science, it is an *immanent* challenge. We cannot step outside our conceptual scheme and question that scheme all at once. As a *transcendental* challenge scepticism simply makes no sense: “There is no such cosmic exile” (Quine 1961a, 275), no self-sufficient vantage point from which to question science.<sup>17</sup>

---

<sup>16</sup> This view about the nature of sceptical challenges Quine also developed in the ten years between *Two Dogmas* and *Word and Object*. See, for example, Quine’s (1954, 229): “We cannot significantly question the reality of the external world, or deny that there is evidence of external objects in the testimony of our senses; for, to do so is simply to dissociate the terms ‘reality’ and ‘evidence’ from the very applications which originally did most to invest those terms with whatever intelligibility they may have for us.”

<sup>17</sup> Are not sceptical challenges just as problematic when we recognize that they are “of a piece with the scientific endeavor” (Quine 1981b, 475)? Barry Stroud certainly seems to think so. According to Stroud, Quine is “committed at least to the coherence of [the traditional sceptical question] by his very conception of knowledge” (1981, 468). Quine, like the traditional epistemologist, distinguishes between our objective input from the world and our beliefs about the world as a result of that input. According to Stroud, any such “bipartite view of knowledge leaves open the general possibility that the objective world is different from the way we take it to be” and that, in consequence, we can never know “that that possibility does not obtain” (*ibid.*). More metaphorically, Stroud argues that the naturalist, the busy sailor adrift on Neurath’s ship, can never dismiss the possibility “of sawing all around that meagre portion of the ship that represents our sensory data, and setting the rest of it adrift” (1984, 234).

Stroud’s critique would be valid if the standard conception were correct, if Quine had dismissed traditional epistemology out of despair. Yet, Quine’s view precisely implies that we *cannot* strictly distinguish between our input from the world and our beliefs about the world as a result of that input. Sure, Quine has a bipartite view of knowledge, but his bipartite picture is one internal to science. His ideas about input and output are immanent ideas. We simply cannot maintain our sense data as a self-sufficient raft while setting the rest of our ship of knowledge adrift. See Quine (1981b, 474-5).

## 6. TAKING HOLISM SERIOUSLY

Let me sum up what we have established thus far. Quine's rejection of first philosophy, both before and after "Epistemology Naturalized", is not based on despair, but on his rejection of *transcendence*, his dismissal of the idea of a science-independent perspective. According to Quine, "[t]here is no external vantage point, no first philosophy" (1969b, 127).<sup>18</sup> Both the sceptic and the traditional epistemologist presuppose an Archimedean point in their inquiries. The sceptic presupposes that she can challenge science from some science-independent perspective, while the epistemologist presupposes that she can answer this challenge by reducing our theories to some science-independent sensory language.

Now, what underlies these traditional presuppositions is an absolute distinction between theory and evidence. Both the sceptic and the epistemologist rely on a strict theory-evidence dichotomy in their inquiries. The sceptic questions our scientific theories because she believes that our evidence for these theories is too meager. Yet, her doubts only constitute a transcendental challenge when that very evidence does not itself depend on those theories. Similarly, the traditional epistemologist's project of reconstructing science from sense data only constitutes a truly foundational project when these sense data themselves are not intruded by our best scientific theories.

As a result, in both cases Quine's rejection of transcendence seems to boil down to a rejection of an absolute theory-evidence distinction. Indeed, Quine has argued that "observation is inseparable from theory" (1996, 477), that we cannot draw a clean distinction between an observation's evidential value and the influence of intrusive information. According to Quine, even a very basic one-term observation sentence

---

<sup>18</sup> See also (Quine 1994b, 230): "the immanent is that which makes sense within naturalism, *in mediis rebus*, and the transcendent is not".

like 'Red', which might be taken to report a sense datum, is to some extent susceptible to intrusive information. After all, one can imagine extreme cases in which we "may be persuaded, by collateral information about odd lighting and juxtaposition, that something is really red that did not seem so or vice versa" (Quine 1961a, 41). This shows that even an innocent observation sentence like 'Red' is never completely theory-free. It is therefore not surprising that Quine proposes that it would make more sense to speak about "degrees of theoreticity", with sentences like 'Red' at one extreme and highly theoretic observation sentences like 'There was copper in it' at the other (1996, 477).

Ironically, what underlies Quine's rejection of a strict theory-evidence dichotomy is his holism. Thus far, I have presented Quine's holism as a thesis that affects the *relation between* theory and evidence. Our theories are said to be significant only in clusters because a single theoretical statement "has no distinctive empirical content of its own" (Quine 1984, 125-6). Let us call this *modest semantic holism*. As we have seen, this holism is strong enough to explain why we cannot translate our theoretical concepts into observation terms. Yet, modest semantic holism applies only to the theoretical terms and sentences of a theory. Nothing is said about the way in which the meanings of observation sentences themselves are constituted. As it now turns out, however, the scope of Quine's holism is considerably broader. After all, if 'observation is inseparable from theory', meaning holism affects our observation sentences as well. The meaning of a one-term sentence like 'Red' too derives from the contribution it makes to our theory as a whole, a thesis that we might call *strong semantic holism*.<sup>19</sup>

---

<sup>19</sup> It should be noted that, for Quine, there is an important sense in which the meaning of observation sentences is not affected by semantic holism. I examine this nicety in §7, where I will show that it does not affect my conclusion that, in Quine's view, theory-free observation sentences are not available for the traditional epistemologist's purposes.

Quine's position, then, might be summarized as follows. At the highest level of generality, Quine's rejection of first philosophy is a rejection of transcendence, a rejection justified by his strong semantic holism. There is no external vantage point because our statements will only make sense within our theory of the world. Quine's dismissal of a strict theory-evidence distinction, and hence his dismissal of both the skeptic's and the traditional epistemologist's presuppositions, is an application of his ideas about transcendence and hence a consequence of his strong semantic holism. The problem with Quine's argument from despair is that it is too weak. It grants the traditional epistemologist and the skeptic their strict theory-evidence distinction and argues on the basis of the weaker modest semantic holism that we cannot derive the one from the other.

## **7. THEORY VS. EVIDENCE**

At this point one might start to wonder whether Quine is not dismissing too much in rejecting first philosophy and embracing a strong semantic holism. Is not Quine closing off our connection with the world in claiming that observation is inseparable from theory, in rejecting an absolute theory-evidence distinction? It might seem that if we cannot take our evidence to be theory-free, we are somehow trapped within our system of beliefs. It might seem, in other words, that the cure is worse than the ailment, that Quine's views about evidence should be cause for a much greater despair than the initial argument that we cannot reconstruct science from sense data.

It is my contention, however, that such a conclusion would be too strong. Quine's ideas about the relation between theory and evidence are more nuanced than they might initially seem to be. In this last section, I will argue that, to some extent, Quine

*does* allow theory-free observation sentences; that to some extent, he does allow a strict theory-evidence dichotomy. I will argue that Quine only claims that theory-free observation sentences are not available for the traditional epistemologist's purposes.

The key to understanding Quine's more nuanced ideas about the relation between theory and evidence is his distinction between *holophrastic* and *analytic* observation sentences. Consider the very basic observation sentence 'Fluffy cat', for example, and suppose that a subject utters the sentence in the presence of a fluffy cat. If this subject is a competent speaker of English, her sentence will contain meaningful parts, it will be an analytic observation sentence.<sup>20</sup> The speaker knows what is meant by the component term 'cat' and she uses the word to refer to an object. Furthermore, the speaker will be disposed to assent to an alternative observation sentence if that sentence describes the situation equally well. If the speaker were to learn that a cat can also be referred to as a 'felis catus', for example, she would immediately be able to form the sentence 'Fluffy felis catus' and see that the sentence is also true in her situation. Moreover, the speaker will be prepared to withdraw her assent to the observation sentence when she discovers that the catlike object is not really a cat after all.

An infant who has just learned 'Fluffy cat' as one of her first sentences, on the other hand, will use the sentence in a completely different holophrastic way. She will not see the sentence as composed of distinguishable meaningful parts. Rather, her sentence will just be an unstructured whole, a random cry 'Fluffycat' that she is conditioned to utter or assent to in appropriate circumstances:

---

<sup>20</sup> The notion of 'analyticity' here should not be confused with the notion of analyticity that plays an important role in Quine's rejection of the analytic-synthetic distinction. In order to avoid such confusion, Quine also sometimes speaks about 'taking an observation sentence piecemeal'. See, for example, his (1993, 412).

Observation sentences contain words that refer to objects when used in mature discourse, but the infant first acquires such a sentence only as a seamless whole, conditioned—like the signal cry of the ape—to an appropriate range of global neural intakes.

(Quine 1995b, 464-5)

The infant does not use the sentence to refer to a particular object. Rather, she is trained to utter the complete sentence as an unstructured whole in relevant situations. As a result, even if she were to be conditioned to utter the sentence ‘felis catus’ in these circumstances, she would not automatically be able to form the sentence ‘Fluffy felis catus’. Furthermore, the infant at this stage will also not be able to withdraw her assent to any observation sentence in the light of new information: “[s]econd thoughts are not yet relevant; they become so only at a later stage, when scientific theory has begun to interrelate observation sentences and generate conflict” (Quine 1996, 476).

Now, according to Quine, in the latter holophrastic sense observation sentences *are* theory-free, i.e. independent of intrusive information. As soon as a speaker has learned to use her observation sentences analytically, however, a complicated process that proceeds by “short leaps” (1975b, 267), these sentences will fall within the scope of Quine's strong semantic holism. That is, these sentences too will be significant only in clusters, and the meanings of its terms too will be established together, by the totality of relations between the sentences of her theory.

[Holophrastic observation sentences] are associated as wholes to appropriate ranges of stimulation, by conditioning. Component words are there merely as component syllables, theory-free. But these words recur in theoretical contexts in the fullness of time. It is precisely this sharing of words, by observation



sentences and theoretical sentences, that provides logical connections between the two kinds of sentences and makes observation relevant to scientific theory.

(1990, 7)

As a result, Quine's distinction between holophrastic and analytic observation sentences perfectly illustrates the scope of his strong semantic holism. As soon as a speaker starts to master his language beyond the stage of conditioned “animal cries” (1993, 412), meaning holism sets in. The word ‘cat’ starts to occur in more and more observations sentences and the infant gradually acquires the ability to form new sentences all by herself; a point in her development at which she already relies on a substantive object-based theory of the world. In consequence, as soon as we have acquired the bare essentials of our language and the capacity to refer, our observation sentences too will become only meaningful in clusters. That is, the meaning of our observation terms too will derive from the contribution they make to our theory as a whole.

The distinction between holophrastic and analytic observation sentences therefore explains why Quine believes it to be impossible to develop a phenomenalistic language that is truly independent of science. For, whenever the epistemologist starts her inquiry with sentences like ‘Red patch now’, she will only have provided a theory-free science-independent foundation if she uses these sentences holophrastically, if she considers them as unstructured wholes. Yet, holophrastic observation sentences will not be of any use for the traditional epistemologist’s purposes, precisely because they are radically unstructured and theory-free. The ability of an infant to utter the one-term sentence ‘Red’ in the holophrastic sense, whenever confronted with a red experience, does not amount to anything more than her ability to cry whenever she has hurt herself. She cannot yet refer to the color or

use the term in an epistemologically interesting sense: “We can credit the child at this point with being able to *discriminate* red, to *recognize* red. [...] But to say that he refers to the color would be to impute our ontology to him” (1973, 81-3). Using sentences like ‘Red patch now’ in the holophrastic sense as a foundation for science, even if this would be possible for the epistemologist who has already mastered the English language, is therefore fruitless. Without the ability to refer and the ability to utter truth-valued sentences, the traditional epistemologist’s project will never get off the ground. It is only in the analytic sense that observation sentences can be linked with scientific theory. Yet, in the analytic sense the component terms of observation sentences cannot be separated from the theoretical system in which they take part.

As a result, even though Quine’s argument against traditional epistemology rests on his strong semantic holism, his rejection of a strict theory-evidence distinction is no cause for despair; our observation sentences remain ultimately grounded in theory-free responses to sensory stimulation. According to Quine, we can maintain that “observation sentences stay on in their old definition and their role as [...] the checkpoints of science”, even if we have to acknowledge that observation is inseparable from theory (1996, 477).

## 8. CONCLUSION

In this paper, I have examined Quine's reasons for dismissing traditional epistemology. I have challenged the claim that his argument is one from despair. Quine does not reject traditional epistemology because we cannot reduce our science to sense data. Rather, Quine dismisses the project as flawed from the beginning: it is impossible to develop a self-sufficient sensory language, independent of our best

scientific theories of the world. The search for a transcendental perspective, independent of science, is a mistake. Quine's argument is supported by his strong semantic holism, the thesis that the meanings of both our theoretical and our observation statements, considered analytically, derive from the contribution they make to our theory as a whole. As a result, observation is to a large extent inseparable from theory, and we are all bound to start our inquiries from within; even sceptical questions are immanent.

Let me, in conclusion, examine how we might interpret "Epistemology Naturalized" in the light of these findings; that is, examine how we might make better sense of Quine's argument in the paper. I believe that the paper can be better understood if we keep in mind the distinction between immanent and transcendental inquiry. As we have seen above, there are two ways in which one might interpret sceptical challenges. In the transcendental reading, the sceptic is seen as questioning science from some science-independent external vantage point, while in the immanent reading scepticism is a challenge from within. Quine dismisses the transcendental challenge as incoherent but admits that sceptical scenarios are live possibilities when construed immanently.

Now, since the epistemologist's project of reducing science to sense data is supposed to provide an answer to the sceptic's challenge, it admits two interpretations as well. On the one hand, one can interpret rational reconstruction as an attempt to fulfill the Cartesian dream, to provide a foundation for knowledge from some science-independent sensory language. In this transcendental reading, rational reconstruction is a project within first philosophy. As we have seen, Quine dismisses this project as incoherent because he rejects the idea of a self-sufficient sensory language. Yet, one can also interpret "rational reconstruction" as a project *internal* to

science, as a relatively innocent attempt to reconstruct the relation between theory and evidence. In this reading, the project does not presuppose an external vantage point. One can just posit a phenomenistic language, acknowledge that this language is not self-sufficient, and examine whether we can simplify our theory of the world by reducing our scientific talk to this language. In this reading, the project need not be dismissed because it presupposes an implicit sub-basement of conceptualization. Rather, it fails because we ought to despair of ever being able to successfully define the empirical content of a single theoretical statement in isolation.

In this paper, I have limited my discussion to the transcendental interpretation and contended that Quine's argument against this type of rational reconstruction is not an argument from despair. Yet, the careful reader of Quine *after* "Epistemology Naturalized" will notice that Quine has never limited himself to either one of these two interpretations. Consider, for example, the following passages:

[v]arious epistemologists, from Descartes to Carnap, [...] sought a foundation for natural science in mental entities, the flux of raw sense data. It was as if we might first fashion a self-sufficient and infallible lore of sense data, innocent of reference to physical things, and then build a theory of the external world somehow on that finished foundation. The naturalistic epistemologist dismisses this dream of a prior sense-datum language.<sup>21</sup>

(1995b, 462)

My attitude toward the project of a rational reconstruction of the world from sense data is [...] naturalistic. I do not regard the project as incoherent, though its motivation in some cases is confused. I see it as a project of positing a realm

---

<sup>21</sup> See also (Quine 1986, 327-8).

of entities intimately related to the stimulation of the sensory surfaces, and then [...] to construct a language adequate to natural science. It is an attractive idea, for it would bring scientific discourse into a much more explicit and systematic relation to its observational checkpoint. My only reservation is that I am convinced, regretfully, that it cannot be done.<sup>22</sup>

(1981a, 23)

Although Quine is talking about the same project in both passages, viz. reconstructing science out of sense data, the former constitutes a transcendental and the latter constitutes an immanent reading of the project. For, whereas the former talks about ‘seeking a foundation for science’, the latter talks about ‘positing’ sense data and about bringing ‘scientific discourse into a much more explicit and systematic relation to its observational checkpoint’. It is because of this reason that Quine uses a distinct argument in each case. In the former he rejects the idea of a self-sufficient sense datum language and in the latter he is convinced, regretfully, that the project cannot be fulfilled.

Now let me turn to “Epistemology Naturalized”. Quine’s goal in the paper is to convince the reader that we should abandon “creative reconstruction” and that we should examine how the construction of scientific theories “really proceeds”. In order to establish this, Quine argues that there are no advantages of rational reconstruction over ‘straight psychology’. Now, when one reads Quine's paper with the above distinction between immanent and transcendental reconstruction in the back of one's mind, one finds that Quine is almost exclusively concerned with dismissing the advantages of rational reconstruction in its immanent reading. Quine spends almost no time on rejecting the Cartesian quest for a foundation of knowledge. He uses only

---

<sup>22</sup> See also (Quine 1996, 477).

a few words to argue that, with respect to the doctrinal side of epistemology, we are no farther along today than where Hume left us (ibid., 72). The implication here is that since the doctrinal project fails, the transcendental quest for foundations can be abandoned, both on its conceptual and its doctrinal side. It is at this point, that Quine could have inserted his argument against self-sufficient sensory languages; but he did not, probably because he presupposed that the reader already accepted the hopelessness of the project. The bulk of Quine's argument is concerned with dismissing the advantages of Carnap's project (ibid., 72-80), a project that he interprets immanently as he emphasizes that Carnap already saw the "Cartesian quest for certainty [...] as a lost cause" (ibid., 74).<sup>23</sup>

Quine does not interpret Carnap as a first philosopher aiming to validate our scientific theories. Rather, he believes that the advantage of Carnap's project, if it were to succeed, is that it would "elicit and clarify the sensory evidence for science" (ibid., 74); a project that is immanent, as it will only legitimize the concepts of science "to whatever degree the concepts of set theory, logic, and observation are themselves legitimate" (ibid., 76). Given this immanent interpretation of Carnap's project, it is no surprise that he uses his argument from despair to dismiss it.

My suggestion, therefore, is that one should not read "Epistemology Naturalized" as an argument against traditional epistemology in its transcendental interpretation, even though some passages invite such a reading.<sup>24</sup> Quine and Carnap (and many other epistemologists for that matter) had already rejected this type of first philosophy elsewhere. Rather, Quine was concerned with the type of "creative reconstruction"

---

<sup>23</sup> See also (Quine 1995a, 13): "Carnap's motivation was not [the] traditional quest for certainty. Rather, his goal was just a systematic integration [...] of our scientific concepts of mind and nature [...] His choice of experiences rather than physical objects as his foundations was, he assures us, just a matter of strategy."

<sup>24</sup> One of the most confusing elements of "Epistemology Naturalized" is that Quine uses the term 'epistemology' to denote both the Cartesian quest for certainty and the relatively innocent attempt to examine the relation between theory and evidence. In this respect, I agree with Johnsen that "Epistemology Naturalized" fails to expose Quine's views as clearly as possible. See footnote 5.

that continued to be an essential element of Carnap's epistemology. Quine's aim was not to show that this type of inquiry is naturalistically unacceptable, he only attempted to establish that this project, regretfully, could not be fulfilled, that “[w]e must despair of any such reduction” (1969a, 77).<sup>25</sup>

## REFERENCES

- Carnap, R. (1928), *Der Logische Aufbau der Welt*, Berlin-Schlachtensee: Weltkreis-Verlag; translated by R. George (1967) as *The Logical Structure of the World*, Berkeley: University of California Press.
- Carnap, R. (1936/1937), “Testability and Meaning”, *Philosophy of Science*, 3, pp. 419-71 and 4, pp. 1-40.
- Carnap, R. (1956), “The Methodological Character of Theoretical Concepts”, in: Feigl, H. and M. Scriven (1956), *Minnesota Studies in the Philosophy of Science*, vol. 1, Minneapolis: Minnesota University Press, pp. 38-76.
- Fogelin, R. (2004), “Aspects of Quine's Naturalized Epistemology”, in: Gibson, R.F. (2004), *The Cambridge Companion to Quine*, Cambridge: Cambridge University Press, pp. 19-46.
- Gibson, R.F. (1992), “The Key to Interpreting Quine”, *The Southern Journal of Philosophy*, 30:4, pp. 17-30.
- Hacker, P.M.S (2006), “Passing by the Naturalistic Turn: On Quine’s Cul-de-Sac”, *Philosophy*, 81:316, pp. 231-53.
- Johnsen, B. (2005), “How to Read “Epistemology Naturalized””, *The Journal of Philosophy*, 102:2, pp. 78-93.
- Kertész, A. (2002), “On the De-Naturalization of Epistemology”, *Journal for General Philosophy of Science*, 33, pp. 269-88.

---

<sup>25</sup> [Acknowledgements]

- Kim, J. (1988), "What is "Naturalized Epistemology"?", *Philosophical Perspectives*, 2, pp. 381-405.
- Maddy, P. (2007), *Second Philosophy: A Naturalistic Method*, Oxford: Clarendon Press.
- Murphey, M. (2012), *The Development of Quine's Philosophy*, Dordrecht: Springer.
- Putnam, H. (1981), "Why reason can't be naturalized", in: *Realism and Reason, Philosophical Papers Volume 3*, Cambridge: Cambridge University Press (1983), pp. 229-247.
- Quine, W. V. (1946), "Lectures on David Hume's Philosophy", edited by James G. Buickerood, in: Quine (2008a), pp. 36-136.
- Quine, W.V. (1948), "On What There Is", in: Quine (1961b), pp. 1-19.
- Quine, W.V. (1950), *Methods of Logic*, New York: Henry Holt & Company.
- Quine, W.V. (1951), "Two Dogmas of Empiricism", in Quine (1961b), pp. 20-46.
- Quine, W.V. (1952), "On Mental Entities", in Quine (1976), pp. 221-7.
- Quine, W.V. (1954), "The Scope and Language of Science", in Quine (1976), pp. 228-245.
- Quine, W.V. (1955), "Posits and Reality", in Quine (1976), pp. 246-254.
- Quine, W.V. (1961a), *Word and Object*, Cambridge, MA: The M.I.T. Press.
- Quine, W.V. (1961b), *From a Logical Point of View*, 2nd edition, London: Oxford University Press.
- Quine, W.V. (1966), "Russell's Ontological Development", in Quine (1981), pp. 73-85.
- Quine, W.V. (1969), *Ontological Relativity and other essays*, Cambridge, MA: Harvard University Press.
- Quine, W.V. (1969a), "Epistemology Naturalized", in: Quine (1969), pp. 69-90.
- Quine, W.V. (1969b), "Natural Kinds", in: Quine (1969), pp. 114-138.
- Quine, W.V. (1970), "Grades of Theoreticity", in Foster, L. and J.W. Swanson (1970), *Experience & Theory*, Amherst: University of Massachusetts Press, pp. 1-17.
- Quine, W.V. (1973), *The Roots of Reference*, La Salle, Ill: Open Court.
- Quine, W.V. (1975a), "Five Milestones of Empiricism", in: Quine (1981), pp. 67-72.
- Quine, W.V. (1975b), "The Nature of Natural Knowledge", in: Quine (2008a), pp. 257-270.



- Quine, W.V. (1976), *The Ways of Paradox*, revised edition, Cambridge, MA: Harvard University Press.
- Quine, W.V. (1981), *Theories and Things*, Cambridge, MA: Harvard University Press.
- Quine, W.V. (1981a), “Things and Their Place in Theories”, in: Quine (1981), pp. 1-23.
- Quine, W.V. (1981b), “Reply to Stroud”, *Midwest Studies in Philosophy*, 6, pp. 473-5.
- Quine, W.V. (1984), “Carnap's Positivist Travail”, in: Quine (2008b), pp. 119-28.
- Quine, W.V. (1986), “The Sensory Support of Science”, in: Quine (2008a), pp. 327-37.
- Quine, W.V. (1987), “Carnap”, in: Quine (2008b), pp. 142-5.
- Quine, W.V. (1990), *Pursuit of Truth*, Cambridge, MA: Harvard University Press.
- Quine, W.V. (1991), “Two Dogmas in Retrospect”, in: Quine (2008a), pp. 390-400.
- Quine, W.V. (1993), “In Praise of Observation Sentences”, in: Quine (2008a), pp. 409-19.
- Quine, W.V. (1994a), “Exchange between Donald Davidson and W.V. Quine following Davidson's Lecture”, in: Quine (2008b), pp. 152-6.
- Quine, W.V. (1994b), “Responses to Articles by Abel, Bergström, Davidson, Dreben, Gibson, Hookway, and Prawitz”, in: Quine (2008b), pp. 223-34.
- Quine, W.V. (1995a), *From Stimulus to Science*, Cambridge, MA: Harvard University Press.
- Quine, W.V. (1995b), “Naturalism; Or, Living within One's Means”, in: Quine (2008a), pp. 461-72.
- Quine, W.V. (1996), “Progress on Two Fronts”, in: Quine (2008a), pp. 473-7.
- Quine, W.V. (2008a), *Confessions of a Confirmed Extensionalist and Other Essays*, edited by Føllesdal, D. and D. Quine, Cambridge, MA: Harvard University Press.
- Quine, W.V. (2008b), *Quine in Dialogue*, edited by Føllesdal, D. and D. Quine, Cambridge, MA: Harvard University Press.
- Roth, P. (1999), “The Epistemology of “Epistemology Naturalized””, *Dialectica*, 53:2, pp. 87-109.
- Shatz, D. (1993), “Skepticism and Naturalized Epistemology”, in: Wagner S. and R. Warner (1993, eds.), *Naturalism: A Critical Appraisal*, Notre Dame: University of Notre Dame Press, pp. 117-45.

Siegel, H. (1995), "Naturalized Epistemology and 'First Philosophy'", *Metaphilosophy*, 26:1, pp. 46-62.

Stroud, B. (1981), "The Significance of Naturalized Epistemology", *Midwest Studies in Philosophy*, 6, pp. 455-71.

Stroud, B. (1984), *The Significance of Philosophical Scepticism*, Oxford: Clarendon Press.