

On Quine

New Essays

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Contents

	<i>page</i>
<i>Acknowledgments</i>	vii
<i>List of Contributors</i>	viii
Introduction	1
PAOLO LEONARDI and MARCO SANTAMBROGIO	
1 Pursuit of the Concept of Truth	7
DONALD DAVIDSON	
2 A View from Elm Street	22
UMBERTO ECO	
3 Quine on Exile and Acquiescence	37
BARRY STROUD	
4 In What Sense Is Language Public?	53
DAGFINN FØLLESDAL	
5 Against Naturalized Epistemology	68
BAS C. VAN FRAASSEN	
6 Quine on the Naturalizing of Epistemology	89
ROGER GIBSON	
7 Quine on Physical Objects	104
MARIA LUISA DALLA CHIARA and GIULIANO TORALDO DI FRANCA	
8 The Place of Natural Language	113
JAMES HIGGINBOTHAM	
9 Quine's Experiment with Intensional Objects and His Existentialist Quantified Modal Logic	140
HECTOR-NERI CASTAÑEDA	
10 Transparency and Specificity in Intentional Contexts	164
ANDREA BONOMI	
11 Quine and the Attitudes	186
ERNEST LEPORE and BARRY LOEWER	

Against Naturalized Epistemology

BAS C. VAN FRAASSEN

Experientia docet? Experientia doesn't.

Aldous Huxley, *Antic Hay*

Empiricism is, in the first place, a reaction against a certain sort of metaphysics, exemplified by pre-Kantian rationalism. Characteristic of such metaphysics are the primacy given to demands for explanation and satisfaction with certain kinds of explanations that postulate entities or characteristics of the world to which there is no empirical access.

This is a negative way to explain empiricism. I think it fits the roots in the fourteenth-century nominalist critique of the Aristotelian tradition and the British and French reactions first against rationalism and later against idealism. I have advocated such a reaction against scientific realism and also against the natural philosophy of laws of nature, necessities in nature, and objective chance (1980, 1985, 1989). That I wish to be an empiricist does not thereby entail that I want to embrace the typically concomitant foundationalist epistemology. The main question I wish to address is: Is there, can there be, an empiricism which is not itself a metaphysics of the sort which empiricists disdain?

The critique of metaphysics is not the only characteristic feature of empiricism. In some way, the central role of experience – and I think also the admiration of empirical science – must be part of it. In this chapter I shall try to show that Quine's epistemology naturalized, and related "naturalized" versions of empiricism, are inadequate. But I shall also try to show briefly how empiricism may still be possible for us.

I. Naive Empiricism

At first sight, the empiricist makes an assertion about the adequacy of experience to what experience is *of*. But what sort of dogma would that be – *adaequatio experientiae ad rem*? It could be metaphysics, stating limits to empirical access which experience could not (by itself) show us. Alternatively it could be an empirical hypothesis such as any philosopher could share, empiricist or no. Empiricists regard empirical science as incarnating their

ideal, but can they say something like that about science (as a whole) without falling into the metaphysics they deplore? This puzzle about the status of empiricism as a philosophical position, is at the same time a puzzle about the relation between philosophy and science.

As a foil for this exploration I will begin with a distinctly old-fashioned sounding attempt to mark out empiricism, as a position on how we and our world are related to each other. Following ideas found in Hans Reichenbach and William James, I have in the past tried to sketch a (minimal) empiricist position by means of the slogan

(*) Experience is our one and only source of information.

I am and was well aware that this is at best a slogan, resting heavily on a metaphor ("source") and that it gives rise to a large number of questions if we scrutinize it. Here is one answer to those questions:

1. Experience in the sense of *what happens to us* 'yields' or 'issues' a cumulative stream of propositions X_t over time, the so-called *deliverances of experience*.
2. Those propositions are at least reliable indicators of what is the case (even if they are not all true).
3. There is nothing other than experience of which both 1 and 2 are true – e.g., imagination, fantasy, dreams, putative visions, reading may all do 1 but cannot be relied on independently to satisfy 2.
4. Knowledge or warranted certainty or rationally compelled belief (opinion) consists solely in what can be derived from those deliverances of experience by a certain restricted recipe, i.e., a set of rules or procedures, call it R , which is usable by us.
5. Thought of as a function which transforms the sequence X_t into an enlarged sequence X^+ , this recipe R does not depend on any factors independent of X_t – it does not depend, e.g., on the variable t itself, or on some auxiliary sequence Y_t of propositions about what is the case – but solely on the propositional content of the deliverance of experience X_t itself.

This is fairly elaborate, yet it remains subject to a number of criticisms.

Point (i). Clause 1 is meant to eliminate the metaphor of "source", but does not succeed. The words "yields" or "issues" introduce the same metaphor. We could replace them by "cause", but how would Hume, for example, have felt if we suggested that the very position of empiricism cannot be stated without essential and uncritical (or precritical) reliance on that notion?

Point (ii). Clause 1 gives a name to a certain sequence of propositions, but does not tell us how to distinguish it (or those propositions) from anything else. If I feel propositions "welling up" in myself it is important to classify

them as deliverances of experience or of other sources/processes. But how? Certainly they are not distinguished by being caused by what happens to us, for so are many of their rivals such as dreams, hunches, and so forth. Nor are they what is caused solely by what happens to us, since our present constitution also plays a role in that. (I say all this, momentarily embracing the cruel dilemma of *Point (i)*, that we must rely either on the concept of cause or else on metaphors, although neither is satisfactory.)

Point (iii). I have not spelled out what constitutes a *reliable* indicator of what is true, but it must involve some measure of comparison between X_i and the sequence of true propositions T_i which is like X_i except for sometimes containing a directly contrary proposition. Whatever that measure is must in turn enter into what is meant in clauses 4 and 5. To what extent, if any, is this reliability diminished by the “derivation” procedure R ? Nor, of course have I spelled out what R is.

Point (iv). The description of experience implicit in clauses 1 to 3 is phenomenologically untrue – whatever the deliverances of experience are, they are inadequately characterized by this “ticker tape” model.

Point (v). In view of clause 4 how could we have any information about whether clauses 2 and 3 are true?

II. The Dilemma of Naive Empiricism

The explication 1 to 5 I gave of (*) can only serve as an example. Anybody who took (*) seriously today would obviously come up with a still less foundationalist, less old-fashioned one. But two of the problems, it seems to me, would remain, namely the first and the fifth. The first is that (*) is caught between metaphor and metaphysics. To be quite frank, I do not believe that the *needed, relevant* relation of causality could be one found in or derivative from natural science – not metaphysical, not a modality in nature, but “naturalized.” The fifth point may at present look peculiar to the old-fashioned explanation I gave of (*). But if we revise 1 to 5 so as to be less orthodox, more liberal, it will still be true that however we spell out (*), we must say:

Point (v)*. The statement (*) asserts a putative truth about the world, and it implies substantive limits on how we can have information concerning facts about the world of a sort to which belongs also what (*) itself asserts.

Is this truly a difficulty? I believe it is, but let me first say what the problem is not.

It is not simply the dead horse of skepticism rising up again. The difficulty is not that someone who believes (*) would have to say: “According to (*) itself, I cannot have information about how experience as a whole relates to

what it is *of*, so it cannot be rational for me to believe that it is so.” Without argument I shall respond here that what is rational is not to be identified with what is rationally compelled, but with its dual: *what is rationally permitted*, anything which has no contrary that is rationally compelled. To this I add that we are not rationally compelled to disbelieve statements about facts concerning which we can have no relevant information. An example may make this clear: Someone could rationally be a scientific realist, and indeed believe in the reality of many unobservable things, while believing something tantamount to (*). Second, although the skeptic is within his rights to ask for warrant or justification, he drives that too far. It may well be, for instance, that we cannot know that A without knowing that B, and/or cannot be warranted in asserting A without warrant for asserting that B. But that does not entail that we must know B before knowing A, or that it is required to have a warrant for B which is independent of any warrant for A.¹ The requirement of independent justification is again an insistence that you cannot rationally believe something unless you are rationally required to believe it. I subscribe wholeheartedly to the contrary: *Rationality is but bridled irrationality*.

Nor is the problem simply a fear of the apparent self-reference displayed in (v*). Indeed, if there is a problem of self-reference, it counts rather against the suspicion I have just voiced. For *prima facie* my worry would be expressed as:

In believing (*), you believe also something about your belief that (*), namely that it concerns a state of affairs about which you can have no information. And that is just what you reproach the metaphysicians you disdain for.

Now if self-reference were strictly speaking impossible, an illusion due to confusing use and mention, for example, then that argument would certainly disappear. But an argument with equal impact would emerge. For suppose that (*) is clarified in such a way that it has a well-defined range, and that the state of affairs it describes does not fall within that range. Now the objection seems to have disappeared. But for a philosopher, mere consistency can never be the point of the game. If (*), so restricted, is part of his philosophical position, he must confront questions about the fact it purports to state. He will effectively undermine that part of his position, perhaps even make it look ridiculous, unless he then lets his allegiance to (*) lead him to an allegiance to a principle of the same form, with larger range, encompassing the putative fact stated by (*). Consider the analogue

(*E) Any fact about language storable in English is storable in a finite number of English words.

This is obviously true – even you or I can tell at once that it is true, can’t we? Yet it implies a substantial limitation concerning the storability of a sort of

fact, to which what it says also belongs. The problem here is: to what language does (*E) belong? We do not and cannot have a language in which we can discuss all possible languages, including our own, with such glad abandon. But as Quine among others has taught us, we can practice *semantic ascent*. Suppose we are speaking a language, call it English, in which we cannot say something like (*E) about that very language. We can then broaden our language to English plus semantic devices, in which we can then say (*E) about the language we had until a moment before.²

Having said what the problem is not, let me try to recast it very precisely to show what it is. The problem is solely that in believing (*), the empiricist would be taking up a metaphysical position of the very sort that empiricism is and has always been in the first instance a reaction against. I introduced (*) as a candidate to play a certain role:

(NE) to be an empiricist = to believe that (+)

and the question is whether this role, the role of (+) in (NE), can be played at all. Taking seriously my slogan candidate, the question becomes whether (*) could be clarified, cleansed, or tarted up in such a way that

- (1) belief that (*) motivates the empiricist reaction against metaphysics of the sort described at the outset, and does not itself involve one in such metaphysics.

If we leave out the primacy of the demand for explanation, whose rejection may be ancillary, this means that

- (2) (*) is a statement which does not purport to give information about something beyond empirical access, yet is denied by anyone whose philosophical position involves giving explanations that draw on putative information about facts beyond empirical access.

The first part makes the hoped for hygienic version of (*) sound like an empirical hypothesis, of the sort science investigates. The second part requires it to be a statement which concerns experience and accessible information as a whole, no holds barred, so as to have negative implications for the status of statements about putative facts beyond the reach of experience.

The problem is therefore: Can there be such a statement at all? Could refining (*) possibly get us something that plays both those roles?

III. Natural Epistemology: The Cognitive Science Surrogate

Is there some empirical hypothesis that can actually play the role of empiricism? Quine's "Epistemology Naturalized" is perhaps the most famous recent statement of the contention that rightly understood and cleansed of confusion, traditional epistemology leaves a residue only of questions for empirical sci-

ence (cognitive science) and for logic. In any case, we should ask: If (*) were cleansed of all blemish, what residue, if any, would it leave for (cognitive) science?

Sketch of a Cognitive Science Project

The idea here suggested is this. Undoubtedly (*) has in it some vagueness, and also a certain metaphorical element. But if we decide and agree on some rephrasing that eliminates the vagueness and metaphor, we will have a factual hypothesis – let us call that (***) – and we can then investigate whether it is true. First of all, we must add to (*) in some way to distinguish what experience tells us from imagination, fantasy, dreams, numerology, astrology, and so forth. Next we must add some way to measure the information present in a person's opinion, so that we can meaningfully ask whether that information has increased from one point in time to the next. When we have done that, we can meaningfully assert something like: There is a strict correlation between what experience tells people in any given time interval, and the increase in information in people's opinion during that interval – after adjusting for wear and tear, noise and interference, and so forth, in the usual scientific way. After such rephrasing, (*) will surely become a factual assertion (***), with real and identifiable content.

I am not sure that what I have just proposed can be done in a way that leaves (*) capable of playing the role for which it was introduced, to wit:

to be an empiricist = to believe that (*)

I am not at all clear on how to carry out such a rephrasing. I do feel a little more sure that I can guess at what hypothesis a cognitive scientist could investigate, that she or he might express in the form of sentence (*). So let us take a look at that.

For example, I know that I have no experience of dragons, and I know that if there are any, experience has given me no information about them, and so forth. Experience is as general term – more specifically there is experience of X by Y, such as experience of elephants by Peter. In one specific instance, therefore, the first question is whether experience gives Peter reliable information about elephants, and the second question is whether he gets information about them in any other way. This must be understood with some delicacy. In ordinary life, "experience" is a success term. When a restaurant advertises for a waitress, "experience required", it does not mean experience at the receiving end of waitressing, let alone of elephants. Whether (*) is correct involves some standard of relevance in the particular case.

We can check this by survey, for large numbers of people; we can also put it to experimental test. For example, we measure the amount and accuracy of

various subjects' opinions about elephants on a number of days – on some of these days we keep them in sensory deprivation tanks and on some we place them in a cage with elephants. Then we can also choose other topics for opinion, say at random from the *Encyclopedia Britannica*, to widen our data base. The outcome of such an inquiry will not be conclusive, any more than in any other such inquiries by sociologists, psychologists, anthropologists, and other cognitive scientists. But for a large number of instances of form

(*XY) Experience of X (by himself and/or others) is the one and only source of information concerning X for person Y

we would get data bearing on them negatively or positively, and so the generalization

(**) For all X and all Y, (*XY) is the case

would putatively be confirmed or disconfirmed. We have here at least prima facie a good explication of (*) itself.

There is no doubt at all that some such limited hypotheses about Peter and elephants are empirically significant. Could quantification, generalization remove the empirical significance together with such limitations of scope? It could at least in some other cases. For example, *that Peter is happy* is significant in that way; *that everything has some property* is not. But it is part of this envisaged inquiry that it yield an explication (**) of (*) in a way that leaves its putative role intact. Obviously the kind of instance (*XY) which will truly fall under (**) has still been left sketchy, and we will have to press that very carefully so that (**) will be neither too limited nor vacuous.

I shall now argue that this is hopeless. The sketched investigation is not science, not even cognitive science – it is not worth a grant. It will not yield us a significant empirical hypothesis which captures just the belief one needs in order to be an empiricist.

Does the Surrogate Have Empirical Content?

Could (**) – the cognitive science surrogate for (*) – be falsified or disconfirmed by cognitive science?³

There is a problem in (**), in that we need again to worry about the legitimacy of self-reference: Does what it says belong to the range of Y? To reach the conclusion that experience as a whole is so unreliable as to be useless as a source of information, would also spell the end of cognitive science itself. So science could not establish that conclusion without indicting and disqualifying itself – or without taking back the claim that it had established anything at all.

But this can be ignored, it seems, exactly when we think about negative

outcomes. If for a single X and Y, whatever they be, we disconfirm (*XY), that may be telling enough. But how would that go? It would not do to find an example in which certain experience gives X no information about Y, for only relevant experience counts. Also it does not matter if there is no such relevant experience in the case of a given Y, for then it is vacuously so that all relevant experience gives information about it. Suppose we designate certain experience – e.g., seeing and touching elephants – as relevant and Peter learns nothing from it. If it is just Peter, that is his problem; if it is everyone, we would have to recast “relevant”. The conclusion would not be that (**) is endangered, but that a certain form of experience is after all not relevant in this way. Having put Peter in the elephant cage, and taking him out a few hours later, we might find Peter disgusted, demoralized, and full of unreliable opinions about elephants. But this would hardly be an earth-shaking find. That observers are to some extent unreliable, we know. That the raw data, the immediate reports made by observers, must be processed to extract the significant information, is familiar. Statistical processing of this sort, such as in the theory of errors applied to astronomical sightings, we have had for two centuries.

So it seems disconfirmation can only come in telepathylike cases. At one point in *Pursuit in Truth* it seems that advice against telepaths and soothsayers is all that remains for Quine of empiricism (19), but a little later he indicates that (as a good empiricist?) he can't be certain that even this is good advice (21). Could the scientist find that we have other sources of information besides experience of the subject matter (by ourselves or others)? In the very first trial, of Peter with the elephants, we might have found something unexpected. Coming out of the sensory deprivation tank, Peter might suddenly have made a number of true statements about elephants, thus increasing the measure of information about those animals present in his opinion.

But if a cognitive scientist found such an unexpected outcome, how would we react? We can equally ask how would we react. Would we say that Peter did have new information when he came out of the tank? Suppose, after hearing his pronouncements about those elephants, we asked him how he arrived at them, and how he felt about them. Suppose he answered “I was asserting those statements, to express my new beliefs about elephants, and they just came to me while I was daydreaming in the tank.” Imagine we find the pronouncements to be true; he steps back into the tank, and two hours later emerges to make statements about pterodactyls going far beyond what paleontology presently tells us about them. If we think that Peter gains new information in a way akin to observation of the animals in question, we should be willing to enter it as data – but of course we don't.

Would the situation change if we found that in those cases which we can check directly, pronouncements made under those conditions are (almost al-

ways) true? I will stick my neck out and say *No*. We would count as data the reports of the daydreams experienced in the tank, and infer (relying on our past statistical generalizations) new beliefs about pterodactyls and the like. But we would never count the statements about the pterodactyls as data. In contrast, if the laboratory technician is classified by us as reliable and present under the right conditions, we do treat his statement “The gauge needle is on the 7” as data, not just the report “The lab technician had the visual experience of the gauge needle at 7”.

In other words, we would start to use sensory deprivation tanks as a source of information, but only in the indirect and derivative sense that we would come to have confidence in the statistical correlation. The latter we would say was confirmed by the data gathered, and those data do not include the deliverances of daydreams *but only their occurrence*. This point may be obscured in two ways. The first is that as confidence grows, we will cease to mention the intermediate steps. In just the same way, if I report what I heard on the news, I may sound as if I am taking the newscaster’s statements as observation reports. Of course I do not. I simply have such confidence in the news service’s chains of communication and command that I do not bother to mention them. Still, my datum is not that the reported event occurred, but that the newscaster reported it. The second is that we may be tempted to think that we never treat anyone’s utterances any other way. That is, when I take it as given that the needle was on the 7 when the lab assistant (or even I myself) says so, I give that report the same status as the newscaster’s. This means that I must tacitly be taking as datum only his (or my own) saying so, and relying on a correlation with the facts, on the basis of previous data supporting that correlation. But this way an endless regress beckons. The regress must stop at assertions whose contents we do take as data. Where exactly we stop is to some extent a matter of the will, but in science this practice is very carefully circumscribed with safeguards.

In further support of this, I ask you to think about two things: recent hypotheses about innate ideas, offered in linguistics, and breast-feeding. To take the latter first, we can give a cognitive explanation (in terms of desire for food and of opinion about breasts) of the baby’s spontaneous breast-feeding behavior. Should we say the baby has the relevant information from birth? She certainly has the relevant opinion from birth, and that is one of the points in evolutionary explanations of our survival. If that counts as information, the generalization (**) is false, and I think we could also tell that to the empiricist who brandishes (*): His mother could already have told him that empiricism is a mistake. But in fact if we see a baby searching around with its mouth, we may statistically infer to the proximity of a mother’s breast, but we do not take it as a datum in the way we would take an older person’s report of form “breast here now”.

When certain scientists have recently suggested that we have innate ideas, in order to explain the facts of language learning, they did have something like instinct in mind. But ask yourself this: If a certain scientist were to conclude that, would he then begin to send to scientific journals papers in which, among the data he reports, some are his assistants’ reports of what they saw or heard, and some are their innate ideas?

The point is that what is honored by the title of “data” is in practice very carefully circumscribed. The source of information which science taps is reports of experience – and although these also express the reporter’s opinion, under conditions where we think those opinions are reliable, that is by no means all there is to it. As a result, we are unable to find examples of a person gaining information in any other way – for whatever looks like that is classified as an indirect, derivative way of gaining information through experience alone.

Evidential Status of the Cognitive Science Surrogate

Could (**) be confirmed by the cognitive science project? Imagine that we find or confirm

For a large random sample of subjects X (chosen from the *Encyclopedia Britannica*) and a large random sample of persons Y, (*XY) is the case.

This would appear to mean that we would have good support for the generalization (**). But now we do need to face the problem of the range of (**).

Cognitive scientists are in the enviable position of belonging to their own subject matter. Any increase in understanding of nature they achieve is ipso facto an increase in self-understanding, so helpful and indeed indispensable to us in our moral and emotional life. Nor does this by itself produce an epistemological problem: The hermeneutic circle is not automatically vicious. It is only right that the investigation of the brain should be reserved for people with brains, and inquiry into thought for thinkers. We are reminded here of the measurement problem for quantum mechanics: A fundamental physics must include in its domain the physical processes of measurement. That point does figure largely in problems of interpretation, but does not prevent the emergence of tenable interpretations. In exactly similar fashion, the apparent circle must be addressed for cognitive science, and its results must be assessed in the light of the scientific method its practitioners are required to follow.

The hard evidential case for (**), i.e., the survey, observation, and experimental reports cited in its support, would be reports of experience. The laboratory assistant, for example, is required to record what he sees and hears, not what he fantasizes or guesses. Second, no other sorts of reports are admitted even by scientists who hold nonempiricist views. The reliability of the reports

is then subject to checking too, but the criterion is whether the results are duplicated in other researchers' reports of *their* experience.

Taking into account, therefore, the method of inquiry, the conclusion really established is that if (***) is correct within a certain domain – experience within this inquiry by the researchers involved – then we have good evidence for its general correctness. To be more precise, we can at any time delimit a “universal” domain D, and subdomain D', and assert the conditional: If (***) is correct within D', then we have good evidence for its correctness in domain D-D'. A fortiori, the assumption that (***) is correct in domain D', which is the cognitive science working hypothesis, puts one in a position to assert with warrant that (***) is correct in general. This is certainly heartening, but it is also disheartening. For if we are raising the question whether (***) is true, the established result may make its assertion more pragmatically defensible, but does not warrant a great deal. And worse, if we must conclude that it is in principle impossible to have better, *unconditional* warrant, then we must seriously question whether the cognitive science inquiry was even relevant to our topic.

This last sentence is contentious. I am making an epistemological point, and the issue is delicate. There is one naive charge of circularity which can be answered. But if we think about how it is answered, and we also reflect on the way the circularity is acceptable in practice, then a new point emerges, which does bring disaster for (***) regarded as a candidate explicans for (*).


Let us ask whether it might not be that (***) is conclusively established if the conditional

if experience by the experimenters in domain D' is a source of information concerning that domain [where D' is the relation of agreement and disagreement between the subject's experience and the facts investigated], then it is so for the population in general that experience is a source of information

is established. In a seminar discussion, Jeremy Butterfield argued that if this conditional is supported by the evidence, then so is its consequent.

This is a wonderful ‘bootstrapping’ idea. It is not what we would find, at least at first sight, in a more limited sort of inquiry. Suppose we want to investigate the thesis that human vision is a reliable discriminator between lemons and oranges by moonlight. We do not rely on the experimenters' ability to do exactly that: While the subjects are responding to the objects with “lemon!” and “orange!”, the experimenters look only for labels printed on the samples, on the backs of the subjects, and on the dials of their light meters. So if the experimenters establish the thesis, we must see it only as issuing a conditional: If visual experience of the experimenters is reliable in respect R, then it is reliable in the general population in respect S.

But can this be the whole story? We want to detach the antecedent, and do this after checking on the experimenters' visual discrimination of the labels, e.g., black numbers on white background, under the relevant conditions. For this we prepare an experimental setup, relying on our own ability to discriminate between those very labels under some conditions. We cannot continue this regress. Instead we shall be satisfied if there is agreement between the numbers they name, and what we see, whereupon we feel secure that they see what we see, and that we are all perceiving accurately. We do not conclude only that there is this agreement in response – we conclude that the numbers named are the ones before us.

What exactly is the practice here? These reports, including my own, that, e.g., two black numerals are the same, I treat as defeasible for sometimes I check up on them. Most especially, I confess myself willing to carry out such a check if any challenge is brought. But I also treat them as reliable, for I do not voluntarily take this regress of verification very far. It is part of our practice not to need to do that. We are comfortable with the fact that we stop at some early point. So this is the precise way of saying how, in scientific inquiry, we regard observation reports: We regard  treat them as giving us data, in a way that is both defensible and reliable. That is the exact sense, therefore, in which we treat experience as source of information. Now what if the rationale for this very practice is targeted? If we “bracket” the norms of that practice then we are no longer engaged in scientific inquiry.

Could we say: But the practice proves itself, in the sense of “by their fruits shall ye know them”? But how do we describe and check the fruits? We are just back at the point where we were before. An investigation at this level would look like science, but it would be a parody of science.

Note well that there is no skeptical argument here. I do not suggest that there should be an independent inquiry to validate the practice. But given that this is the practice, partially definitive of what science is, it makes no sense to ask cognitive science to confirm such a principle as (***) understood with unlimited scope. Despite the misleading form of words, there is no question here of possible significant confirmation and no question of a legitimate scientific project. *It is not science; it is not significant; and it is not worth a grant.*

As instructive analogue, imagine the following parallel: A neo-Nazi community which has grown up on a quite inaccessible island considers the reliability of moral judgment or insight. They note a number of examples: “X was faced with an execrable situation, e.g., miscegenation, she judged it to be execrable, and we realized that she had judged correctly.” Thus they support the view that moral insight is reliable. They reflect also that they reached this conclusion by noting the relevant relations between individual situations and

responses correctly, which acts were themselves in part moral judgments – i.e., deliverances of moral insight.

But one thing they certainly have not done: They have not established that moral insight is reliable, by recourse to moral insight. Suppose we told them that neo-Nazi judgment is perverse or evil, and they cite the results of their study. We would then realize that it would be difficult to budge them, but we would not grant them their conclusion that moral insight shows that their moral insight is reliable.

Think also of the polemical parallel of the neo-Nazi island, of the conditional warrant discussed above. Suppose we say: but only a conditional was established. If your experimenters are reliable in their judgment of which moral judgments are correct in the sampled situations, then moral judgment in the population as a whole is reliable. Could they answer: but that is enough; why think the experimenters are a biased sample themselves? They were everyone of them Gauleiters of good standing!

It is clear enough what their practice was in limited inquiries, such as into whether a particular community was exercising good judgment with respect to glorification of the fatherland. That practice was to take critical, reflective judgment as a (defeasible but reliable) source of information concerning moral rightness. Clearly they treated it as defeasible, since such local inquiries were in order, and inquirers were chosen from among the Gauleiters, about whose judgment there was presumably already some evidence. Regress of checks on reliability is not required to go more than a little ways (again, to a defeasible extent) if there is such a practice. But in this case they had putatively set out to have an inquiry of unlimited scope – an inquiry into this very practice itself. And then the very thing that normally allows the regress to be curtailed – and rationally so – is missing from that role, since now it is the target.⁴

In this and the preceding subsection I have argued that an empirical, scientific investigation of (*) could neither disconfirm nor confirm it. These arguments are meant to support my (empiricist) contention that (*), construed in any way that would allow it to play its supposed roles, would itself be a metaphysical statement of the sort empiricism wants to bar. But we must be extremely careful at this point, for there is a concept which metaphysicians love, and might wish us to mobilize here: the concept of *presupposition*. We might be tempted to sum up our inquiry with this: In investigating (*), science would be trying to investigate its own presuppositions, and thus trying paradoxically to engage in empirical inquiry while ‘bracketing’ what that inquiry presupposes. The suggestion or insinuation is then that science has, in (*), a factual presupposition – something it needs to assume and leave sacrosanct as precondition for the very possibility of scientific inquiry. But beware: Here there be dragons – or at least empiricist-swallowing monsters. For could a

conscientious empiricist really say, empirical science has a substantial factual presupposition which is a hypothesis about the world not within the scope of empirical inquiry? Surely that would put him in the exact predicament of believing (*) explicated as metaphysical thesis.

Against Naturalized Epistemology

The conclusion I pursued in this section is that we cannot resuscitate naive empiricism by recasting it as a “high level” empirical hypothesis. If such a hypothesis is of such unlimited range that it can play the role of (+) in NE – i.e., as a cognitive science surrogate for naive empiricism – it is no longer targetable by a scientifically significant investigation. As Quine has put it, a philosopher might be tempted now to look for an “Archimedean point” outside science, as fulcrum for a lever of justification. That would be a great mistake as well. We cannot step outside science and give it an intellectually respectable justification from outside. As should now be clear, it is equally wrong to think that we can investigate and confirm the adequacy of science from within. More important, for my present concerns, the empiricist’s point of view, which certainly elevates science to paradigm of rational opinion, cannot consist in hypotheses of the sort science seriously investigates.

How does this affect Quine’s announced program of epistemology naturalized? The basis of that program is the conviction that questions of epistemology leave upon clarification only a residue of empirical, scientific questions about us humans. Empiricism is an attempt to demarcate a certain position in epistemology, and it appears now that it has no scientific surrogate – there is no parallel demarcation of human nature which will explicate this position.

But recall Quine’s argument. It is historical, beginning with a sketch of a certain program pursued by philosophers from Hume through Carnap. I won’t query the historical accuracy; certainly such a program can be described in retrospect. It had two parts, *doctrinal* and *conceptual*. The doctrinal part was the thesis that all our warranted beliefs, including the science we accept, can be inferred from the observational base. What exactly is that? Sometimes Quine says “sensations” or “sense data”, but deduction can only be from statements, not from things or events or momentary states or whatever those are. Sometimes he says “observation statements”, and these are variously described as reports by people of what sensations they had, or as conditional responses to stimuli, made by specific people but uniform across a certain range of stimulation for a whole cluster or community of people. The doctrinal part was anyway bankrupt after Hume’s critique of induction.

The conceptual part was the thesis that all concepts utilized in framing our warranted beliefs (and most especially, our accepted scientific theories) can be

explicated as constructible from concepts pertaining directly to sensations. Presumably these “basic” concepts are the ones mobilized in the observation statements, or at least sufficiently rich so that all observation statements needed for the doctrinal part can be couched in them. But the doctrinal part being defunct, how do we identify these basic concepts? The most successful attempt at this conceptual reconstruction, according to Quine, was Carnap’s *Aufbau*. If it had succeeded, each scientific statement would have been explicable or equivalent to a logical construction from observation statements. To be able to assess that, we need an independent characterization of the observation base. We are again lost in the mists, since the doctrinal and conceptual theses appear to need each other to identify the “sufficient” or “adequate” observation base. But in any case, even with only some guesses about that, after the admission of defeat for the doctrinal part, Carnap’s conceptual reconstruction failed. Thus both parts of the program failed.

No one today, I think, is likely to pursue this program further, even if the refutation is not logically airtight. It failed, *period*. But what conclusions should we draw? Quine boldly identifies this failed program as the whole of epistemology. Epistemology is dead. First God, now epistemology, where will it all end?

But I can hardly go along with this. Quine described here a program even stricter than what I called naive empiricism. It is at most, I think, an extremist empiricist dream, and as such only one strand in traditional epistemology. Why think that it has no, or could have no, rival alternatives? Such programs as the one described by Quine, or even the more liberal one I described as naive empiricism, are extreme in their demands for justification, warrant, support, and defense. I call it *defensive epistemology* and I agree with Quine that it is dead. But it is not all of epistemology. Epistemology is the study of knowledge, belief, opinion, with its focus on questions of rationality, and it lives today.

IV. Options for a More Sophisticated Empiricism

We have come to a dead end now, but I still want to be an empiricist, and the question is: How am I to conceive of what I want to be? Apparently it is not going to be a matter of believing any version of slogan (*), or anything like it. Indeed, we must give up (NE) itself, the principle that to be an empiricist must consist in believing some statement about what the world is like. Maybe we should have realized that all along.

If asked for examples of philosophical positions, I naturally think of various kinds of realism: that universals, or moral values, or possible worlds, are real, that they exist. Those positions certainly seem to be beliefs. Then I think of various sorts of antirealism: There are no abstract entities, no “absolute”

values, no potentiality, propensity, necessity, laws of nature, or what have you. Those too sound like beliefs. Still, there have been attempts at more radical sorts of antirealism in our century. I think here of the phenomenological movement, of logical positivism, of existentialism, and of the followers of the later Wittgenstein. Disturbingly, each of those movements seems to have eventually turned into, given rise to, or been displaced by, some new metaphysics.

What empiricists have shared over the centuries, however, has not most obviously been a set of beliefs. More in evidence have been denials, in the sense of refusals to believe. The roots of modern empiricism lie first of all in the movement associated with the disintegration of the medieval Aristotelian tradition: the nominalists of fourteenth-century Paris and Oxford. Through our recent fictional hero William of Baskerville in *The Name of the Rose*, whose fortunes and philosophical approach to secular mysteries are so uncannily reminiscent of William of Occam and Nicholas of Autrecourt, we get an intriguing glimpse at their rebellion. There we see also the positive side, the admiration and advocacy of the new experimental method, of empirical inquiry unburdened by older metaphysical allegiances.

It makes their detractors point to skepticism. Actually it is the celebration of a certain kind of freedom from oneself: One’s own theoretical convictions, however much valued, must be always ready for suspension so as to allow a more neutral, less belief-ridden inquiry into the facts to which we have access. The spiritual tactic to be prized above all, when any factual question arises, is to find some method of inquiry neutral in its assumptions between oneself and one’s actual or imagined opponents. This is not a belief, but an attitude toward the role of beliefs – a proper aesthetic distance to be preserved.⁵

What I have just described is an attitude, or rather a cluster of attitudes, a philosophical stance. The question is how any such stance is to manifest itself in the philosopher’s philosophizing. We shall have gotten nowhere if each stance is to manifest itself uniquely in some set of dogmas. Nor can it simply be an attitude with which one might then engage in any sort of metaphysics – as if the piety of its followers were to redeem any sort of superstitious cult. I cannot pretend to have thought out all the options logically open to us here, but there is an answer in the literature. I refer to Carnap’s “Empiricism, Semantics, and Ontology” in which a philosophical position is equated with a choice of language.

Let me emphasize that there are things in Carnap’s essay which I cannot and will not accept. If I were to philosophize seriously by appeal to universals, possible worlds, essences and the like, and you asked me if I believed what I said, I could not reply “Oh, I’m just talking, that is just the way I talk.” Instead, I would regard this as a very serious choice of language that would bring serious beliefs with it. What I do hope for from Carnap is this. Perhaps a

philosophical stance *which does not consist in belief*, which cannot be identified with having a belief, can nevertheless manifest itself uniquely in a choice of language as *my language*. That is the idea I want to explore. For a long time, however, I felt there was no hope for this Carnapian idea. As a prolegomenon, let us canvass the problems that made me so pessimistic.

V. Problems with Carnap's Idea

1. As the first problem I'll take one Carnap himself considers. We do not come to have our language by choice – when I begin to philosophize I have a language already. That is true, but then I also subject my language to a critique, and, in Carnap's words, “we may regard it as a matter of decision in this sense: We are free to choose to continue using [it] or not” (23). As an example of my own I would take certain hyperintensional constructions that philosophers have used very freely in the past, such as “qua” or “as such”. I find these unintelligible, and refuse to use them in serious philosophical discourse. In a more radical way, I think of *Word and Object* as advocating that the language for serious philosophizing, the only one granted to be thoroughly intelligible before paraphrase, should be extensional.

2. The second objection is that Carnap held to the analytic/synthetic distinction, despite Quine's critique, as indeed he indicates explicitly (32, n 2). That is, it is crucial to Carnap's discussion that the language chosen have a certain structure, in terms of which we can distinguish between the sentences implied in *any* use of the language – the tautologies of that language – and sentences which the user is logically speaking free to deny or assert. Quine, however, insists that if we inspect our own language, we find no criteria for this demarcation.

Several issues are entangled here. Quine was not thinking about conscious choice with respect to language. If we were to be converted by *Word and Object* then we would, as partial sign of our new commitment, infer willingly to any substitution of co-extensive predicates in our serious discourse. Our very conversion, our new commitment, would maintain our allegiance to the principle of extensionality. Such linguistic commitments can also be found at much lower levels. God knows I don't have the attitude of the French Academy. Yet I'm aghast when I ask for cream for my coffee, and the stewardess hands me packets of powder. Despite the force of advertising, I refuse to call anything cream if it is an edible petroleum product.

One issue entangled here belongs to philosophy of mind. Although my continued use of language indicates acquiescence of a sort which I could alter by choice, much of it is not due to conscious or explicit choice. For that reason it is not only not clear, but objectively unsettled exactly what my language is.

What is settled is that it does not contain “qua” and that its structure is such that statements like “Some cream is an edible petroleum product” is absurd, necessarily false, in my language. That the demarcation is therefore vague, does not destroy the distinction – vagueness we understand (well enough for this).

A second entangled issue is fallibility, defeasibility – that a decision is always absolute but never final, to cite a very different philosopher. The language advocated in *Word and Object* could be my language, even if I remain willing to say that future scientific developments might lead me to revise it, to choose differently. I may also give in on “cream” eventually. That does not alter the present demarcation.

3. With the third and fourth objection we come to topics where I will need to leave something to my hopes for the future. The third objection is that Carnap cannot show us how the choice of language is rational, without getting into the very type of ontological assertion which he wanted to avoid. He says it is a matter of practical decision, which may or may not be vindicated:

The acceptance or rejection of . . . linguistic forms . . . will finally be decided by their efficiency as instruments, the ratio of the results achieved to the amount and complexity of the efforts required. (Carnap, 1950: 40)

But what are these results, and more important, in what language are they described? More generally, suppose I give reasons for my decision by explaining what function this language must serve, and asserting that it is adequate to this role, that its choice will be followed by the sort of success which can vindicate. What language would I be speaking? Not the chosen language, but one in which I can describe both it and the world, and discuss to what extent the facts can be described in it. If I refused to speak this richer language, in which the adequacy of the chosen language can be asserted, then I would put myself in the position of admitting that I had no reason at all for this choice, that it was mere caprice. But then, if taking a philosophical position consists in such an exclusive choice of language, it becomes the paradigm of capricious, irrational, or at least arational behavior. The position becomes literally indefensible, in the strongest possible sense.

I do think that this problem deserves a lengthy reflection, which I cannot undertake here. But let me at least separate it into several parts.

(a) It would be a cruel dilemma, if the only reasons one could give would be such that to give them would renege on the choice itself. But we have learned from our struggles with foundationalism and skepticism that sometimes demands for justification must be rejected.

(b) It is also a cruel prospect to think that others could infer these reasons, and hence certain implicit or tacit beliefs on our part, from the use of our

language. I think here of what happens when I use the term probability. Should I suspect that a scientist who has adopted David Lewis' or David Armstrong's language can arrive, in a purely scientific way, at the conclusion that my linguistic behavior betrays a belief in possible worlds or universals? That may be for him, given his (entirely admissible) perspective, the right belief to reach. And yet I want to say that my philosophical stance, the very thing that he is trying to explain to himself, puts the lie to his conclusion.

(c) But there is a third part: What if my own philosophizing, through its internal dialectical momentum, drives me inevitably to attempt such a rationale, by which my initial philosophical stance would self-destruct?

4. This brings me to the fourth and final problem, and to the Quinean subject of *semantic ascent*. There is something unstable in the choice of a language to embody a philosophical stance. For we are conscious, and although this means that we can choose, it also means that we transcend, in a certain sense, what we make ourselves into by these choices. Suppose I say: I choose language L, my language shall be L, it shall be thus-or-so. Then I can and will also reflect on this choice, and I find myself at once confronting questions about it, such as the question whether L will be adequate with respect to my purposes and goals. Those questions, being about L, are not statable in L. I have quite automatically practiced what Quine calls semantic ascent, and moved into a richer language L+ in which L can be discussed.

Hence the very picture of someone to whom what is intelligible or conceptually possible coincides with what is expressible in specific language L, collapses into incoherence.

VI. Hope for Empiricism

Given these problems, what hope remains? My hopeful idea has two parts. The first is that a philosophical position can consist in something other than a belief in what the world is like. The alternative is a stance (attitude, commitment, approach) which can be expressed, and which may involve or presuppose some beliefs as well, but not ones that are unpalatable to someone taking that stance. In the case of an empiricist, this stance would, for instance, involve a characterization of what science is (in my opinion it is a pursuit of empirical adequacy) but also a certain advocacy of scientific practice, and disdain for certain sorts of metaphysics. The second hope, about which I am more tentative, is that Carnap may have been right to think that such a philosophical position can be identified (wholly or in part?) through a choice of language.

What will be needed to support those hopes? As my discussion of semantic ascent indicates, there cannot strictly be such a thing as the choice that L shall be my language. At the very least, the choice of L places me in an indefinite or

potentially infinite hierarchy of languages reachable by semantic and pragmatic ascent. So the picture of an epistemic subject, for whom what is (conceptually) possible equals what is expressible in L, is illusory. But that hierarchy has its limits, too, and living in a potential infinity of unsettled, but settleable and "transcendentally" constrained fact, is what Kant tried to teach us. The language of universals, for example, may have parts in which there are nonelliptical valid arguments, which have no copy of that form in my language or in any language I could reach by pure semantic and pragmatic ascent.⁶

The most obvious threat that must be disarmed is that to have chosen L as my language just is to believe that A for some statement A in some language L+ is reachable from L by semantic/pragmatic ascent. I should like to conjecture an appropriate theorem here, but I cannot quite do that yet. The reason is that the "just is" does not translate quite simply into an "if and only if". We are not merely concerned with the expressive power of metalanguages. We are also in a part of philosophy of mind where I see unresolved issues concerning intention, choice, and decision. In some models of decision and deliberation, lately proposed, we see the equation: To have decided to do X is to have reached the point of certainty that one will do X. (The "will do" is here simply the future tense of "do", not a locution itself expressive of decision or determination.) That seems to me at best an oversimplification. There is indeed an equivalence. But consider this: There is no possible world in which the following have different truth values:

X deliberately and consciously kicks Y.

X knows that he himself deliberately and consciously kicks Y.

From each the truth of the other can be inferred. They are necessarily equivalent in any reasonable sense of "necessarily"; not even God, as the medievals would say, could create the one without the other. Yet the two facts described are not the same. With propositional attitudes we enter the region of the hyperintensional. Kicking is not knowing, no matter how circumstances qualify them. Perhaps I can claim no more than an analogy here, but it gives me the hope that no belief I can have about L will – regarding only the information cached in its content – be the same as having L as my language. And so also, perhaps, no belief I can have about what the world is like can be equated with my being an empiricist.

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that remain. Thanks also to the National Science Foundation for support of this research.

NOTES

1. I want to thank Ludwig Kirk for helpful correspondence on this point.
2. It is possible to react differently and say that English does have the device of self-reference, so that (*E) is an English sentence, but that certain other means of expression are lacking. In any case, (*E) belongs to an area of discourse where naiveté lands us very quickly in self-contradiction. It would be of little use to say "Oh, linguists talk about languages like English all the time; whatever concept of language they have suffices." For the semantic paradoxes show that no simple concept of language is adequate, or can be simply extrapolated, beyond a certain point. See further my "The world we speak of, and the language we live in" (1986).
3. This point was raised by my student Lyle Zynda.
4. It may again be easy to misunderstand this as a skeptical argument. Since we may be in the very position of these neo-Nazi inquirers ourselves (from the point of view of some third civilization), any negative conclusion about what the Nazis can find out transfers to us – by an 'obvious' extrapolation. I did not draw the conclusion that the Nazis' moral judgment is unreliable, on the basis of the subconclusion that this putative inquiry of unlimited scope comes apart under scrutiny. That would be a fallacy. I do not see how we could get from this discussion to moral skepticism, or relativism, except via a fallacy.
5. I call it a tactic; it is not a strategy. As a strategy it could miscarry to the point of absurdity.
6. Cf. van Fraassen, 1989, chap. 5, sections 1 and 5.

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Quine on the Naturalizing of Epistemology

ROGER GIBSON

I. Introduction

Any examiner of W. V. Quine's contributions to philosophy must acknowledge Quine's contributions toward the naturalizing of epistemology as well as his contributions toward the naturalizing of empiricism. These contributions are easily conflated, but they are not the same. Quine's contributions toward the naturalizing of epistemology take the form of more or less philosophical arguments and considerations directed against old-time epistemology, i.e., against first philosophy, and in favor of its replacement by natural science. His contributions toward the naturalizing of empiricism take the form of more or less scientific arguments, considerations, and speculations regarding how we have acquired our theory of the world.

Nothing much turns, epistemologically speaking, on my calling the former arguments and considerations *philosophical* and the later *scientific*, because according to Quine's naturalism, philosophy and science are epistemologically on a par. Nevertheless, it is also true that Quine's brief for naturalizing epistemology is cast in more general terms than is his brief for naturalizing empiricism. The two projects are logically distinct, at least to the extent that one could give up Quine's project of naturalizing empiricism without thereby giving up his project of naturalizing epistemology.

In sections II and III, I sketch Quine's two projects and the connection between them; in section IV, I respond to a widely held criticism of Quine's endeavor.

II. Epistemology, Ontology, and Reciprocal Containment

As Quine frequently has pointed out, *epistemology* is the theory of method and evidence, whereas *ontology* is the theory of what there is. Empiricism is Quine's tentatively preferred theory of method and evidence, and the ontology of contemporary natural science is his tentatively preferred theory of what there is.

On the epistemological side, Quine's preference for empiricism rests on his commitment to natural science, for it is contemporary natural science that