Naturalized epistemology is epistemology based on accepting the deliverances of our best current theories about the world, and premissing them in the account we give of how we get those theories. One of its principal attractions is that it allows us to make progress with other tasks in philosophy and elsewhere, unhampered by sceptical doubts. The paralysing effect of self-conscious questions about the getting and testing of beliefs – prompted in the tradition of epistemology by an acute sense of the finitary predicament not just of each putative knower taken individually, but of the collective even as it pools the results of its members’ best endeavours – is solved in naturalised epistemology by the simple expedient of avoiding those questions altogether.

But naturalised epistemology has a tendency to make one uneasy. Its attractiveness can come to seem a corner-of-the-eye affair, lasting only while one’s gaze is fixed elsewhere. Under direct scrutiny it appears to have two serious defects, each individually fatal to it, but interestingly linked. These are that it is circular, and that it seems comprehensively to miss the point – or if not, to duck the demand – of traditional epistemology. Without doubt these complaints, in one or another formulation, are wearisomely familiar to naturalism’s proponents, but I have yet to see a satisfactory response to them, and so take this opportunity to seek one.

In Quine’s view, epistemology naturalised is epistemology treated as part of science – in effect, as an empirical psychological enquiry into how we get our beliefs about nature. In an often-quoted passage from the eponymous paper that launched the debate, Quine writes: “Epistemology, or something like it, simply falls into place as a chapter of psychology and hence of natural science. It studies a natural phenomenon, viz. a physical human subject. This human subject is accorded a certain experimentally controlled input – certain patterns of irradiation in assorted frequencies, for instance – and in the fullness of time the subject delivers as output a description of the three-dimensional external world and its history. The relation between the meagre input and the torrential output is a relation that we are prompted to study for somewhat the same reasons that have always prompted epistemology: namely, in order see how evidence relates to theory, and in what ways one’s theory of nature transcends any available evidence”.

On the face of it naturalisation would seem to mark a change of focus as against traditional concerns, bearing out the charge laid by Rorty and others that Quine has substituted a causal enquiry for the justification-seeking one that the label “epistemology” traditionally denotes. If so, of course, there could be a complaint only...
about bending the name to a different purpose, a very minor injury to those still interested in justificatory questions, for what's in a name? — they could continue their task and call it "Fred". But Quine insists that there has been no change of subject matter; naturalised epistemology is truly epistemology; what it does is to improve on the traditional variety. Like the traditional variety it tackles the question of the relation of evidence to theory; but it is epistemology grown up, explaining the relation of sensory inputs to outputs of theory on the basis of empirically checkable facts about how we learn to speak of the world. It transpires that learning to speak is the epistemic crux for Quine, for doing so, as he puts it, "virtually enacts the evidential relation"; and he has a psychogenetic account that sketches how.² It follows that epistemology is no longer “first philosophy” in the Cartesian sense, because there is no magisterial justificatory task for it to perform. Insofar as justification is to the point at all — and it is not — it comes tangentially and free, because it comes pragmatically; total theory works, which is all that needs to be said. (I speak here of course of justification as it would be sought by what Quine asperses as a “supra-scientific tribunal”, namely, traditional epistemology. There is an internal, naturalised sense of justification, the getting of evidence for theories by observation and hypothetico-deductive reasoning which science itself, in the form of psychology, teaches us: but by “justification” in all of what follows I shall mean the ambitious variety of traditional epistemology.)

One of Quine’s main motives for supplanting traditional with naturalised epistemology is that, in his view, the former attempted to get science from sensings by a reductionist project after the various manners of Hume, Russell in one of his phases, and Carnap — who is Quine’s principal target in this connection. Quine famously rejects the reductionism involved, but accepts that epistemology “contains” science in the sense that science is indeed projected from data, as the output consequent to sensation. But the containment in that direction is reciprocal to a containment in the other: science contains epistemology, because epistemology is part of psychology. The reciprocity has the effect that epistemology itself turns out to be, like the rest of science, “our own construction or projection from stimulations”.³

It is this “reciprocity” that looks squarely circular (so to speak). Quine recognises this, but argues that giving up the dream of deducing science from sense data breaks the circle, or perhaps renders it virtuous. If the enterprise of effecting a reductive translation of physical language into sense datum language cannot be carried through, then the Janus face of psychology begs no questions in looking both ways.

What is the objection to this? Well, it is that Quine has taken it that the one alternative to naturalised epistemology — that is, psychology — is epistemology which involves reductive translation. His immediate target is Carnap’s “rational reconstruction”, but this can serve to represent phenomenalisms in general, since it shares with them an ambition to exhaust external-world talk in experiential talk without remainder. But why should such a strategy be thought the only alternative to naturalised epistemology? And why should it be thought that rejecting it disposes of any interest in justification?
Let us note how Quine comes to think that the reductivist project is naturalism’s only alternative. He starts by stating that epistemology is concerned with the foundations of science, which includes mathematics. In just the way that study of mathematics neatly divides into “conceptual” and “doctrinal” studies – that is, investigations respectively into meaning and truth – so too does the study of natural knowledge. On the conceptual side, the task is to show how natural knowledge is based on sense experience. On the doctrinal side, the task is to justify natural knowledge in sensory terms. In Quine’s view the doctrinal side fails; we have not, he says, advanced beyond Hume’s despair on this head. But on the conceptual side there has been progress, made possible by the technique of contextual definition.

Carnap’s “heroic efforts” to effect a rational reconstruction of natural knowledge in terms of sense experience supplemented by logic and set theory, lie on the conceptual side. If successful his efforts would identify and clarify the sensory evidence for science, even if they failed to show how its possession justifies science; and they would deepen our understanding of our discourse about the world. But they do not succeed, because the reductive translation required does not go through: Quine’s argument needs no rehearsing here. Quine therefore writes, “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”.4

Let us grant the point about reductive translation. Quine next assumes that naturalised epistemology and epistemologies that turn on translation between them exhaust the options. But this is just incorrect; there are a number of non-reductive ways for the justificatory enterprise to proceed. Take just one example: a remarkable feature of Quine’s claim about the foundering of the doctrinal project in Hume is his neglect of what that failure immediately prompted, namely, Kant’s critical enterprise, and what that directly or indirectly prompted in its turn, namely, the possibilities it suggested to some – Strawson and the very late Wittgenstein, in not very different ways, included – for exploiting more forensic conceptions of justification than is envisaged by austere versions of empiricism taken alone.5 It is not necessary to dilate on these options here; we have merely to be reminded of their existence to see that we are not faced with a simple disjunctive syllogism. If naturalised epistemology is to rest to any degree on ruling out the opposition, it will have to show that all other approaches to the doctrinal task founder too.

Quine resisted the charge of circularity, recall, by saying that so long as investigation of the evidential link between sense data and theory is not regarded as addressing questions about justification, no circle is at stake. He assumed that the attempt to secure justification consists in the attempt to reduce theory to data, and so could argue that abandoning hopes of a translation amounts to abandoning the justificatory enterprise. If so, the circle breaks, or turns virtuous: where there is no attempt at justification, it begs no questions to premiss in epistemology what traditional epistemology took itself as having to justify. But the foregoing remarks show that so far we have not been shown that the justificatory enterprise is bankrupt, because we are not bound to identify it with the reductionism Quine rejects.

The next step in showing that naturalism does not escape circularity is to demonstrate something stronger, namely, that the justificatory question is anyway
unavoidable. Quine says that epistemology is concerned with the foundations of science. A concern with the foundations of science – a foundational concern – sounds like a concern with assumptions, aims, ontology, methodology and reasoning, one of the chief points in investigating all which – if not the chief point – is to ascertain how to tell good theories from bad. This is much more than just seeking to understand the links between evidence and theory, where such understanding falls short of providing justifications. We wish to know when the links are strong enough to bet one’s money or one’s life on them. We recognise that there are different kinds of evidential relations, individuated by subject matter. We wish to control what can count as evidence for a given subject matter, and to know when caution (or to call it otherwise: doubt) is appropriate, and what can legitimately prompt it. Most of our concerns – in the physician’s consulting room, on the construction site, in the pharmaceutical laboratory, on the battlefield – are austerely practical ones, where reliable means of forming judgements are at a premium. We therefore have to try to advance beyond merely understanding evidential links where doing so falls short of showing how they bestow a license to rely on certain of them, for such understanding must be the basis for yielding something more: namely, norms. A conception of “getting it right” in a given area of endeavour matters to us; and it demands tests and a way of recognising when they have been passed or failed. Hence, the justificatory enterprise is a non-negotiable part of epistemology. It is why epistemology got started.

So that there is no chance of misunderstanding what is at stake here, allow me to iterate. Quine describes the enterprise of naturalised epistemology as the endeavour (I quote) “simply to understand the link between observation and science” when he is specifically seeking to avoid the circularity charge. That makes it sound as if the task is a very modest one; the passage in full reads, “scruples against circularity have little point once we have stopped dreaming of deducing science from observations. If we are out simply to understand the link between observation and science, we are well advised to use any available information, including that provided by the very science whose link with observation we are trying to understand”. Now as we see, the strongly normative character that we expect to follow from understanding evidential links alters the picture. Getting into possession of epistemic norms neither has to, nor does amount to, deducing science from observations, but neither is it just understanding a non-justificatory connection. So we could entirely eschew the attempt to carry out remainderless translations of talk about the external world into a reducing class of sensation sentences, but the attempt to demonstrate the nature and relative strengths of the support provided to theories by observations is a practical necessity, and for this it will not do to premiss what is to be tested in an account of what tests them. Given that, the circle on which naturalised epistemology bases itself is vicious.

At this juncture, by way of aside, one might register a concern about the non-justificatory notion of “evidence” in play here. Standardly, the notion seems intrinsically to be one that exists precisely to play the traditional epistemological role of confirming and infirming, supporting and weakening given claims by its respective presences or absences. In Quine the notion is tied to sensory stimulation, and left
otherwise – and explicitly – unexplained: he writes that in his theory “the term ‘evidence’ gets no explication and plays no role”. This, obviously, is a luxury that can be afforded only when we have given up on doctrinal studies altogether.

The foregoing remarks are based on a pro tempore acceptance of Quine’s claim that epistemology concerns the foundations of science. But – and here is the second of the two objections to be urged against the naturalising programme – epistemology is surely concerned with a good deal more than this. It is more even than a concern with science (that is, with the superstructure as well as the foundations of science), unless the word “science” is stretched to denote with complete generality everything we hope we know. (It had this meaning in the early modern period.) For there are plenty of things we might hope to know beyond the structure and properties of the material world, which is what the natural sciences deal with. We wish also to know about history, for example, and the motives and feelings of others, and whether there is anything of value in the world, ethically and aesthetically; and we are surely interested in the differences between ways of knowing some of these things and knowing others. And as before, we have our exigent practical concerns, which makes getting things right a vital interest, and poses the demand that traditional epistemology exists precisely as an attempt to satisfy. Even the most hardened non-cognitivist in ethics, for example, must accept that we are good readers of the intentions of our fellows, and although physical entities play their part in this — raised eyebrows, air-waves issuing from mouths — it takes an even more exotic form of reductionism than Quine repudiates in Carnap, namely a belief that in the end everything will be expressible in the language of physics, to think that our other epistemic interests, in history and folk psychology and these other spheres, can be naturalised along with the epistemology of science.

Commitment to physicalist reduction cannot be foisted on Quine, however, because although it is naturalistic, it does not exhaust naturalism. Roger Gibson reminds us that Quine infers from the fallibility of science the view that future science might tell us that there is more to evidence than sensory stimulation, and that therefore adherence to empiricism must be tentative. So naturalism is not to be defined as acceptance of the deliverances of physical theory together with what it tells us about how we get it (that is, by empirical means); it is rather to be defined as acceptance of current such theory, for any “current”. If the theory changes, acceptance must go with it; naturalism lies, in short, in following the fashion. This is integral to naturalistic epistemology’s break with justificatory concerns, as witness these facts: a good naturalist in the 13th century AD, or the 13th century BC, would on his naturalistic principles have been bound to go with the current theory of the day. The dramatic nature of past theory change teaches us that being naturalistic at any point in the history of science is therefore a matter quite independent of whatever justification scientists in different periods have had for their claims, whether about the fifth essence, the pulsative faculty of the heart, phlogiston, or the colour and strangeness of quarks: take your pick.

Naturally we all feel confident that even if quarks go the way of phlogiston, current science has got it much righter than ever before, and in some cases, we suspect, has got it right simpliciter, so it at least seems safe to be epistemologically
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