Not Actually Hume's Problem: On Induction and Knowing-How

STEPHEN HETHERINGTON

Abstract
Philosophers talk routinely of 'Hume's problem of induction'. But the usual accompanying exegesis is mistaken in a way that has led epistemologists to conceive of 'Hume's problem' in needlessly narrow terms. They have overlooked a way of articulating the conceptual problem, along with a potential way of solving it. Indeed, they have overlooked *Hume's own* way. In explaining this, I will supplement Hume's insights by adapting Ryle's thinking on knowledge-how and knowledge-that. We will also see why Hume's 'sceptical solution' was a perfectly *appropriate* response to his 'sceptical argument' — rather than (as is often thought by analytic epistemologists) a merely descriptive response patently missing the normative sceptical point so strikingly formulated by Hume.

Colin Howson called it Hume's problem.[1] But *was* it? And Quine proclaimed that 'The Humean predicament is the human predicament.'[2] But *is* it? Howson and Quine were referring to what is generally called the problem of inductive scepticism — *Humean* inductive scepticism, one of *the* classic pieces of philosophical reasoning. They were mistaken, though. Classic it is; misattributed it also is. The predicament in question, real or not, was not Hume's. Inductive scepticism, as contemporary epistemologists describe it, is not Humean.

This is not a new thought. Mainly in the past decade or so, a few philosophers have questioned the standard interpretation of what Hume was trying to establish, when discussing observation, causality, reason and knowledge. In this paper, I supplement that questioning, mainly aiming to add to our understanding of Hume's project. However, I have a separable aim, too, of increasing contemporary epistemology's conceptual options. When epistemologists discuss what they call inductive scepticism, they continue to do so in the terms with which Hume has standardly been interpreted. Yet if I am right,

[1] *Hume's Problem: Induction and the Justification of Belief* (Oxford: Clarendon Press, 2000).

[2] 'Epistemology Naturalized', *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969), 72.

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a significant epistemological option is thereby being overlooked. The option in question is inspired by Gilbert Ryle's remarks on intelligent actions. Let us enrich epistemology's logical space, by at least *noticing* this paper's Rylean-Humean conceptual option.

Will doing so also *solve* 'the' problem of induction (as contemporary epistemologists formulate that problem)? Not wholly; but we might have taken a promising first step. We will see why Hume succeeded in solving the sceptical problem *he* posed. And this will uncover a fresh line of anti-sceptical thought, one which might well amount to a way of finding epistemic strength — where inductive scepticism denies us any — within inductive inference. In short, Hume's own solution *might* point us towards a way of solving the contemporary problem, in addition to his own. (I will not argue here that it does do so. However, even the thought that it might do so is an exciting one.)

1. A Standard Epistemological Interpretation of Hume

Here is one way in which Humean inductive scepticism will standardly be developed by epistemologists.[3]

Consider someone with observational evidence of *X*s being *Y*s, and who proceeds to form the belief that the next *X* to be observed will also be a *Y*. Could that belief be epistemically justified (other things being equal) by that evidence? Not by that evidence alone (according to standard epistemological parsings of Hume): the person also needs to be justified in believing that this aspect of the world is being structured by cause-and-effect relations — these underlying a related pattern of uniformity within the world. If she does not already have that general assurance, her particular extrapolation cannot be adequately justified, no matter how many observations of *X*s being *Y*s appear in her evidence. As the point is sometimes put, Hume would expect the inductive believer to have in place a justified *stability*-belief — a justified belief that the world is not about to *change* in the relevant respect.

Yet the only possible way for such a belief to be justified is by an extrapolation from observational evidence — that is, inductively.[4]

[3] I will present this version of Humean scepticism in contemporary epistemological terms, talking of epistemic (inductive) justification and of (inductive) knowledge. In §4, I will explain my preferred replacements for such talk in this case.

[4] Hume reaches this verdict, of course, having rejected the alternative of some demonstrative *a priori* reasoning underlying such a belief.

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Further observational evidence is needed for *it* — in other words, observational evidence beyond just those observed *X*s.

And, unfortunately, this realization serves only to launch us upon a vicious infinite regress in our analysis. The regress would include potentially more and more complicated observational patterns of stability being adduced as evidence, each time with the aim of justifying a further stability-belief. And all of this new complexity would be required simply in order for the *initial* belief (about the next *X* to be observed) to be inductively justified. The existence of the vicious infinite regress, however, implies that this belief *cannot* be inductively justified.

As I said, that is the usual epistemological parsing of Hume's argument, with the conclusion being said to concern inductive *justification*.[5] And epistemologists often then infer that inductive *knowledge* is likewise affected. After all, if inductive justification is needed for a belief to be inductive knowledge (as will standardly be accepted by epistemologists), and if there is no inductive justification (as Hume is usually thought to have concluded), then no belief is inductive knowledge. This is why Hume's sceptical conclusion is often taken to imply, for example, that 'no one knows that the sun will rise tomorrow.'

Hume himself reacted to these seemingly sceptical worries by devising his so-called 'sceptical solution'.[6] We have a *custom*, a *habit*, of continuing to form inductive beliefs. *Nature* prevents our ignoring our observational evidence. *Nature* prevents our abstaining from such a belief as that the sun will rise tomorrow.

Now, given how remarkably sanguine Hume seemed about this idea (and given what a clever and insightful philosopher he was), it is surely surprising how little respect epistemologists accord it — *even* when it is considered just as a component of his own overall philosophy. The following form of criticism of Hume is common. It will be said that he has offered only a *descriptive* 'solution' to his normative or prescriptive scepticism, with the former therefore being

[5] It is not a parsing bereft of substantial scholarly support. Two influential advocates of versions of this form of interpretation are D. C. Stove, *Probability and Hume's Inductive Scepticism* (Oxford: Clarendon Press, 1973) and Barry Stroud, *Hume* (London: Routledge & Kegan Paul, 1977), 50–67.

[6] And this response of his has attracted few epistemological supporters. Is it therefore of no epistemological value? Perhaps epistemologists have not accurately understood what Hume meant by it. I will return to this issue soon, beginning in §3.

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unable to entail anything substantively critical of the latter. (No 'Is' entails an 'Ought.') So, no such 'solution' is *really* a solution. Did Hume thereby portray each of us as a naturally hapless diptych — possessing two visages in our roles as inductive believers, each visage looking past the other, neither affecting the other? The usual epistemological interpretation of Hume seems to imply so.

Nevertheless, perhaps that interpretation is mistaken. Can we portray Hume himself as a more thematically unified artist, as offering an entirely *appropriate* form of solution to his sceptical reasoning? Can we thereby uncover a more unified picture of *ourselves* within Hume's artistry?

2. Ryle

Indeed we can — by using some ideas centred upon the distinction between knowing-that and knowing-how.

Gilbert Ryle did most to clarify this distinction for philosophers.[7] Roughly, it separates propositional knowledge — knowing *that* such-and-such is so — from practical knowledge — knowing *how to* perform some particular action. Ryle's main contribution here was an argument against *intellectualism* — the thesis that any exercise of knowledge-how involves being guided by, and applying, some pertinent knowledge-that. *Not* all intelligent acting (Ryle concluded) relies upon the crucial influence of some knowing-that. Knowing how to do F need not, even in part, be one's knowing that p (for some action F and proposition p). In particular, exercising one's knowledge of how to do F need not involve applying one's knowledge that some sufficient condition φ *is* how to do F.

Ryle's rejection of intellectualism about intelligent acting flowed from a powerful regress argument. Elsewhere,[8] I have reconstructed it in the following way.[9]

[7] See *The Concept of Mind* (London: Hutchinson, 1949), ch. II; 'Knowing How and Knowing That', *Collected Papers*, Vol. II (London: Hutchinson, 1971), 212–225.

[8] 'How to Know (That Knowledge-That is Knowledge-How)', *Epistemology Futures*, (ed.) S. Hetherington (Oxford: Clarendon Press, 2006), sec. 2.

[9] I did so, as part of defending Ryle against criticism by Jason Stanley and Timothy Williamson, 'Knowing How', *The Journal of Philosophy* 98, No. 8 (August 2001), 411–444.

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First, I attributed to Ryle a consideration of this intellectualist principle:

R For any action *F*, and for some content φ describing a sufficient criterion of how to do *F*: If (when doing *F*) one knows how to *F*, then (1) one already has knowledge that φ(*F*), which (2) one knows how to — and one does — apply so as to do *F*.

Next, I observed him to be reasoning along the following lines. For argument's sake, suppose R to be true. And suppose that someone, *x*, knows how to *F*. Then *x* does *F* only if (for some content φ describing a sufficient criterion of how to do *F*), *x* already has knowledge that φ(*F*), which *x* knows how to — and *x* does — apply so as to do *F*. Yet *x*'s applying *x*'s knowledge that φ(*F*) so as to do *F* is a *fresh* instance of both performing and knowing how to perform a specific action. This renders R applicable again; with which, the foregoing form of reasoning recurs. But a vicious infinite regress also develops — of instances of increasingly complex regulative knowledge-that being needed, and applications of them being performed. And these would be needed just so that *x* is performing even a single action manifesting knowledge-how. Thus, if R is true, even one such action cannot be performed. Apparently, though, it can be. We must conclude that R is false. But R is intellectualism-as-applied-to-our-intelligently-performed-actions: R *is* intellectualism. Consequently, intellectualism is false.[10]

All of this — the distinction between knowledge-that and knowledge-how, along with both the concept, and Ryle's rejection, of intellectualism — will be pivotal in what follows. It should allow us to appreciate better what Hume was actually saying about induction.

[10] Strictly (as John Williams has pointed out to me), R's falsity might be thought to allow the possibility that a given instance of one's knowing how to *F* (while doing *F*) involves propositional knowledge without involving one's knowing how to apply it. But (in what is, I assume, a Rylean spirit) I mean the negation of R to involve only the negation of one's-having-prior-propositional-knowledge-by-which-one-is-being-guided. The different aspects of this complex ('hyphenated') property are present entirely, as a group — or not at all. What is in question when we assess intellectualism is propositional knowledge's *playing a specific sort of guiding role*, not its mere presence, say. See John Williams, 'Know-How and Propositional Knowledge', *Synthese* (forthcoming).

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3. Hume's Own Words

In §1, we encountered an instance of what epistemologists usually claim that Hume was saying. Let us now focus on Hume's argument anew, especially in the light of §2. I will concentrate on his *Enquiry Concerning Human Understanding*, especially §IV, Part II, and §V, Part I. I will derive two interpretive results: (1) Hume is not arguing for the sceptical conclusion generally taken by epistemologists to be his aim;[11] and (2) his sceptical solution is not as potentially irrelevant to his efforts in (1) as the usual epistemological reaction seems to believe it is.

§IV, Part I, begins by attending to this key question (32):[12] '*What is the nature of all our reasonings concerning matters of fact*?' Hume answers thus (ibid.): 'they are founded on the relation of cause and effect.' His term 'founded', though, is metaphysical, not epistemic. Hume is not asking how we *justify* 'reasonings concerning matters of fact'. Rather, he is wondering about what (metaphysically describable) *kind* of action any such reasoning is: what *constitutes* it? And his answer is elliptical. He is telling us that any such instance of reasoning is 'founded on' a *belief* about 'the relation of cause and effect'. (For next, in the same vein, he inquires into '*the foundation of all our reasonings and conclusions concerning that relation*'.)

So, Hume is putting in place a picture which he will then reveal as implying the threat of an infinite regress. It is important, therefore, to be clear as to what the picture is *of*; and here is where §2 above becomes pertinent, helping us to interpret Hume's words. For an awareness of Ryle's ideas allows us to appreciate that the picture with which he is engaging here is, in effect, a particular instance of *intellectualism*. (Of course, unlike intellectualism-as-described-by-Ryle, it is not understood by Hume quite, or at least not explicitly, in terms of knowledge-that and knowledge-how.)[13] It is a picture he is about to reject, as he tells us (*ibid.*):

> I say then, that, even after we have experience of the operations of cause and effect, our conclusions from that experience are *not* founded on reasoning, or any process of the understanding.

[11] This general result is not new with me, as §6 will explain. But because there is *something* new in my version, I will outline it before discussing (in §6) kindred interpretations by other philosophers.

[12] My page references for Hume will be to the *Enquiry*'s second edition, (ed.) L. A. Selby-Bigge (Oxford: Clarendon Press, 1902), a volume that also includes Hume's *Enquiry Concerning the Principles of Morals*.

[13] But it *almost* is; and §4 will seize upon this kinship.

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In contemporary terms, his aim is thus to show that when we perform an action of extrapolating inductively from our observations, this action need not be guided by anything already in place within our 'reasoning' or 'understanding'. Hume's goal is to show that the action of forming an inductive belief (and note that this action is clearly an intelligent one, an instance of what Ryle would term an exercise of knowledge-how) is not dependent upon being controlled by some prior exercise of the reasoning or understanding. Inductive thinking (whatever its normative strengths or weaknesses) is not like *that* — which is to say, inevitably a product of prior reasoning or understanding — in its metaphysical genesis.

Perhaps this is all to the good. For how far would we *get*, as inductive thinkers, if we were slaves to that dependence? Hume considers any given inductive inference, before issuing this rhetorical request (34):

> But if you insist, that the inference is made by a chain of reasoning, I desire you to produce that reasoning. The connexion between these propositions is not intuitive.

Hume is not denying that inductive inference occurs. He is denying that it needs to be a manifestation of intellectualism. *How* does inductive thinking occur? Hume's answer is that it does so without any need for a prior and controlling exercise or manifestation of reason or understanding.[14]

Accordingly, it is of great interest to re-examine, given this interpretation of Hume's aim (namely, as striving to disprove a kind of intellectualism), the core of his supposedly sceptical reasoning. Consider some intelligent action of forming an inductive belief. Let us hypothesise (on intellectualism's behalf) that this action needs to have been guided by an assurance already in place within the reason or understanding. This assurance would, for instance, be knowledge of whatever 'secret powers' (33) link the observed properties X and Y. However, if a believer needs this prior knowledge, as part of being *guided* so as to infer (from the observed Xs being Ys) to the next observed X's being a Y, then she will be *unable to perform* that action of making that inference.

Why so? It is because the prior stability-knowledge (of the 'secret powers') would *itself* need to have arisen from an action of inferring

[14] Note, too, that nowhere in this account does Hume deny that an inductive inference can lead to an *accurate* belief, a *true* belief. The problem is not one of inferring accurately. Again, it is one of what constitutes the action — the intelligent action — as such of inferring inductively.

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inductively. Hence, it will have been subject to the *same* sort of need for a guiding assurance, courtesy of some reasoning or understanding: further prior assuring knowledge will have been needed. With which thought, a vicious infinite regress begins — of inductively derived pieces of stability-knowledge, perchance. Each would need to have been present to, and used by, some reasoning or understanding, if even the initial intelligent action of inferring inductively is to have occurred. But the regress shows this to be an unsatisfiable demand. Consequently, Hume concludes his argument in these terms (38):

> It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future; since all these arguments are founded on the supposition of that resemblance.

Accordingly, as soon as we require our forming-of-an-inductive-belief to be guided *by* such stability-knowledge (of 'this resemblance of the past to the future'),[15] we face a problem. That guiding stability-knowledge is unavailable. And is this a problem for us as inductive thinkers? It is, *if* intellectualism is correct.

However, now we turn to Hume's 'sceptical solution'. We may see both parts of it anew, as follows. First, its sceptical aspect is its *denial of the intellectualist hypothesis* as to the nature of inductive thinking. Yet, second, it is thereby a real solution to the problem of explaining — by *replacing* the intellectualist hypothesis as a putative explanation of — the nature of such thinking. How is it then a solution? It leaves the *explanandum*, inductive thinking, in place — now explained, however, *as being a non-intellectualist exercise of intelligent activity* (that is, a way of acting which can occur, fully formed, without having *needed* the intellectualist hypothesis to be true).

Thus, when Hume introduces his notion of 'Custom or Habit' (43), he describes it in this way (*ibid.*; first emphasis mine):

> wherever the repetition of any particular act or operation produces a propensity to renew the same act or operation, *without being impelled by any reasoning or process of the understanding*, we always say, that this propensity is the effect of *Custom*.

[15] In calling this stability-knowledge (as I am terming it) a 'supposition', though, is Hume *distinguishing* it from knowledge? Not clearly, because earlier (36; my emphasis) Hume puts the same point in terms of

> the similarity which we *discover* among natural objects, and by which we are induced to expect effects similar to those which we have found to follow from such objects.

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In other words, custom (whatever it does include) does *not* include what it would have to include if intellectualism held sway: it does not include guiding intervention by the intellectualist's favoured mental processes.[16] Hume acknowledges that he does not 'pretend ... to have given the ultimate reason of such a propensity' (*ibid*.). But this does not disturb him, because his goal here is just to reject a specific theory of what the propensity would have to involve. He is discarding an *intellectualist* interpretation of what it is to engage in the activity of forming an inductive belief, of extrapolating inductively from observations.

Accordingly (*ibid*.; my emphasis):

> after the constant conjunction of two objects — heat and flame, for instance, weight and solidity — we are *determined by custom alone* to expect the one from the appearance of the other.

Somehow we function habitually; and whatever this involves, it need not mean our being controlled by a prior exercise of, or a prior insight from, our reasoning or understanding.

Nor is this because induction, when used habitually, will not give us knowledge (45; my emphasis):

> Without the influence of custom, we should be entirely *ignorant* of every matter of fact beyond what is immediately present to the memory and senses.

The relevant contrary of ignorance, I assume, is knowledge. So, (inductive) knowledge is at stake in all of this.[17]

What else can we say about the nature of such knowledge? Hume immediately complicates his description, in a way which will make

[16] Here is where, crucially, most contemporary epistemologists will read more into Hume than is required, strictly speaking. His phrase, 'reasoning or process of the understanding', will be assumed to denote something normative, not merely psychological. However, the simplest interpretation of Hume here is as denoting a faculty of reason, rather than as denoting *and approving of* it.

[17] But what *kind* of (inductive) knowledge is thereby at stake? In §4 I revisit this question. (Here is a hint of what we will find there, though. I said that the 'relevant contrary of ignorance, I assume, is knowledge.' However, a more careful, still Humean, reading would replace 'is knowledge' with 'is at least true belief'. So, what we gain from inductive habit or custom is at least (inductive) true belief. And if we cultivate the right habits or customs, this process of gaining (inductive) true beliefs can be done *well*. In which case, the result of doing this is an inductive *skill* — a skill at forming true beliefs inductively.)

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§4's pending proposal all the more philosophically congenial (*ibid.*; my emphasis):

> We should never *know how to* adjust means to ends, or to employ our natural powers in the production of any effect. There would be an end at once of all action, as well as of the chief part of speculation.

Again, what is such knowledge-how like? Here is Hume's answer (46–47; my emphasis):

> All these operations are a species of natural instincts, which *no reasoning or process of the thought and understanding* is able either to produce or to prevent.

Intellectualism could not receive a clearer or more decisive rejection from Hume than this. He is ending his sceptical solution on the same theme as that which permeates his supposedly sceptical argument — namely, the question of what *makes* an exercise of inductive thinking an intelligent action. Is it an action that needs to satisfy intellectualism if it is even to exist? Not at all, says Hume — in both his sceptical argument *and* his sceptical solution. Accordingly, contemporary philosophers misrepresent Hume when describing him as meaning to show that inductive beliefs are wholly unjustified, or that they are guesses or irrational, say. Such a description overstates the intended epistemic import of Hume's reasoning. Maybe such a sceptical challenge is of epistemological interest; it was not Hume's challenge, though.

4. A Rylean-Humean Legacy

Now combine (i) Hume's hint about knowledge-how, and (ii) our improved understanding of his argument (as rejecting an intellectualism about how inductive thinking unfolds), with (iii) Ryle's discussion of knowledge-that and knowledge-how. My aim in this section is to delineate a philosophical result which we, in a post-Rylean spirit, may properly take from Hume's reasoning. Specifically, might we derive a Rylean-Humean form of theory? Might Rylean insights about knowledge-how and knowledge-that, and especially about intellectualism, blend profitably with Humean insights into the nature and epistemic standing of inductive inference? I believe so, along the following lines.

Suppose that, on the basis of observational evidence, you form the inductive belief that the sun will rise tomorrow. Given the falsity

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of intellectualism, this is something you can do intelligently — as an exercise of knowledge-how — *without* needing to have been driven by prior guiding knowledge-that (such as the stability-knowledge that the world is functioning stably in the relevant respect). Your forming that inductive belief can exist as a manifestation of knowledge-how, even in the absence of being constitutively guided by prior knowledge-that. So, *this* is how we break the claimed (and worrying) dependence of inductive knowledge upon prior (yet unattainable) inductive stability-knowledge. We end the threatened Humean vicious infinite regress in a way that, it seems, instantiates how Ryle ended the vicious infinite regress posed by intellectualism.

This picture could be called a *practicalism* — as opposed to an intellectualism — about inductive knowledge.[18] In thinking inductively (particularly if you do it more accurately than not), you exercise a skill. This skill need not be intellectualist in nature; it may be practicalist. A thinker can be exercising some inductive knowledge-how *independently* of being driven or determined by prior, supposedly related, knowledge-that — including, therefore, stability-knowledge-that.

The following epistemological picture thereby emerges, on Hume's behalf. Any inductive knowledge you have is at least inductive knowledge-how.[19] Maybe your inductive knowledge-how is your knowing how to form inductive beliefs that are usually true, say.[20]

[18] I do not call it simply 'pragmatism', because that term is used so widely and heterogeneously. Still, my practicalism is one possible restricted application of pragmatism.

[19] We might not want to deny that any knowledge-how is also knowledge-that; nor need Hume have denied this. In knowing how to form a true belief that the sun will rise tomorrow, we may well wish to grant, you know that the sun will rise tomorrow. (Certainly we might wish to grant both such knowledge-how and such knowledge-that, if you know *well* how to form a true belief that the sun will rise tomorrow.) But maybe this is because the knowledge-that *is* merely knowledge-how. I explain, and argue for, that thesis in 'How to Know (That Knowledge-That is Knowledge-How)', *op. cit*. All I am insisting on right now, on Hume's behalf, is that the successful inductive thinker is forming beliefs that are *at least* manifestations of inductive knowledge-how.

[20] I intend the phrase 'usually true' to reflect some sort of *reliabilist* precisification. This is just one of the possible precisifying paths we could take here. And so an *externalist* interpretation of the knowledge-how is available to us, all else being equal. In contrast, the intellectualist picture is clearly internalist. It is what Hume was considering, in envisaging an inductive thinker who uses her inductive evidence self-consciously and deliberatively. This is not to say that Hume, as interpreted here, is endorsing externalism

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This skill could be present and exercised *even* if you are not being guided by knowing in advance, either that your inductive beliefs will be true or that they will usually be true (because, in either case, the world is not about to change dramatically in a relevant respect).[21] Thus, inductive knowledge-how is an ability; and its being exercised does not depend upon the prior existence of, and constitutive guidance by, any special knowledge-that, such as some inductive stability-knowledge. You can know *how* to predict accurately, for instance, even if you have no guiding assurance in advance *that* you can do so.[22]

Moreover, talking in this anti-intellectualist way of that sort of inductive ability renders Hume's sceptical solution eminently applicable — not only within his own philosophical enterprise, but within a contemporary philosophical setting. Abilities thrive on custom or habit. An ability can also in principle be *strengthened* by custom or habit. An ability can be enriched, tested, moulded, and improved — all of this by habitually being exercised. Accordingly, far from being an irrelevant kind of response to his sceptical argument, Hume's sceptical solution is exactly right. It *should* be taken seriously, articulating as it does an implication of rejecting an intellectualism about the knowledge-how manifested in thinking inductively. Inductive thinking is a custom or habit (with more or less accurate inductive thinking being a more or less effective custom or habit); and exercises of this habit need not be irrational, *even* if they have come into existence in some non-intellectualist manner. They can be *intelligent* actions even if their causal pedigree need not have been *intellectualist*. We are inductive *practitioners*, first and foremost, not necessarily inductive intellectualisers. Hume had this fundamental insight; and Ryle enables us to understand it (while perhaps refining it a little) in more contemporary terms. Ultimately, we will wish for further detail and elaboration. For now, though, the point is one of

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and rejecting internalism. But he is rejecting one *especially* intellectualist version of internalism.

[21] You might not *have* this associated inductive stability-knowledge anyway, if Hume's supposedly sceptical argument is right in its claim about an infinite regress.

[22] Thus put, I am denying one notable instance of a pertinent variation on the controversial KK-principle. The latter claims that one's knowing that one knows that p is a necessary condition of one's knowing that p. The instance of the variation I am denying is something like this: One has inductive knowledge of how to predict accurately that p, only if one knows that one does.

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epistemological principle — programmatic perhaps, but in principle the *right* program within which to seek detail and elaboration.[23]

5. Buckle on Humean Epistemology

How Humean is that Rylean-Humean story? How far does §4's post-Rylean interpretation of the continuing philosophical import of Hume's reflections on induction take us beyond his own epistemological picture? In answering that question, we may usefully draw upon Stephen Buckle's extended analysis[24] of Hume's first *Enquiry*.

In his sceptical analysis of induction, what Hume denied was (i) the existence of one particular kind of inductive knowledge, along with (ii) the truth of a thesis about the nature of another sort of inductive knowledge. The thesis adverted to in (ii) is intellectualism, directed at what we may call *ordinary* inductive knowledge — such as predictions about what the next X to be observed will be found to be like. The inductive knowledge denied to us in (i) was what could be termed a *deeply* causal knowledge (a *non*-ordinary sort of inductive knowledge). That would include stability-knowledge, which reflects upon *why* the next X to be observed will be a Y, say.

And one pertinent indication of the latter knowledge's having a special role in Hume's thinking is that, whenever he used the term 'knowledge' clearly to deny the existence of (what I am calling) *deeply* causal knowledge-that, he had in mind a quite restricted sense of such knowledge. As Buckle explains (106–117, 150, 163–164), what was at stake for Hume — like Locke before him, most significantly — was a systematic or philosophical form of knowledge, most clearly of the world's 'secret powers'. Hume was expecting of such knowledge that it merit the title *scientia*. And *it* is what his 'sceptical argument' denied us. In being denied intellectualist insight into

[23] One elaborative line of thought may be David Papineau's: 'Reliabilism, Induction and Scepticism', *The Philosophical Quarterly* 42, No. 166 (January 1992), 1–20. He conceives of inductive justification as reliabilist justification, and he offers a rule-circular justification of induction — an inductive defence of induction. This accords with my conception of induction as a skill that can be strengthened by being used repeatedly.

[24] *Hume's Enlightenment Tract: The Unity and Purpose of* An Enquiry Concerning Human Understanding (Oxford: Clarendon Press, 2001). All otherwise unattributed page references in this section are to Buckle's book. On Hume's naturalism, more generally, see Buckle's 'Hume's Sceptical Materialism', *Philosophy* 82, No. 322 (October 2007), 553–578.

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the world's underlying causal links, we are being denied *that* (inductive) knowledge-that.[25]

Again, though, this does not entail that Hume denied us *all* inductive knowledge-that, such as the knowledge that the sun will rise tomorrow.[26] The inductive knowledge-that he is denying us is just 'access to the essences of things on which rational knowledge of the world — *scientia* or dogmatic knowledge — is built' (203). It is 'knowledge of causes' (*ibid.*) — in the not-distinctively-Humean sense of 'power or necessary connection' (202). And his denying us that special sort of (inductive) knowledge-that is not thereby a denial of what we might call ordinary inductive knowledge-that.

Why is that so? Hume's denial of *intellectualism* is what grounds my use of 'not thereby' in that claim. The Rylean-Humean reason why one's lacking a philosophical or systematic sort of stability-knowledge-that, in particular, does not entail one's lacking all ordinary inductive knowledge, is as follows. (i) Any instance of forming some ordinary inductive knowledge is at least an exercise of some inductive knowledge-how, a specific inductive true-belief-forming habit; and (ii) given the falsity of intellectualism, *that* skill can be exercised no less skilfully even if the philosophical or systematic stability-knowledge-that is absent. Consequently, a compatibility is revealed, between (a) one's manifesting or exercising some ordinary inductive knowledge (one's acting skilfully in exercise of some

[25] Of course, as part of this denial, Hume is denying that we can have (what we might now call) *deductive* knowledge-that of the world's underlying causal links — either directly, via reason alone, or indirectly, via premises reporting sensory experience.

[26] In this vein, note Hume's assertion, in a letter to John Stewart (February, 1754) that

> I never asserted as absurd a proposition as *that any thing might arise without a cause*: I only maintained, that our certainty of the falsehood of that proposition proceeded neither from intuition nor demonstration; but from another source.

(See *Hume's* An Enquiry Concerning Human Understanding *and Other Writings*, (ed.) S. Buckle (Cambridge: Cambridge University Press, 2007), 210.) We may also note Hume's remark, in 'A Letter from a Gentleman to his Friend in Edinburgh' (*ibid.*, 157), that

> you may judge of the candour of the whole charge, when you see the assigning of *one kind of evidence* for a proposition, instead of *another*, is called denying that proposition. . ..

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inductive knowledge-how),[27] and (b) one's lacking any special (*scientia*), guiding, inductive knowledge-that, notably any stability-knowledge-that.

That compatibility is also what Hume's 'sceptical solution' was accommodating. He was describing a respect in which, perhaps contrary to what we might have thought, we have no need to rectify that lack of any philosophical or systematic knowledge of underlying causality. Hence, his 'sceptical solution' was *sceptical* because it did not rectify the lack: it did not deny our lacking that particular sort of knowledge-that of 'secret powers'. In Buckle's terms (115):

> The sceptical solution . . . is sceptical because it accepts that there is indeed no rational insight [that is, 'no genuinely philosophical knowledge of the world'].

But the 'sceptical solution' was also a *solution*, because it explained a respect in which we have no need to rectify that (sceptical) lack (166). It explains that we can still *act* as inductive thinkers, even in the absence of the 'rational insight' (115) Hume has denied us. And there is no harm in this. We remain 'rational animals' (116), although not because of

> any capacity for rational insight into nature's secrets. We do have rational powers, but in this we differ from animals in degree, not

[27] Naturally, this will not prevent the inductive knowledge's being fallible. Hume was well aware of that fallibility. And conceiving of inductive knowledge as at least knowledge-how accommodates this, precisely because our fallible skills, even our cognitive ones, are routinely fallible without ceasing to *be* skills. ('But when is a Humean habit an instance of knowing-how, a real skill — rather than a *mere* habit?' It is knowledge-how insofar as it is a successful habit. 'How successful must it be?' That is the question of how *good* knowledge-how needs to be. Yet this question is not automatically directing us to a problem of philosophical principle for the current suggestion; for in general skills inherently *allow* for this possibility of being more or less good, even vaguely so, while still being present as genuine skills. It can be indeterminate where exactly to distinguish between an exercise of a particular skill and an exercise not of that skill — without there thereby being *no* exercises of the skill. Talking of skills enables us to accommodate this point of epistemological principle. And in making this paper's interpretive point about Hume, this is all that needs to be noted about this larger epistemological issue.)

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> kind — just as human beings themselves have different degrees of this capacity.[28]

Contemporary epistemologists, as we saw in §1, interpret Hume's 'sceptical solution' merely as portraying our continuing to have observations, from which (in spite of his sceptical doubts about the epistemic justifiedness or rationality of doing so) we continue to infer inductively. Those epistemologists will say that Hume would not take himself thereby to be describing anything with *epistemic* impact or power. On the contrary; that *is* what he would take himself to have been doing. His subject just happens not to have been the specific sort of epistemic impact or power upon which contemporary epistemologists focus their energies — which is to say, epistemic justification that is present, in some form or other, as a potential constituent just of knowledge-that.[29]

Thus, for example, we should bear in mind that Hume was describing, not random actions, but what Ryle would call intelligent ones. Admittedly, I have been talking (in a non-intellectualist way) of their not needing to be *guided* by reason or understanding. But possibly a more precise (non-intellectualist) characterization of such

[28] Locke had a similar approach, in his *Essay Concerning Human Understanding*. See I, i, 5:

> The Candle, that is set up in us, shines bright enough for all our Purposes.

See also I, i, 6:

> 'Tis of great use to the Sailor to know the length of his Line, though he cannot with it fathom all the depths of the Ocean. . . . If we can find out those Measures, whereby a Rational Creature put in that State, which Man is in, in this World, may, and ought to govern his Opinions, and Actions depending thereon, we need not be troubled, that some other things escape our Knowledge.

See, too, Edward Craig's argument, in *The Mind of God and the Works of Man* (Oxford: Clarendon Press, 1987), for 'one of the most basic points of [Hume's] philosophy' being the thesis (85)

> that where philosophers thought they saw the operations of [a faculty of] *reason*, the divine spark at work in man, they were watching nothing more than a mundane mechanism and its natural effects in the mind.

[29] That contemporary focus could well be needlessly narrow anyway. We should always bear in mind that there might be much more — or indeed much less — to the epistemic world than is currently discussed in epistemology. For some further remarks on this general theme, see my 'Introduction: Epistemological Progress', *Epistemology Futures*, *op. cit.*

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actions would say that they can be guided without being *supervised* or *overseen*, and that the intellectualist model, in contrast, does require those actions to have been overseen by that means. Distinguishing between (i) being both guided and supervised, and (ii) being guided yet not supervised, allows us to attend to how *observations* can guide our inductive beliefs, independently of reason or understanding somehow overseeing or supervising that process. The idea would be that observations can guide our inductive beliefs even if neither reason nor understanding is functioning as an overseer or supervisor of that process.

Moreover, when this sort of responsiveness to, and use of, one's observations becomes habitual, it can be (as we might now say) an exercise of know-how. And so it becomes epistemic. Clearly, such an exercise may be skilful. But it could also thereby be viewed by Hume as epistemic in at least one sense, being directed as it is — and successfully so — at the formation of true beliefs. Not only does it respond to observational evidence; it can even result in *as many* true inductive extrapolations (that is, as many true inductive beliefs about the unobserved) as might have eventuated if it had been guided authoritatively by some prior stability-knowledge-that, being supervised or overseen by some aspect of reason or the understanding. The presence or absence of an instance of the latter form of *intellectualist* guidance is therefore not the difference between an action's manifesting epistemic power and its not doing so.

Of course, in that lengthy description I have reached for some comparatively contemporary epistemological terms. I need not have done so, though. For the inductive skill or ability — the know-how — that I have described, on Hume's behalf, is what he called *experience*. It makes *use* of passing sensations or observations. Buckle characterizes the Humean conception of experience in the following terms (42):

> understood not as individual sense perceptions but as *connected experience* over time. . . . the Aristotelian sense of connected experience of the world — experience in the sense of 'being experienced', the fruit of extended contact with the world over time.

Such experience can include believing, not merely at a time but over time. It will thereby include habitual believing. *And* it is a practice in which we can readily know how to engage.[30] Hume does not deny

[30] M. R. Ayers describes it as 'the memory of repeated perceptions of similar objects'. See his 'The Foundations of Knowledge and the Logic of Substance: The Structure of Locke's General Philosophy', *Locke's*

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this; far from it, as his 'sceptical solution' attests. And such a skill is what, by borrowing from Ryle, I have called inductive knowledge-how.

Again, therefore, we may interpret Hume's 'sceptical solution' as affirming just that no exercise of any such inductive knowledge-how ever needed any overseeing guidance from a particular possible deliverance of reason or understanding — including some special stability-knowledge-that — if the particular exercise of the inductive knowledge-how in question was simply to *exist*. We might say, then, that some contemporary epistemologists (as portrayed in §1) confuse — as Hume did not — two importantly distinct questions: (i) the question of how such (inductive) knowledge-how is to exist, with (ii) the question of how such knowledge-how is to be, in effect, an especially intellectualist kind of knowledge-that. The Humean epistemological outlook here was more subtle than contemporary epistemology has usually treated it as being.

6. Further Interpretive Comparisons

There are a few other recent attempts by philosophers to show that Hume was not striving to establish what contemporary epistemology calls inductive scepticism — the epistemic unreasonableness of all inductive inference. My own interpretation supplements these attempts. I will discuss two of them in particular,[31] by Don Garrett[32] and by David Owen.[33]

In denying that Hume was an inductive sceptic, each of Garrett and Owen argues that Hume's focus was on the question of how causal beliefs *come into existence*, ostensibly as conclusions of inductive

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Philosophy: Content and Context, (ed.) G. A. J. Rogers (Oxford: Clarendon Press, 1994), 63.

[31] See also Tom Beauchamp and Alexander Rosenberg, *Hume and the Problem of Causation* (New York: Oxford University Press, 1981), ch. 2; Harold W. Noonan, *Hume on Knowledge* (London: Routledge, 1999), 110–131; and Helen Beebee, *Hume on Causation* (London: Routledge, 2006), 36–45.

[32] *Cognition and Commitment in Hume's Philosophy* (New York: Oxford University Press, 1997), ch. 4.

[33] *Hume's Reason* (Oxford: Oxford University Press, 1999), especially ch. 6. See also his 'Hume's Doubts About Probable Reasoning: Was Locke the Target?', *Hume and Hume's Connexions*, (eds.) M. A. Stewart and John P. Wright (Edinburgh: Edinburgh University Press, 1994).

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reasoning. Hume's question was this: Does Reason as such, a distinct and perhaps sovereign faculty of the mind, bring about such beliefs? According to these philosophers, Hume denies that it does; and I agree with them. I offer my account nonetheless, for two reasons. In philosophical terms, it *underlies* Garrett's and Owen's, by providing a more general and fundamental explanation of their shared general point. It also does more justice to the *epistemic* aspects and implications of Hume's argument.

Garrett's main claim (94) is that Hume denies that an inductive inference ever arises via 'any piece of reasoning *about* it' (i.e., about 'this species of reasoning'). As Garrett explains this point, Hume is denying that inductive inferences must include, or be constitutively preceded by, meta-inferences. Owen's main claim (137), likewise, is that, for Hume, 'The problem is how these beliefs are produced, not how they are justified.' In response to which problem, Hume's answer is that these beliefs are not produced via 'an activity of the faculty of reason, conceived of as the discovery and use of intermediate ideas which explain the transition' (132). The putatively intermediate ideas (which is to say, intermediate in position, within a thereby lengthened chain of ideas) would be about the uniformity of nature. In short, therefore, Hume denies that inductive inferences need to include any further ideas of uniformity 'which serve to link the impression from which we start the inference with the idea of the unobserved' (*ibid*.).

Here is where my analysis contributes philosophically to the debate between such interpretations. (1) *Garrett*. Insofar as no *meta*-inference is needed for bringing about an inductive conclusion, no sovereign guidance is needed from Reason, with some independently and antecedently constituted idea commenting upon (and thereby licensing) that inductive conclusion. For the latter non-need is *why* the former one obtains. Philosophically, it is why Garrrett's point obtains. (2) *Owen*. Insofar as no further *intermediate* ideas about nature's uniformity are needed for bringing about an inductive conclusion, again no sovereign guidance from Reason is needed, with some further (independently and antecedently constituted) idea helping to lead to (and thereby licensing) that conclusion. The latter non-need retains its explanatory role here: it is *why* the former non-need obtains. Philosophically, it is why Owen's point obtains.

So, Garrett's and Owen's interpretations may be viewed as instantiating my own. Each amounts to a more specific acceptance, in effect, of my comparatively general thesis that Hume's argument is rejecting an *intellectualism* about how inductive inferences

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proceed.[34] On my analysis, no further idea need intervene in the inductive inference. Specifically (as Garrett would agree), no idea *about* the inference as such need intervene; and (as Owen would agree) no extra idea about uniformity need intervene as a *link* between other ideas within the inference (such that these would remain inferentially inert if not thereby linked). In various specific ways, therefore, Reason does not oversee inductive inference. Our Rylean gloss helps to explain, more generally and fundamentally, why this is so.

It also does increased justice to the epistemically normative aspects of Hume's argument. Owen writes as if Hume's argument lacks epistemic implications, certainly sceptical ones. Yet it does have some. It denies that inductive knowledge-how needs to be guided by any inductive knowledge-that, particularly any special knowledge-that of the world's relevant stability or uniformity. So, for inductive thinkers, there *can* be a lack of a related kind of knowledge; and noting this potential lack can be deemed sceptical.

Nevertheless, even this lack will not make our inductive inferences epistemically unreasonable. Of course, Owen realizes that Hume is not dismissing inductive inference as unreasonable. But we may also regard Hume as describing a sense in which inductive inferences *can* provide knowledge. However, in order to appreciate this, we need to loosen the conceptual hold upon us of the intellectualist conception of knowledge. The knowledge in question, which will be provided by good uses of induction, would be inductive knowledge-*how*, not necessarily knowledge-that. Although this possibility is not discussed by these other philosophers, it merits both interpretive and conceptual attention.

7. More on Intellectualism

This paper's picture amounts to an adaptation and unification, by learning from Rylean epistemological thinking, of the two main strands in Hume's discussion of induction. I will close by emphasizing anew how vital to the paper's interpretive picture of Hume is the Rylean rejection of intellectualism.

[34] Owen (132–134) explains why, in his view, Garrett's interpretation is mistaken in detail, even if correct in generic thrust. I am not attempting to adjudicate between these two philosophers. My claim right now is just that, no matter which (if either) of them is right, my analysis is general enough to assist in explaining that correctness.

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Ryle was saying that knowledge-how can be exercised intelligently even if no prior knowledge-that has been used to support and generate that exercise of knowledge-how. In short, a person does not *need* the prior knowledge-that, if she is to have and to apply the knowledge-how.

Recall again the Humean argument. Hume was showing (in a similar way to how Ryle's own argument unfolds) that the formation of inductive beliefs need not be applying a faculty of *reason* or *understanding*. Contemporary epistemologists tend to treat this as a denial just that any *justificatory* strength is passed from observational evidence to inductive beliefs. However, we have seen, that interpretive reaction by epistemologists fails to do justice to Hume's thinking. In Rylean terms: Hume was distinguishing some especially reflective and reasoned inductive knowledge-that from everyday or habitual inductive knowledge-how. But if we try to understand his approach wholly in terms of the contemporary concept of epistemic justification, we overlook that — tailored as the concept of epistemic justification is to a corresponding concept only of knowledge-that, not knowledge-how. Again, Hume's argument is a rejection only of one specific instance of intellectualism — namely, an intellectualism about people's practices of forming inductive beliefs in particular. And, in rejecting intellectualism about a kind of action K, one need not be denying anything more than a thesis about one specific aspect of what it takes to perform, intelligently or skillfully, an instance of K. One need not thereby be denying that there *are* instances of K. One's denial concerns their nature, not their existence — as Hume's 'sceptical solution' reminds us (for the particular case of skilfully formed inductive beliefs).

Hume is denying that intellectualism is true of people's knowing how to think at all inductively, including therefore their knowing how to think accurately and inductively. Hence, his point is that, whenever one is forming an inductive belief, one *need not be guided by prior knowledge that* relevant causal stability is in place (such as by prior knowledge of 'secret powers' underlying the situation). To deny this point of Hume's is to accept an intellectualism about any action of forming an inductive belief. Yet if Hume is right, this would commit one to conceiving of there being a vicious infinite regress of ever *more* instances of prior inductive knowledge-that, if there is to be even a *single* instance of inductive knowledge. And once we come to see the latter instance of inductive knowledge as being inductive knowledge-how, that vicious-infinite-regress result becomes an instance of Ryle's (§2 above).

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Ryle was denying that any action (even an intelligent action, manifesting some knowledge-how) needs to be controlled or supervised by an independent faculty or power of reason as such, one which would typically express itself through the presence and application of prior, already present, knowledge-that. Hume's result applied only to the formation of beliefs — and, even then, only of inductive beliefs. Note that we may accept these results without embracing doxastic voluntarism — that is, without regarding the formation of an inductive belief as wholly or partly involving an exercise of voluntary control. *However* our inductive beliefs come into existence, prior and guiding knowledge-that need not have been part of the process.[35]

Understandably, we might wish our inductive practices to provide inductive knowledge-that. And, once more, I am not saying that Hume would deny that this can occur.[36] Still, we should not forget how the *exercising* of an inductive practice will, if we are relevantly skilful, most obviously be a manifestation of inductive knowledge-how

[35] The following sort of objection (suggested to me by Paul Snowdon) then needs to be countered:

> Maybe the way in which our inductive beliefs come into existence *is* vital for this paper's interpretation. In particular, is the formation of an inductive belief an *action* at all? If inductive beliefs are not formed voluntarily, instances of forming them might well not be genuine actions. And if the formation of an inductive belief is not an action, it is also not an exercise of knowledge-how.

Hume himself did not regard belief-formation as subject to the will (48). Would he therefore not have deemed an instance of belief-formation to be an action, an exercise of knowledge-how? Certainly *we* need not deny this status to such belief-formation. After all, belief-formation like that can be quite skilful, considered purely as a way of registering accurate opinions — no matter that it might be done with no overarching awareness of one's being skilful. In that sense, it can *just happen* skilfully, given how one is placed within the world. That was Hume's point, too, in talking of custom or habit, and in acknowledging that we do not understand 'the ultimate reason of such a propensity' (43). As he realized, customs or habits can help one out as a believer, *even* if one does not notice, let alone understand, how this is occurring. (And so note 20's point about externalism returns. Even if inductive belief-formation's epistemic merits are to be understood externalistically, this does not entail that skills are not involved. The action in question need not be a consciously planned and controlled action — explicable in intellectualist terms. But this does not entail its not being an action. It can be skilful. Knowing-how is apt.)

[36] Recall note 17 above.

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before it is equally obviously anything else (such as a piece of inductive knowledge-that which is *not* an instance of knowledge-how).

Epistemologists have overlooked this possibility in interpreting the philosophical import of the Humean account. They have thought only of inductive knowledge-*that* as involved or implicated throughout the Humean sceptical reflections. In this respect, however, contemporary epistemology has not served Hume well: he was also discussing inductive practice, inductive know-how. Correlatively, too limited a range of conceptual options has been used in interpreting this segment of his philosophical legacy. We now know how to do better in that respect. What philosophers now term 'the problem of inductive scepticism' was not Hume's problem.[37]

University of New South Wales

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