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Peter Millican

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## SYMPOSIUM

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# Hume on Reason and Induction: Epistemology or Cognitive Science?

PETER MILLICAN

The fourth chapter of Don Garrett's book *Cognition and Commitment in Hume's Philosophy*,<sup>1</sup> entitled "Reason and Induction," contains a powerful and provocative discussion of Hume's argument concerning induction, in which Garrett first outlines the well-known traditional "skeptical" and contemporary "nonskeptical" types of interpretation, before criticising both types very effectively. He then ends by proposing his own rival interpretation which sees Hume's argument as descriptive rather than normative, and takes its aim as being to establish a fundamental thesis in cognitive psychology concerning the *causes* of our inductive reasonings, with no direct implications, either skeptical or non-skeptical, regarding their *epistemic basis*. In Garrett's view, Hume's concern is to establish that our practice of reasoning inductively, though itself involving the exercise of our inferential faculty (i.e., "reason"), does not have a *foundation* in that faculty—in other words, that our inductive reasoning does not result from our first having made a higher-level inference about the reliability of such reasoning:

In arguing that inductive inferences are not "determin'd by reason," Hume is neither expressing an *evaluation* of the epistemic worth of inductive inferences.... Nor is he denying that inductive inferences are a *species* of reasoning. He is denying only that we come to engage in this species of reasoning as a result of any piece of reasoning *about* it. (CCHP 94)

If correct, this interpretation implies that we radically rethink what Garrett describes as "one of the most famous arguments in the entire history of philosophy," which Hume himself "clearly regards...as one of his most important and most original contributions," and which is indeed commonly regarded today as constituting "the essential core of Hume's philosophy" (CCHP 76-77). So it is to Garrett's discussion on the interpretation of this argument that I shall devote most attention here. I shall begin with an outline of his objections to the familiar interpretations of it.

## I. Garrett's Objections to the Skeptical Interpretation

The traditional interpretation of Hume's argument concerning induction sees it as a straightforwardly skeptical attack on the rationality of inductive reasonings, aimed at proving that such reasonings are entirely devoid of evidential value. In relatively recent years this interpretation has been advanced and developed most prominently by Antony Flew (1961) and David Stove (1973), both of whom see Hume's argument as founded on an implicit assumption of deductivism, thus explaining Hume's own endorsement of it whilst undermining its pretensions to persuade anyone who is not already convinced of the illegitimacy of non-deductive inference. Against this interpretation, Garrett presents three powerful objections. First, that Hume's supposed extreme skeptical conclusion seems incompatible with his own widespread use and endorsement of inductive reasoning. Secondly, that even if this first objection can be blunted by appeal to Hume's involuntarist and non-rationalist psychology (which implies that he, like everyone else, will inevitably continue to reason and believe regardless of his philosophy) nevertheless a skeptical reading is hard to square with the unconcerned *manner* in which Hume continues to use and to recommend induction. Thirdly, that Hume's argument is logically inadequate to yield the skeptical conclusion traditionally ascribed to it: "there is no reason why Hume *should* regard the famous argument as itself sufficient to establish that inductive inferences lack evidentiary value" (CCHP 81-82). Garrett backs up this third objection with an outline of the structure of the argument as it occurs in the *Treatise*, an outline which (unlike Stove's well-known structure diagram) is both plausible and faithful to the text.<sup>2</sup>

## II. Garrett's Objections to the Nonskeptical Interpretation

The contemporary nonskeptical interpretation of Hume's famous argument, like the traditional skeptical interpretation, sees it as yielding a negative epistemological result about the basis of induction in reason, but crucially reinterprets this result by taking "reason" here to be understood by Hume in only a narrow "rationalist" or deductivist sense which is not Hume's own. On this interpretation, therefore, the argument does nothing

to impugn the reasonableness of induction, but shows only the impotence of a concept of reason that is itself Hume's primary target and which he rejects, manifesting this rejection most clearly by thereafter proceeding to use the term "reason" in a quite different, broader and non-rationalist sense that unashamedly embraces both demonstrative and probable inference.

Garrett devotes a fair amount of space to discussing four different versions of this interpretation, dealing in turn with the work of Beauchamp and Rosenberg (1981), Arnold (1983), Broughton (1983), and Baier (1991). However his objections to all of them are very similar, and again essentially reduce to three main points. First, that it seems implausible, given Hume's general Lockean understanding of the notion of reason (according to which reason comprises both demonstrative and probable inference), to take him to be using that notion in a special non-Lockean "rationalist" sense within the famous argument, when he in no way signals such a departure from his usual practice. Secondly, that Hume's various summaries of his own conclusion—when he states that "we have no reason" to draw inductive inferences (T 139) and suchlike—seem to be far stronger than merely a denial that induction meets narrow rationalistic standards. Thirdly, that if the argument's intended conclusion were really so modest, then much of its structure, and in particular Hume's careful proof that the "Uniformity Principle" cannot be supported by probable reasoning, would be entirely, and manifestly, redundant.

### III. Garrett's Three Criteria of Adequacy

Whether by design or otherwise, Garrett's three points against each of the skeptical and nonskeptical interpretations follow parallel themes. The first objection in each case concerns Hume's consistency in his use of the term "reason" and in his implicit or explicit normative judgements about what is, and is not, reasonable. The second objection in each case concerns the strength of Hume's conclusion and his perception of its impact—the words in which he expresses it and the extent to which it does, or does not, unsettle him. Finally, the third objection concerns the force and structure of the famous argument—whether it has the power to imply the conclusion that Hume supposedly draws from it, and whether its various parts make sense when seen in the context of an attempt to reach that conclusion. So we can draw from Garrett's discussion three corresponding criteria of adequacy for any interpretation of Hume's argument, which will shortly enable us to examine his own position in an appropriate contrast to those that he dismisses. First, however, we must see in a little more detail how he spells out that position in his book.

#### IV. Garrett's Own Interpretation

Having dismissed, on what are genuinely strong grounds, both of the hitherto dominant interpretations of Hume's argument, Garrett presents his own interpretation relatively briefly, somewhat giving the impression that it will succeed by default as long as it can evade the objections already raised against the "skeptical" and "nonskeptical" alternatives. In contrast to both of these, his approach is radically unconventional in seeing the argument as concerned only with cognitive psychology—with what *causes* us to draw inferences in the way that we do—and not at all with the epistemic credentials of those inferences. So he takes the word "reason" and its cognates here to be referring not to any normative, evidential conception of rationality (whether narrowly "rationalist" or otherwise), but simply to the natural human faculty that is responsible for our actual reasoning behaviour: the faculty that determines how we argue and make inferences. This natural faculty of reason is therefore, by definition, the *causal* foundation of every one of our probable inferences, and this might seem to be in direct conflict with the oft-repeated conclusion of Hume's argument, that probable inference is not founded on reason. This apparent conflict is, no doubt, why previous interpreters have almost universally taken Hume's "reason" to be primarily a normative notion distinct from that natural faculty, and why many have as a consequence felt compelled to see Hume as at some point either inconsistent or equivocal in his use of that term and its cognates.<sup>3</sup> But Garrett has noticed that this circle could conceivably be squared by interpreting Hume's conclusion not as a claim about the immediate causation of *each* of our probable inferences, but rather, as a higher-order claim about what determines us to indulge in the *general* practice of probable inference in the first place. As he puts the point:

Hume should be interpreted quite literally, as making a specific claim, within cognitive psychology, about the relation between our tendency to make inductive inferences and our inferential/argumentative faculty: he is arguing that we do not adopt induction on the basis of recognizing an *argument* for its reliability, for the utterly sufficient reason that there is no argument ("reasoning" or "process of the understanding") that could have this effect.

It must be emphasised that this does not mean that inductive inferences are not themselves *instances* of argumentation or reasoning.... His point is rather that...they are a class of "reasonings" (inferences or arguments) that "reason" (the faculty of making inferences or giving arguments) does not itself "determine" (cause) us to make. (CCHP 91-92)

Let us now examine how well this interpretation stands up to the three criteria of adequacy that we have drawn from Garrett's own discussion.

### V. First Criterion: Lockean and Humean "Reason"

Garrett claims that his own univocal interpretation of Hume's notion of "reason" corresponds with Locke's notion, in encompassing both demonstrative and probable inference (CCHP 85). However the matter is not nearly so simple, because a proper comparison between Lockean and Humean reason must take into account not only their presumed scope, but also their supposed nature. In the chapter on "Reason" in the *Essay*,<sup>4</sup> Locke states repeatedly that he takes this faculty to be one whose operations (notably inference) essentially involve mental *perception*, and this applies both to demonstrative and probable inference:

*Inference...consists in nothing but the Perception of the connexion there is between the Ideas...; as Reason perceives the necessary, and indubitable connexion of all the Ideas...one to another, in each step of any Demonstration...so it likewise perceives the probable connexion of all the Ideas...one to another, in every step of a Discourse, to which it will think Assent due. (ECHU IV xvii 2).*

It is not clear whether Locke views the direct perception of demonstrative and probable connexions between ideas as itself an operation of reason, or whether instead he sees reason as working with perceptions provided by a separate faculty or faculties (presumably intuition in the case of demonstrative connexions).<sup>5</sup> But whatever the verdict on this taxonomic issue, it is clear that Hume's account of probable reasoning is radically different from Locke's, for if there is one uncontroversial truth about Hume's account of induction, it is surely that according to him probable inference depends crucially on instinctive custom and not at all on mental perception of probable connexions. The upshot is that Hume must differ from Locke *either* in denying that probable inference falls completely within the province of reason, *or else* in denying that reason is a faculty whose operations essentially involve mental perception. Both denials are indeed to be found in the *Treatise*, but significantly they occur in different places. The first (which implies that probable inference, though indeed a form of *reasoning*, is "not determined by" *the faculty of reason*) is emphasised repeatedly immediately after the argument concerning induction itself (e.g., T 91, 92, 97). The second (which openly admits, as operations of the faculty of reason, inferences that are founded on the vivacity of ideas through association rather than on mental perception) occurs later, when as we shall see Hume reassesses the relationship between "reason" and "the imagination" (e.g., T 103, 225, 265).

All this substantially reduces the force of Garrett's first objection to interpretations that see Hume's notion of reason as being reinterpreted between the famous argument and most of the remainder of the *Treatise*. For it is precisely that argument which forces Hume to move away from the Lockean paradigm, providing a clear motive for some such reinterpretation even if (as Garrett stresses) none is explicitly announced or highlighted in the *Treatise*. And there is significant, albeit controversial, evidence that a reinterpretation of "reason" was indeed intended or at least belatedly acknowledged by Hume, in a footnote occurring quite soon after the famous argument (and inserted while the *Treatise* was going through the press), in which he points out a closely related equivocation in his notion of the imagination:

In general we may observe, that as our assent to all probable reasonings is founded on the vivacity of ideas, it resembles many of those whimsies and prejudices, which are rejected under the opprobrious character of being the offspring of the imagination. By this expression it appears that the word, imagination, is commonly us'd in two different senses; and tho' nothing be more contrary to true philosophy, than this inaccuracy, yet in the following reasonings I have often been oblig'd to fall into it. When I oppose the imagination to the memory, I mean the faculty, by which we form our fainter ideas. When I oppose it to reason, I mean the same faculty, excluding only our demonstrative and probable reasonings. (T 117-118n)

My own view of what is going on here can perhaps best be summarised diagrammatically:

	Demonstration	Induction	Whimsies & Prejudices	Memory
Lockean	Reason = Perception of evidential connexions		Imagination = Representation of ideas	
Strict Humean		Imagination = Representation and association of ideas		Memory
Loose Humean	Reason = Established operations of association		Imagination = Irregular operations of association	Memory

For the Lockean, demonstration and induction fall unequivocally within the domain of reason because they are founded on mental perception of evidential connexions. The imagination is quite distinct, and closely allied with the memory (if not necessarily encompassing it). Hume's argument concerning induction undermines this picture by showing that induction is founded not on mental perception but on the vivacity of ideas through association; even further, his notorious argument on scepticism with regard to demonstrative reason (T I iv 1) indicates that this, too, crucially depends upon the idea-enlivening propensities of the imagination (so we reach the "Strict Humean" position illustrated in the diagram). However, having thus done away with the Lockean understanding of reason's essential nature and its implied warrant based on mental perception, Hume is anxious to avoid the consequence that probable reasoning is on all fours with the "whimsies and prejudices" that are the imagination's more typical offspring, so he continues to make use of a reinterpreted reason/imagination distinction by drawing the line between them in the same place as Locke, albeit on a very different basis (the "Loose Humean" position in the diagram). Now the distinction has to be founded not on the absolute contrast between mental perception and the operations of the imagination, but instead on a division *within* the operations of the imagination, between on the one hand those that are "established," "general" (T 267), "permanent," "irresistable," "universal," "solid" and "consistent" (T 225-226), and on the other hand those that are relatively "irregular," "changeable," "weak" (T 225), "trivial" (T 267) and "frivolous" (T 504n).

To sum up, therefore, the attribution to Hume of an ambiguity or transformation in his notion of reason is by no means gratuitous or ad hoc, but has considerable justification, both philosophical and textual. *If* the point of his argument concerning induction is, as I have suggested, to deny that probable inference can be warranted through mental perception in the way that Locke had supposed; and *if*, as seems clear, Hume was nevertheless anxious to preserve the honorific title of "reason" for probable inference (e.g., to distinguish respectable inductive science from superstition); *then* it is entirely to be expected that his notion of reason should be transformed as a result of his famous argument. And so ironically the same point that Garrett rightly urges against the contemporary nonskeptical interpretation of that argument—namely, the importance of sensitivity to the dominant Lockean paradigm within which Hume was writing—is precisely what might lead us to expect such an ambiguity or transformation in his writings. The non-skeptical interpretation may indeed have gone seriously wrong in seeing the notion of "reason" within the argument as being essentially deductivist (and hence non-Lockean), but this view of the argument as a pivot for the Humean reinterpretation of that notion is independently quite plausible.



## VI. Second Criterion: Hume's Conclusion and its Impact

How radical is the conclusion of Hume's famous argument, and how far should he, or we, be seriously unsettled by it? Garrett sees his interpretation as steering an appropriate middle course between the two extreme answers to these questions that have previously dominated the literature: on the one hand, the skeptical reading that takes the argument to be denying induction any evidential force whatever; and on the other, the nonskeptical reading according to which induction is left entirely unaffected by an argument whose target is not induction itself, but only a bogus rationalistic ideal of reason that was wrongly supposed to provide its foundation. Against the latter interpretation, Garrett quotes a well-known passage from T 139, but in doing so he omits what I believe is a sting in its tail against his own position:

Let men be once fully perswaded of these two principles, *That there is nothing in any object, consider'd in itself, which can afford us a reason for drawing a conclusion beyond it; and, That even after the observation of the frequent or constant conjunction of objects, we have no reason to draw any inference concerning any object beyond those of which we have had experience*; I say, let men be once fully convinc'd of these two principles, and this will throw them so loose from all common systems, that they will make no difficulty of receiving any, which may appear the most extraordinary.

Garrett comments on Hume's second italicised clause:

Hume clearly offers [this] as a recapitulation of his conclusion about induction. But the claim that we have...*no reason* for making inductive inferences appears considerably stronger than...the claim that they are [less than certain]. (CCHP 86)

I fully agree, but to my mind the claim that *we have no reason* for making inductive inferences also appears considerably stronger than the mere denial that we reason inductively because we have been moved to do so by a higher-level argument concerning induction's reliability.<sup>6</sup> Moreover Hume's final clause (omitted by Garrett) makes very clear that this appearance is no illusion—for how could he imagine that the denial that we are led by an argument to take up the practice of induction would be sufficient to “throw [men] loose from all common systems,” when it was anyway no part of the established Lockean orthodoxy to suppose that our inductive practices *were* founded on such an argument? Rather, Locke sees induction as founded on the immediate *perception* of probable connexions, conditioned by what we observe “in the ordinary course of Things” (ECHU IV iii 28), and as far as I know he never presents any further argument aimed at proving that such

perception, or the inductive inferences based on it, must be reliable, and never claims that people are moved to take up induction through the recognition of any such argument. The nearest he gets to doing so is when accounting for our idea of power (ECHU II xxi 1), where he hints at an argument which Hume was later to spell out but dismiss as a putative justification of induction (T 90-91; EHU 36-38). But this argument makes no appearance in Locke's discussion of reason itself, and an insistence that induction *should* be based on such an argument seems somewhat contrary to the spirit of his view of reason, which he saw as having a God-given "native Faculty" to draw inferences without dependence on formal rules (ECHU IV xvii 4), and operating accordingly, as we have seen, on the basis of directly perceived demonstrative and probable connexions between ideas rather than such higher-level reflections.

The passage from T 139 is not the only statement of Hume's conclusion that seems too strong to square with Garrett's interpretation. For on this interpretation it is only the *general practice* of induction that fails to be determined by reason, and each of our *particular* inductive inferences is itself an instance of the operation of our reason. But Hume's sceptical pronouncements do not confine themselves in this way:

When the mind...passes from the idea or impression of one object to the idea or belief of another, it is not determin'd by reason. (T 92; see also the similar passage at T 97)

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. (EHU 32)

If "reason," or equivalently "the understanding,"<sup>7</sup> is just the human faculty that underlies our inferential behaviour, then it is hard to see why Hume should deny that a *specific* inference, and the drawing of a *particular* conclusion, are "determin'd by" or "founded on" that faculty. And if he is merely denying that we are moved to practise induction by some process of higher-order *reasoning*, then why when he uses this very word rather than the faculty term "reason," does he pointedly broaden it to the all-inclusive "reasoning, or any process of the understanding"? The following passage is even more emphatic:

He...infers the existence of one object from the appearance of the other...[but it is not] by any process of reasoning, he is engaged to draw this inference.... And though he should be convinced that his understanding has no part in the operation... (EHU 42)

On Garrett's interpretation, our reason or understanding is precisely our inferential faculty, and is therefore certainly responsible for our inductive reasoning even if it is not the source of any higher-order reasoning that leads us to practise it. So Hume must here be seen as sloppy to the point of explicit self-contradiction, in saying that our inferential faculty "has no part" in the drawing of a probable inference.

## VII. Third Criterion: The Argument's Force and Structure

In the course of criticising the traditional skeptical interpretation, Garrett provides an excellent summary of Hume's argument as it occurs in the *Treatise*, adding the comment that "the structure and language of the other versions of the argument are parallel" (CCHP 82). On the basis of this summary he describes Hume's argumentative procedure as follows:

The general strategy is clear: to argue (i) that "determination of" inductive inferences "by reason" requires that a certain proposition (the Uniformity Thesis) be "founded" on some argument, an argument that must be of one of two kinds—demonstrative or probable...—and then to argue (ii) that neither kind of argument can do the job required. (CCHP 82)

He goes on to draw two contrasting morals—that on the one hand, stage (i) is too narrowly focused (on types of *argument*) if Hume's aim were to show that induction is devoid of evidential value (the most it could show is that induction cannot be founded on *argument*, which of course fits Garrett's own interpretation well); while on the other hand, stage (ii) seems too broad if Hume's aim here were to show only that induction cannot be founded on *demonstration*. So for the purposes of the skeptical interpretation Hume's argument is too weak, and for those of the nonskeptical interpretation, it is too strong.

I shall now try to show that on Garrett's own interpretation, Hume's argument is in different respects *both* too weak *and* too strong. Too weak, in that Hume focuses only on *legitimate* forms of argument which on Garrett's principles he has no right to do; too strong, in that at least in the *Enquiry*, Hume clearly addresses and dismisses the possibility that induction could be based on non-inferential grounds.

To start with the second and less crucial part of my claim, it can I believe be conclusively shown that the argument of the *Enquiry* is significantly different in structure from that of the *Treatise*, and in more than one respect. However, I shall not go into detail here, because I have written on this extensively elsewhere (see endnote 2), and for present purposes it is sufficient to draw attention to the passage in the *Enquiry* where Hume explicitly establishes the point that argument—a chain of reasoning

involving intermediate propositions—is necessary if induction is to be appropriately founded:

Now this is a process of the mind or thought, of which I would willingly know the foundation. It is allowed...that there is no known connexion between the sensible qualities and the secret powers; and consequently, that the mind is not led to form such a conclusion concerning their constant and regular conjunction, by anything which it knows of their nature. As to past *Experience*...why this experience should be extended to future times, and to other objects...this is the main question on which I would insist.... At least, it must be acknowledged that there is here a consequence drawn by the mind; that there is a certain step taken; a process of thought, and an inference, which wants to be explained.... I shall allow, if you please, that the one proposition may justly be inferred from the other.... 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. There is required a medium, which may enable the mind to draw such an inference.... (EHU 33-34)

It is only after this that Hume goes on to itemise the various types of argument, and to examine both demonstrative and probable reasoning in turn. So on Garrett's interpretation this passage seems hard to account for: why should Hume go to the trouble of explicitly denying that induction can be founded on perception of objects' powers, or on intuition, if his only concern is to rule out *argument* as its basis?

Although this objection is very similar in spirit to that which Garrett correctly urges against the nonskeptical interpretation, it is admittedly less decisive, because it concerns only the argument as it occurs in the *Enquiry*, and indeed a passage within that argument in which Hume might fairly plausibly be thought to be "beating about the neighbouring fields" (T 78) rather than going straight to the heart of the matter.<sup>8</sup> Besides, the additional considerations that Hume adduces here, even if they are *irrelevant* to his purpose on Garrett's interpretation, clearly do nothing to *undermine* his argument. Far more serious, therefore, is my complementary claim, that Hume's argument in both the *Treatise* and the *Enquiry* is far too weak to establish the proposition which, according to Garrett, is his intended conclusion.

Suppose Hume were indeed primarily concerned to show that we are not moved to practise induction on the basis of a higher-order argument about it—what would be the appropriate way for him to proceed? Surely it would be to focus on considerations such as the following. First, that infants, and

animals, universally make use of inductive prediction even though they are clearly in no position to understand, let alone to frame for themselves, higher-order arguments about it. And secondly, that we often characteristically draw inductive conclusions unreflectively and immediately, even in cases where we have never before reflected on the relevant uniformity. Both of these have to do with *ratiocination*, or more precisely, with its absence, and both happen to be points that are indeed made by Hume, but importantly only *after* the statement of his famous argument (the first at EHU 39 and in his discussions on the reason of animals; the second at T 103-104). In both cases, he draws the moral that these points corroborate the conclusion of that argument, but they clearly do not constitute essential, or even significant, parts of it.

Now let us contrast all this with the considerations that Hume actually does adduce in the development of his argument:

- That causal connections *cannot* be known a priori, but *can only* be discovered by experience.
- That any inference from experience, if it is to be founded on reason, *must* be based on the supposition of a resemblance between observed and unobserved.
- That this supposition *cannot* be known by intuition, nor established through sensory knowledge of objects' powers, but *must* therefore be founded on argument if it is to play the required role.
- That any argument for this supposition *can only* be demonstrative or probable.
- That because its contrary is conceivable, it *cannot* be the subject of demonstration.
- That no probable argument for the supposition is possible either, because any probable argument *must* take it for granted and would therefore be "going in a circle" (EHU 36).

Now on Garrett's interpretation I just do not see how Hume has any right to help himself to all these "cannots," "can onlys," and "musts." He was well aware that previous philosophers had *purported* to know truths about causation a priori and to demonstrate matters of fact,<sup>9</sup> and his writings include plenty of refutations of bogus arguments that fit neither of the categories of demonstrative or probable inference as he characterises them (indeed the notorious final paragraph of the first *Enquiry* is directed precisely against such bogus arguments, and "Hume's Fork," as it has come to be called, is entirely premised on their existence).<sup>10</sup> So the only way to make sense of what Hume says, in my opinion, is to see him as prescribing limits not on what *can* be claimed, or inferred, or argued, but on what can *legitimately* be claimed, or inferred, or argued. In other words he must be

operating with a concept of reason which is *epistemological* and *normative* rather than, as Garrett claims, purely *psychological* and *descriptive*. Otherwise his argumentative strategy is gratuitous at best, and at worst incomprehensible.

As a particular example, let us take his claim that the Uniformity Principle has to be founded on argument if it is to play the required role. Why on earth should Hume feel able to claim this, if the "required role" is simply to function as a premise in some process of ratiocination—specifically, some piece of reasoning, good or bad, for the conclusion that induction will be reliable? The Uniformity Principle could play *this* role even if it were merely an arbitrary flight of fancy, or an assumption which we take for granted because it has been implanted by God, by nature, by Descartes's evil demon, or by we-know-not-what. The appropriate way to show that it doesn't play this role, therefore, would be not to ask questions about its epistemological credentials, or the arguments on which it itself might be founded, but to focus purely on whether it features in the psychology of the reasoning subject—the sort of thing that Hume considers at T 103-104 but *not* within his famous argument.

Again, suppose the suggestion were to be made that we reason inductively on the basis of something like the Lockean argument which Hume canvasses at T 90 and EHU 36-37: we see that objects have behaved in uniform ways, infer the existence of powers which make them do so, and conclude that future objects will behave in the same ways because of these powers. Hume himself responds to this suggestion (T 90-91; EHU 37-38) by showing that the Lockean argument itself presupposes an inductive assumption—that similar objects will continue to be endowed with similar powers—and he concludes that such an argument cannot provide a basis in reason for induction. This response makes perfect sense if Hume's aim is to show that the argument cannot *justify* inductive inference, but is largely beside the point if instead he is aiming to show that the argument cannot *motivate* us to perform inductive inference. For even if the Lockean argument indeed takes for granted a particular inductive assumption, and hence can persuade us only if we are already disposed to reason inductively *in that respect*, this leaves quite open the possibility that such an argument might motivate us to perform *other* inductive inferences. The fact that this inductive assumption has no non-circular justification indeed makes it inappropriate as a solid *epistemological* basis for any further inductive inference, but in no way prevents its playing a role *psychologically* as a premise in such an inference.

In fact Hume acknowledges that a general principle of uniformity can indeed be derived from experience (T 105, T 132, T 173), and can then play the role of a premise in further inductive inference, for example when we draw general conclusions from a single "experiment" (T 104-105, T 131). He also states that most inductive inferences, where past experience is not

completely uniform, involve the conscious weighing of “the experiments, which we have on each side” (T 133). So as regards the *psychology* of induction, no very substantial universal conclusion can be drawn—some inductive inferences are immediate unreflective operations of custom (T 104, T 133); others involve significant ratiocination, including not only careful consideration of past instances but sometimes even explicit application of a principle of uniformity, with this principle itself being supported in turn by reflection on past experience. However, Hume presents the conclusion of his argument concerning induction as one that applies to *all* inductive reasoning: “in all reasonings from experience, there is a step taken by the mind which is not supported by any argument or process of the understanding” (EHU 41). Not only does the language of “support” here sound distinctly epistemological, but also, it is hard to see—in view of the points just made—how this conclusion *could* instead be understood as any psychological claim that Hume himself would wish to maintain.<sup>11</sup>

### VIII. Conclusion: Garrett’s Hume and the Hume of the *Enquiry*

Garrett has performed a major service to Hume scholarship in developing his interpretation of Hume as a thoroughgoing empirical cognitive psychologist—every chapter in his book is interesting and illuminating, and sheds new light on controversies both old and new. Nor is this verdict shaken in the least by my suggestion that his interpretation is fundamentally mistaken: even where Garrett (in my view) misunderstands Hume’s intentions, he does so because of a genuine unclarity or inconsistency in Hume’s writings, and thus highlights areas where further research and discussion are needed.

The particular example of such an area on which I have focused here centres on Hume’s notion of “reason,” which Garrett takes to be simply the natural human “faculty of reasoning: of making inferences, or providing, appreciating, and being moved by arguments” (CCHP 27). He accordingly interprets Hume’s famous argument about induction as concerned not with epistemology (what *warrant* we may have for inductive inference), but with psychology (what *causes* or *motivates* our inductive inferences). In developing this position Garrett criticises, very effectively, the two hitherto dominant readings of Hume’s argument, which he calls the “traditional skeptical” and the “contemporary nonskeptical” interpretations. Some of his criticisms of the latter are, I believe, unanswerable,<sup>12</sup> while his criticisms of the former at least demand a careful reply from anyone who would continue to interpret Hume as the inductive skeptic of traditional philosophical history. Such a reply can, I believe, be made, but not without cost. In particular, it requires that Hume’s notion of “reason” be interpreted as ambiguous, with a significantly different meaning within the famous argument from that which it carries later in the *Treatise* and elsewhere.<sup>13</sup>

What I have tried to show here is that Garrett's interpretation too carries a significant cost. Admittedly it has the merit of simplicity and elegance in reading Hume's "reason" as univocal, but I have claimed that the price of this is to render Hume's famous argument inappropriate and even incoherent. If Hume's primary intention in that argument were, as Garrett maintains, to establish only psychological truths about the causes of our inferential behaviour, then Hume—of all people—could not consistently set about this by means of a prioristic reasoning regarding the possible arguments that might motivate us. It is a central pillar of his thought that causal relations can be established only by observation and experience, and I find it inconceivable that the author of Section VII of the *Enquiry* (much of which has the explicit purpose of refuting any claim to a prioristic knowledge of the mind's workings) would proceed to investigate an issue of psychological causation in any other way.<sup>14</sup>

Garrett's interpretation also carries another related cost, that of making Hume's thought far less relevant to us as philosophers today. For Garrett's Hume seems to me to be guilty of precisely the sin which generations of analytic philosophers have alleged, namely a "psychologism" which damagingly confuses psychological with epistemological issues. There is, I suspect, a fair amount of truth in this allegation, at least as regards the Hume of the *Treatise*. But in my view the Hume of the *Enquiry* is a far more coherent figure, who no longer uses terms such as "reason" and "evidence" in the psychologistic way that Garrett emphasises,<sup>15</sup> and whose principal focus is now very clearly on epistemology and questions of rational warrant. Again, the Hume of the *Enquiry* views argument in a far more modern way than does Garrett's Hume—thus Section IV of the *Enquiry* seems to operate with a distinction between "demonstrative" and "probable" (or "moral") arguments which, like the modern deductive/inductive distinction, depends primarily on the logical relationship between premises and conclusion rather than on the psychological "degree of evidence" which the argument confers, or on the assurance we have regarding the epistemological status of the argument's premises (cf. CCHP 27, 87, 94).<sup>16</sup> All this adds up to a clear trend in Hume's thought towards seeing his theory of reason and induction in epistemological rather than psychological terms, a trend that we would surely do well to follow.

To conclude, Garrett's interpretation of Hume's views on reason and induction is interesting and suggestive, supported by solid scholarship and by a powerful vision of what Hume is up to. However I believe that its emphasis on Hume the cognitive psychologist undervalues the most central contribution of Hume the philosopher, a contribution which Hume himself was able to appreciate far more clearly by the time he came to write the *Enquiry*, and whose presentation was modified accordingly. Garrett's Hume is located squarely in the *Treatise*, where there are indeed strong currents of



psychology mixing in with the epistemology. Even in the *Treatise*, however, Garrett's interpretation of Hume as a purely empirical cognitive psychologist has great difficulty in making good sense of the famous argument concerning induction, and certainly if we are to take our cue from Hume's later example, we have compelling grounds for seeing the concept of reason on which that argument hinges as primarily normative and epistemological rather than psychological. Garrett is quite right (CCHP 95) to see Hume's argument as a fundamental and seminal contribution to human learning, and as a far stronger argument than most of Hume's previous interpreters have supposed. But it earns this status as a fundamental contribution not, as Garrett claims, in descriptive cognitive psychology, but rather in normative epistemology.<sup>17</sup>

## NOTES

1 Don Garrett, *Cognition and Commitment in Hume's Philosophy* (New York: Oxford University Press, 1997). Hereafter abbreviated "CCHP," with page numbers inserted parenthetically in the text. References to Hume's works will be to the following editions: David Hume, *A Treatise of Human Nature*, edited by L. A. Selby-Bigge, 2nd ed. revised by P. H. Nidditch (Oxford: Clarendon Press, 1978), hereafter abbreviated as "T" with page numbers inserted parenthetically in the text; and David Hume, *Enquiries Concerning Human Understanding and Concerning the Principles of Morals*, edited by L. A. Selby-Bigge, 3rd ed. revised by P. H. Nidditch (Oxford: Clarendon Press, 1975), with the first *Enquiry* abbreviated as "EHU" with page numbers inserted parenthetically in the text.

2 Though Garrett's structural analysis does not fit nearly so well the argument presented in Section IV of the *Enquiry concerning Human Understanding*, a point which I believe to be philosophically significant but will not develop further here. For a detailed analysis and interpretation of the argument as it appears in the *Enquiry* see my "Hume's Argument Concerning Induction: Structure and Interpretation," in *David Hume: Critical Assessments*, edited by Stanley Tweyman, six volumes (London: Routledge, 1995): II 91-144 (hereafter abbreviated "Millican").

3 Sometimes Hume clearly does use the term "reason" in a purely descriptive and hence normatively neutral sense, for example when he talks about "the reason of animals," or describes our reason as "fallacious" (EHU 55) and "weak" (T 182; EHU 72). But as we shall see, it is difficult to provide a coherent interpretation of his arguments on the supposition that he is *always* using the term in this neutral sense, and there are even some passages in the *Treatise* where he seems very explicitly to adopt a normative posture, ruling out reason as the source of some argument or belief on the ground that the

latter fails to meet an appropriate standard of solidity, reasonableness or truth (e.g., T 90-91, T 193, T 209). Hence it is perhaps not surprising that, as Garrett says, "Few interpretive remarks about Hume meet with more widespread agreement than the common claim that he uses the term 'reason' in several different senses in his writings" (CCHP 94).

4 All references to Locke are to John Locke, *An Essay concerning Human Understanding*, edited by P. H. Niddich (Oxford: Clarendon, 1975). Hereafter abbreviated "ECHU" with page numbers inserted parenthetically in the text.

5 Locke is generally rather vague about assigning operations to faculties, even in his chapter on reason itself. Compare for example "we may in *Reason* consider these *four Degrees*...the third is the perceiving [ideas'] Connexion" (ECHU IV xvii 3) with "In the Discovery of, and Assent to [intuitive] Truths, there is no Use of the discursive Faculty, *no need of Reasoning*" (ECHU IV xvii 14). But this vagueness is perhaps less a symptom of carelessness than of Locke's somewhat sceptical and even anti-realist attitude to faculties, as expressed quite forcefully in ECHU II xxi 17-20.

6 For example it would seem odd to say that "I have no reason" for believing that  $1+1=2$ , that I exist, or that I am now imagining a yellow circle, simply on the ground that there is no *argument* which would persuade me of these immediately apprehended truths. And it would seem equally odd in any scientific or philosophical discussion to say that "I have a reason" for believing that extraterrestrials have landed just because my imagination is captivated by some patently fallacious argument to that conclusion. "No reason" in this sort of context typically means "no warrant" rather than "no argument," and I see *no reason* to suppose that Hume means anything different in T 139, despite Garrett's argument to the contrary! Garrett's interpretation can claim more textual plausibility within the famous argument itself in *Treatise* I iii 6, since Hume here seems to take for granted that argument is the only possible source of warrant for induction, understandably giving the impression that when he says "no reason" he means "no argument." But as we shall see, even in the *Treatise* his discussion makes sense only if we take him to mean "no *good* argument," and in the *Enquiry* he significantly clarifies the normative thrust of his claims by explicitly ruling out other kinds of warrant also.

7 Garrett has suggested to me in conversation that these faculty terms are not in fact equivalent, and that Hume sees "reason" as just one part or aspect of "the understanding," with intuition as another (the relationship between "the understanding" and "the imagination" is discussed particularly on pages 28-29 of his book, but without any explicit statement of the relationship between "the understanding" and "reason"). This suggestion would not, of course, remove the difficulty of reconciling the above quotations with Garrett's account, but I do not anyway agree with it, mainly because there is clear evidence in Hume's writings of a tendency to use "reason" and "the understanding" interchangeably, often apparently alternating between them (as he does also between "the fancy" and "the imagination") merely for the sake of elegant variation. Even in Book I of the *Treatise* alone there are numerous examples of such apparent variation (e.g., T 88, T 92, T 150, T 180, T 186-187, T 193, T 211, T 218, T 268), and I would

be very surprised if all of these can be interpreted consistently except on the supposition that "reason" and "the understanding" are, for Hume, one and the same.

8 Nevertheless it clearly does provide an answer to Garrett's corresponding objection to the skeptical interpretation: stage (i) of Hume's argument in the *Enquiry* does not focus only on types of *argument* after all, so it becomes far more plausible to claim that his intention there is indeed to show that induction is, in some sense, devoid of evidential value rather than merely not founded on argument.

9 See for example the would-be demonstrations of the causal maxim considered in T I iii 3, "Why a Cause is Always Necessary," of which Hume says that "every demonstration, which has been produc'd for the necessity of a cause, is fallacious and sophistical." Clearly he accepts that the human faculty of reason is capable of producing "demonstrations" of propositions whose falsehood is conceivable—but he sees such "demonstrations" as irrelevant to his claims about causation and induction *because they are fallacious*. Dismissal of them on this ground is clearly inappropriate, however, unless his notion of reason is *normative* rather than purely descriptive. For if by "reason" he simply means our natural reasoning faculty, then he cannot rule out a priori the possibility that reason might motivate us (as it presumably has in fact motivated many people) through fallacious arguments.

10 Note also that on Garrett's interpretation of Hume, he here overlooks a whole class of perfectly good arguments which previous philosophers had taken very seriously, namely deductive arguments which do not have "only 'self-evident *a priori* premises'" (CCHP 87). For the contrary claim, that Hume did in fact countenance "demonstrative" arguments with non-*a priori* premises, see Millican 96-98.

11 It will no doubt be true that in any inductive reasoning there is *some* premise or inferential step which is psychologically taken for granted and not itself inferred by further argument, and Hume might well agree, but *this* is an unlikely candidate as his intended conclusion because it will obviously be true of *any* (non-circular) human reasoning whatever, owing simply to the impossibility of infinite chains of inference. Besides, Hume's claim is anyway clearly intended to be more specific than this: given the logic of his argument he surely means that in any inductive inference there is a *particular* step taken by the mind—namely the assumption of uniformity—"which is not supported by any argument or process of the understanding." This claim seems plausible, and plausibly Humean, only if interpreted epistemologically rather than psychologically.

12 For criticisms in a very similar spirit see Millican, 135-136.

13 In fact it arguably requires a three-way ambiguity, when the "neutral" (see note 3), "Lockean" and "Loose Humean" (see section V above) senses are all taken into account. Here the "neutral" sense is purely descriptive, while the other two are normative, the "Lockean" sense applying within the famous argument, whereupon it is displaced by the intermediate "Loose Humean" sense for most of the remainder of the *Treatise*. For more on all of

this, see Millican, 130-135.

14 Consider how Hume treats a parallel issue concerning the senses: "not to lose time in examining, whether 'tis possible for our senses to deceive us ...let us consider whether they really do so" (T 190). Abstract reasoning about what might be possible can play at best a subordinate role in any Humean empirical psychology—what really counts is what we observe to be actually the case.

15 On page 228 Garrett states that "Hume does not use 'evidence' as a term of epistemic evaluation at all. On the contrary, he consistently uses it to mean 'evidentness'—that is, as equivalent to 'belief', 'assurance', or 'vivacity', construed as properties of ideas." This is arguable as an interpretation of that term in the *Treatise*, but it seems quite wrong in relation to the *Enquiry*, for example Hume's uses of the term at EHU 26-27 and throughout Section X.

16 For defence of this claim, see Millican, 94-98.

17 This is not of course to say that Hume's philosophy of reason and induction is purely normative, for it forms part of a largely empirical investigation into the nature of the human understanding. The crucial point is that it is not purely descriptive either.

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