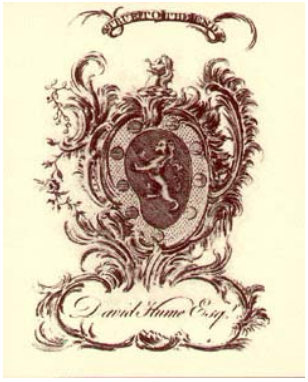

Naturalism, Normativity, and Scepticism in Hume's Account of Belief
Lorne Falkenstein
Hume Studies Volume XXIII, Number 1 (April, 1997) 29-72.

HUME STUDIES
Volume XXIII, Number 1, April 1997, pp. 29–72

Naturalism, Normativity, and Scepticism in Hume's Account of Belief

LORNE FALKENSTEIN

> Here is all the LOGIC I think proper to employ in my reasoning; and perhaps even this was not very necessary, but might have been supply'd by the natural principles of our understanding.
>
> David Hume (T I iii 15)

According to Hume, most of our beliefs, including many of our most important ones, arise when certain causes conspire to enhance the vivacity of an idea. In his *Treatise of Human Nature* and *Enquiry Concerning Human Understanding*, Hume set out to identify these causes and describe the manner of their operation, billing his work as a contribution to a "science" that sets out to "explain the principles of human nature" on the basis of "experience and observation" (T xvi).[1]

But Hume did not just confine himself to describing the causes that lead us to adopt beliefs. In the *Abstract* to the *Treatise* he characterized his work as having "finished what regards logic" by "supplying" the outstanding "defect" in "the common systems," namely, their too concise treatment of "probabilities, and those other measures of evidence on which life and action intirely depend" (A 646-647). A "logic" adequate to guide us in action would have to make claims about which "probabilities" we ought to accept in preference to which others, and consistently with this, Hume's *Treatise* and *Enquiry* draw a number of conclusions about what we ought to believe.[2]

Lorne Falkenstein is at the Department of Philosophy, University of Western Ontario, Talbot College, London, Canada N6A 3K7. email: LFalkens@uwovax.uwo.ca

To so mix normative assessments of the legitimacy of beliefs with a naturalistic account of the causes of belief is not necessarily improper. Someone who supposes that beliefs have causes is not thereby precluded from remarking that some beliefs or some causes of belief are nonetheless more legitimate than others. But in Hume's case a third factor intrudes to militate against any easy coexistence of his normative assessments with his naturalistic account: his scepticism. Beliefs are paradigmatically taken to be legitimated by reason.[3] However, Hume drew the bounds of rationality* so tightly, while yet making claims about the legitimacy or illegitimacy of certain beliefs that are so broad that it remains a question how most of his normative claims can be justified.

For example, Hume claimed that causal inferences cannot be justified by reason*, so that if there were no other factors inducing us to accept them, they would not be believed (T 91-92, 97, 183; EHU 46-47). But in that case, (1) how can he claim that beliefs formed by causal inference are any more legitimate than those induced by sentiment, as he does when he claims that a person suspended in a cage over an abyss ought to believe that the situation is safe rather than feel fear (T 148), that people told miracle stories ought to be sceptical of them rather than follow the first impulses of their feelings of surprise and wonder (EHU 117), or that dismissing a view because it undermines religion is blamable (T 409)? Moreover, (2) how can he claim that among causal inferences, there are certain kinds that are more legitimate than others, as he does when he lays down rules by which we "ought" to judge of causes and effects (T 149), or when he condemns prejudice as rash and erroneous (T 146-147)? And finally, (3) how can he claim that even causal inferences that satisfy the "rules" are legitimate only if they deal with "common life and daily practice and experience" and eschew "all distant and high inquiries" (EHU 162)?

Until recently, these questions were little-considered by Hume scholars, perhaps because neither of the two dominant interpretative traditions, the sceptical and the naturalistic, is particularly congenial to them.[4] If one supposes that Hume was simply a sceptic, then one will not accept that he took one belief to be any more legitimate than another, but will insist that he rejected them all as unfounded.[5] If, alternatively, one supposes that he took belief to be the ineluctable effect of the operation of certain natural causes, then one will infer that questions of warrant are moot, since we have no choice but to believe what natural causes induce us to believe, whether warranted or not.[6] Read from either of these perspectives, Hume should have placed all beliefs on the same footing, as either equally dubious or equally natural.

I am not convinced that either Hume's naturalism or his scepticism necessarily preclude an account of warranted belief, however. As David Pears has pointed out, one of the things that a naturalistic account of belief

formation ought to be able to do is account for the generation of our beliefs about which of our other beliefs are warranted or justified.[7] It might justly be objected that a naturalist account of the origin of our beliefs about warrant is not the same thing as a normative account of the warrant for our beliefs.[8] But there are conditions under which the former can at least allow its proponent to consistently go on to criticize others for believing what they do.

Suppose that a naturalist account could be offered that was rich enough to provide for the possibility of beliefs about warrant reflecting back on their objects, so that someone who had been (i) induced by one set of natural causes to adopt a particular lower-level belief, and (ii) induced by another set of causes to adopt a meta-level belief about the illegitimacy of the first belief, would be led by further causes to either (i) abandon the lower-level belief as a result, or (ii) be less convinced of its truth, or (iii) at least feel embarrassed or unjustified in continuing to assent to it as strongly as previously. And suppose, moreover, that the account could be made rich enough to take the mechanisms responsible for producing one or other of the last three results to be actuated by operations that all people can be presumed able, even if not necessarily inclined, to perform—such as inquiring into certain questions, following through to the conclusions of certain arguments, performing certain experiments or attending to certain results—so that those who fail to engage in these tasks could be blamed for a character defect such as laxity, obtuseness or obstinacy.

In this case, we would have a naturalist account that not only provides for the possibility of our being led to form beliefs about which of our other beliefs are warranted, but that also provides for the possibility of our sometimes revising our other beliefs in light of them, sometimes failing to revise our other beliefs in light of them, sometimes accepting contradictory beliefs, and, most significantly, that provides for the possibility of our ascribing guilt to ourselves or blame to others for believing what we take to be unwarranted. This is still not the same thing as being able to show that these beliefs really are unwarranted, but it at least allows the naturalist who proposes the account to consistently go on to make claims about what others ought to believe. In the end, this may be the closest that someone who denies the possibility of a rational* demonstration can get to providing an account of the warrant for belief.

In this paper I show that Hume has the kind of sophisticated account that I have just described.[9] Moreover, I argue that, far from being a stumbling-block that should lead him to treat all beliefs as equally dubious, Hume's scepticism plays an essential role in this account. For Hume, an encounter with sceptical arguments diminishes the vivacity of all of our ideas, but certain beliefs (those originating from causes that we consider to be legitimate) are better able to recover from the blow. The rejection or mitigation of unwarranted belief is the natural result of frivolous or inconstant belief-forming mechanisms being

disproportionately checked by sceptical arguments—or, equivalently, belief about the warrant for beliefs results from Pyrrhonian scepticism checked by the influence of our more permanent and constant natural belief-forming mechanisms.[10]

As this brief summary indicates, my reading of Hume's position on the warrant for belief does not compromise either his naturalism or his scepticism. I take Hume's fundamental project to be that of explaining the causes that give rise to belief, not the grounds that warrant it, and I take an account of the warrant for belief to fall out of this project only in a round-about way—via an account of how it is that we come to form beliefs about which of our other beliefs are warranted. And while, as part of this project, I do not take Hume to be *simply* a sceptic, I do take his scepticism very seriously. I take him to be sceptical of the ability of reason* to provide a warrant for most of our beliefs, and I also take him to be completely persuaded of the force of Pyrrhonian arguments on such themes as knowledge of the existence of external objects. These are controversial interpretations. While defending them is more than can be undertaken here, I hope that showing that Hume can still provide for assessments of the warrant for belief even in this worst case scenario, where he is taken to be both a committed naturalist and a convinced sceptic, will indicate that warrant is not likely a problem for Hume under *any* interpretation—and perhaps also that we have less reason to reject either naturalist or sceptical readings of Hume.

I. The Natural Causes of Belief

A naturalist account adequate to provide for normative assessments of belief has to be rich in the ways I described earlier, and Hume's account is very rich indeed. Though the account can be partially captured by the deceptively simple maxim that belief is "nothing but a lively idea related to a present impression" or memory (T 110; see also T 97; EHU 50), the maxim is indeed both partial and deceptively simple. For Hume, not all beliefs are in fact produced by the transmission of vivacity from an impression or memory to a related idea. The beliefs produced by reason* and education (see 1 and 3 below) are exceptions, for example. And for Hume, even those beliefs that are the result of transmission of vivacity are far from being the products of a simple or straightforward process. Ideas can vary in vivacity and consequently beliefs can vary in strength (T I iii 11-13; EHU, Section VI), the mechanisms responsible for transmitting vivacity from a present impression or memory are manifold (T I iii 8-13, I iv 1), and these mechanisms can work at cross purposes, sometimes inducing contradictory beliefs and sometimes mitigating one another's effects so as to weaken the original strength of belief or even induce a suspension of belief. Moreover, while some of these mechanisms are activated involuntarily, as a result of perception ("relation to a present

impression"), others can depend on the deliberate or willful exercise of the mental faculties involved in obtaining and processing perceptions: memory,[11] attention,[12] and imagination.[13] (The footnote to EHU IX is perhaps Hume's most extensive treatment of this point.) Thus, while I may have no choice but to believe those ideas that are enlivened by their association with what I am now observing, I can choose to look or not to look in a certain direction, to attend more or less carefully to what I am looking at, or to consider how what I am observing would be affected by any of a number of alternative circumstances I can deliberately envision.[14] In this sense, my beliefs are not purely involuntary.

In what follows, I present a brief catalogue of the various belief-forming mechanisms identified by Hume and comment on the conditions of their operation and the nature of their influence on one another.[15] My aim is to show that they provide Hume with all the elements he needs to go on to account for the origin of meta-level beliefs about the warrant for our other beliefs.

1. Reason*. Hume sees belief (or knowledge) as arising from one or the other of three, basic operations: the demonstration of relations of ideas, the association of ideas with impressions or memories, and the repetition of ideas. The first of these operations is carried out by reason*. That reason* should be not just a justifying ground but a natural cause of belief may at first seem surprising, but Hume does accept that the demonstration of relations between ideas, as exhibited paradigmatically in arithmetical calculations, does impress us with the "evidence" or even "certainty" of what has been demonstrated (T I iii 1, 70-71; EHU IV i 25-26, XII iii 163-164), and in the *Treatise* he remarks that the strength of the belief generated by reasoning* ordinarily equals the vivacity of memory, and exceeds the strength of the beliefs induced by causal association.[16]

Since reason* is such a powerful natural cause of belief, it might seem that Hume should have no problem providing a naturalistic account of warrant. If the beliefs produced by reason* are warranted by an immediately evident or a demonstrated relation of ideas, and are stronger than the beliefs produced by any other mechanism other than memory or current impression, it ought to follow that our strongest beliefs would always have to be in what we are currently experiencing, what we remember having experienced, or what reason* dictates—so that our strongest beliefs ought all to be warranted.

However, Hume remarks in the *Enquiry* that our confidence in the evidence or certainty of what reason* tells us can be shaken by the discovery that reasoning* on geometrical matters sometimes runs into paradoxes (EHU XII ii). And in the *Treatise* he remarks that our confidence in reason* can be further shaken by the reflection that even simple arithmetical derivations are causes that only lead with a certain probability to true conclusions. Our reason* is not only a natural cause of strong belief—indeed, of belief in

generally true conclusions—but a cause of such a kind "as by the irruption of other causes, and by the inconstancy of our mental powers, may frequently be prevented" (T 180).

One may wonder how this could be if the strength of a belief induced by reason* can only be exceeded by one derived from memory or current perception, but, as the context of the cited remark (T 180-181) makes clear, the kind of "irruption of other causes" that Hume has in mind is not the production of other beliefs by weaker belief-forming mechanisms, but the operation of factors that might interfere with our ability to reason*, together with a certain natural weakness in our reasoning* ability. When fatigued, when inebriated, when distracted, or when performing long or difficult calculations we tend to make mistakes in derivation, and our imperfection is such that our mistakes at the longer calculations are due to mistakes about their smallest and simplest parts. Thus, despite the fact that it may produce a very strong conviction, we cannot be certain that what reason* tells us is always warranted by a (correct) demonstration from demonstrably true premises.

Even if there were no problem with the weakness of our ability to reason*, however, Hume would still have a problem accounting for the warrant for our beliefs. For, as observed above, Hume takes it that, left to operate on us on its own, reason* is incapable of motivating some of our most important beliefs, such as those in causal relations and external existence—or, indeed, those in any matter of fact or existence, as he puts it in the *Enquiry*. Since we cannot live without relying on such beliefs, we have no choice but to turn to associative mechanisms. And since they, too, have a natural effect on us—one that may not be as strong as that produced by reason*, but also one that is not contested by anything reason* is able to demonstrate, we are in fact naturally compelled to do so.

2. Association. The principle behind most of our remaining belief-forming mechanisms, and by far the most important object of investigation for Hume, is association. The associative belief-forming mechanisms relate an imagined idea with some presently-had impression or memory. In the process they reflect a portion of the vivacity of our impressions or memories onto the imagined idea. If enough vivacity is injected into the idea, we come to believe it, with a degree of conviction that is proportioned to the quantity of vivacity (T 107-108).

2a. Causal Inference. Since there are three associative relations, resemblance, contiguity, and constant conjunction, there are potentially three distinct kinds of associative belief-forming mechanism. However, for technical reasons that can be set aside for the moment, Hume maintains that resemblance and contiguity do not reflect enough vivacity to induce belief. Constant conjunction, for its part, can reflect varying quantities of vivacity, depending on how often the events are associated in experience, and whether

there are ever any exceptions to their conjunction. Events that are frequently and invariably observed to occur in succession produce a "perfect habit" of association and, where this habit is in place, a great deal of vivacity can be reflected to the associated idea—though the vivacity, and hence the strength of the belief, still falls short of what is produced by memory or reason*. Where exceptions to the constancy of the conjunction are observed, the belief is much weaker—it is a belief in a "probability" rather than a "proof," and the exceptions themselves are believed to be "possibilities." Depending on how numerous and frequent the exceptions are, the belief in the "probability" can be weaker or stronger, and the belief in the "possibility" stronger or weaker (T 130-131, 132-133, 135).

2a(i). Imperfect Experience. There are four "species" of association by constant conjunction identified by Hume in T I iii 12. The first of these is only observed in very young children or in those with an extremely impoverished experience of the world. It arises as a direct result of experience of constant conjunctions, inducing the mind to form a habit of imagining one member of a constantly conjoined pair after having witnessed the other, and an expectation and belief in the existence of this partner even in the absence of an experience of it. Since this habit and belief are trained into the mind by past experience, they vary in strength depending upon the number of past experiences of the constant conjunction. The greater the number of experiences of the conjunction, the stronger the habit and belief, whereas when only a few instances have been experienced the belief is very weak, if it exists at all (T 130-131).

2a(ii). Contrary Causes. Hume remarks, however, that "no one, who is arriv'd at the age of maturity, can any longer be acquainted with [this species of belief]" (T 131). Mature people will form a strong belief in the existence of a constantly conjoined partner after just a few experiences of the conjunction. The reason for this is that, even though they may have had only a few experiences of the conjoined pair, they have had countless experiences of like objects, placed in like circumstances, being followed by like events. This experience leads them to form a very strong belief in the causal principle: that like objects placed in like circumstances have like effects (T 105). Somewhat less fortunately, it also leads them to develop a strong prejudice to consider whatever might have been experienced to precede or follow an event to be its cause or effect, even if the conjunction is experienced only once, so that "what we have found once to follow from any object, we conclude will for ever follow from it" (T 130). This "prejudice" (*post hoc ergo propter hoc)* is automatically inculcated by a generalized application of the "first species" of inference mentioned in the previous paragraph and only corrected by the experience of "contrary instances"—experiences of the failure of the anticipated conjunction actually to obtain.

Confronted with contrary instances, mature people either form the belief

that causes can sometimes fail of their effects, or they hold to the causal principle and insist that what they previously identified as the cause was in fact a compilation of circumstances, some efficacious, some superfluous, and that the effect failed to occur because the truly efficacious cause, previously unobserved behind the superfluous circumstances, was absent. (Those in the latter group do not do this merely because they obstinately wish to preserve their childish beliefs, but because frequent experience with the exact analysis of causes repeatedly confirms their supposition and so induces a strong belief in the conjunction of "unobserved efficacious causes" with "effects that fail to follow their apparent causes.")

Regardless of whether experience leads mature people into the probabilist (or, as Hume prefers to call it, "vulgar") or the necessitarian ("philosophical") camp, the outcome is much the same: the probabilists believe that the effect has an apparent cause, but that this cause can sometimes fail of its effect, and the strength of their belief in the cause-effect correlation is diminished as the number of contrary experiences increases relative to the number of confirming ones. The necessitarians believe that the truly efficacious cause is always followed by its effect, but that this cause has not yet been properly identified. However, since this truly efficacious cause has in the past tended to be accompanied by certain superfluous circumstances, even the necessitarians will (at least provisionally on discovering a better detection system) take the superfluous circumstances as a sign for the possible presence of the cause and will form a belief in the actual existence of the cause (and so of its effect) that is proportioned in the same way as that of the probabilists.[17] In both cases, the *post hoc* prejudice is corrected and the result is a "second species" of belief.

2a(iii). Instinctive and Statistically Guided Inference Concerning Contrary Causes. However, this second species of causal inference is really a grouping of two distinct species (though Hume distinguishes them at T 132-133, he persists in referring to both as "the second species of probability" through to the end of T I iii 12). One of these species is instinctive, the other cognitive; probabilists as well as necessitarians rely upon both. When we have experienced a cause to sometimes fail of its effect the habit of mind to associate the one with the other is weakened, and Hume takes it that the vivacity of the associated idea is correspondingly weakened so that our belief is weaker. This happens automatically and "without any reflection" (T 133).

However, Hume takes it that most of our causal inferences are more deliberate and result from our consciously counting up confirming and contrary instances, subtracting the latter from the former, and considering the belief in the causal connection to fall as far short of certainty as the remainder resulting from the subtraction falls short of the original number of confirming experiments. In this case, we deliberately proportion our belief in accord with the results of a calculation, rather than in accord with the felt vivacity of the idea (T 132-133, 103-105). This third, cognitive species of belief, which I refer

to as "statistically guided causal inference," is one of the best examples of how Hume provides a role for reflection and deliberation in his account of belief formation, and shows that for Hume belief is not always the instinctive product of the felt vivacity of an idea.

2a(iv). Analogy. The fourth "species" of association by constant conjunction identified by Hume in T I iii 12 involves association of analogous causes with analogous effects. However, it is best considered in connection with a different associative mechanism, that involving resemblance.

2b. Resemblance and Contiguity. Though the mechanisms of resemblance and contiguity do not normally transmit enough vivacity to induce belief, Hume takes it that they do have some effect, and as a result can enhance or mitigate the strength of beliefs formed by other mechanisms, or even modify their content. The most striking instances of this occur in the case of resemblance.[18] When causes resemble their effects, the connection is more readily believed than when they are quite different, even though the constancy of the conjunction may be exceptionless in either case. This is the ground of the supposition that a cause must be "adequate" to produce its effect or must "contain" its effect—an illegitimate version of the causal principle that Hume rejects and that he considers to have exerted a baleful influence on the history of thought (T 111-112).

Another notable instance of the influence of resemblance occurs in the case of our tendencies to make generalizations and draw inferences from analogy. Some instances of this have already been touched upon in 2a(ii). Hume's idea is that when we have once learned that a particular kind of object is regularly followed by a certain effect, or regularly preceded by a certain cause, we will naturally tend to imagine that any object that resembles it will be followed by a similar effect, or preceded by a similar cause. This is what we do in the case of argument by analogy, and in this case we proportion our belief to the degree of resemblance between the cases. We do something similar when we argue, not from particulars to particulars (as we do by analogy), but from particulars to genera (as we do when we formulate general rules). In that case we suppose that resembling causes will have not just analogous effects, but the same effects.

However, even extensive resemblances can sometimes fail to touch on the one circumstance in the precedent event that is material to the effect. The classification schemes that we use to group particulars into genera can also fail to recognize such material circumstances. In these cases, the resemblance relation facilitates belief in the analogy or the general rule anyway, and this happens not merely when the true cause is hidden, but even when we know better (T 147-148). This happens because the influence of disconfirming instances, which would normally induce us to at least reduce the strength of our belief, is countervailed by the influence of the resemblance relation, so that we end up with a belief (now aptly called a prejudice) that is strongly held

even in the face of opposing evidence. Listing a pair of examples of hasty generalizations, Hume writes,

> An Irishman cannot have wit, and a Frenchman cannot have solidity; for which reason, tho' the conversation of the former in any instance be visibly very agreeable, and of the latter very judicious, we have entertain'd such a prejudice against them, that they must be dunces or fops *in spite of sense and reason.* (T 146-147, my italics)

Thus, the *post hoc* fallacy is regenerated.

2c. Other Factors Influencing the Associative Mechanism. Besides being induced by the three relations of resemblance, contiguity and constant conjunction, association involves three components: a current impression or memory, a history of past experiences of the constant or regular conjunction of impressions of that type with impressions of another type (insofar as the association involves constant conjunction), and a transition from the impression to the idea of its associated partner. Variations in the quality or character of these components can affect the output of the associative mechanism. If the association proceeds from an impression that is vague or uncertain, e.g., a memory that has faded, thena degree of doubt attaches to it, or(the same thing) a lesser vivacity accompanies it (T 85-86). There is therefore less vivacity available to be transmitted to the associated idea. Similarly, if the experiments that established the habit of association have faded in memory or the transition between the given impression or memory and the associated idea requires that one attend to the influence of a number of intermediate causes, then the habit of association will not be as readily activated or as strong, and as a result less vivacity will again be reflected on the associated idea.

The second of these three factors may work in reverse as well. If a causal correlation is probable, but the few contrary experiments have occurred more recently, they will tend to have a stronger influence than their numbers would warrant, again due to the diminished vivacity of older experiences (T 143-144).

Though Hume does not remark upon it, it would appear that these factors should have less of an influence on statistically guided than on instinctive causal inference (see 2a[iii]). A belief that is grounded on the vivacity we instinctively feel impelled to ascribe to an idea will naturally be affected by the passage of time or the length of arguments, which diminish the vivacity available to be transmitted or weaken the habit that makes this transmission possible. But a belief that is grounded on reflection on the recorded numbers of contrary and confirming instances should be more impervious to such effects. Hume is explicit, however, that the same cannot be said of the following belief-forming mechanisms:

2d. Fantastic association. Beliefs arise through association because of the tendency of the mind to substitute an associated idea for an impression, in the process taking a good part of the vivacity that attends the impression to pertain to the idea as well. This is not the case in fantasy, where all that happens is that ideas occur in a certain chain, and no impressions are present to reflect vivacity onto them. However, Hume remarks that there are occasional cases in which fantastic ideas and stories can be believed, especially when the believer is a third person, rather than the author.[19] This can happen not simply because the reader sees the written words of the author, which are impressions associated with the ideas those words name, and so transmit some vivacity to those ideas (cf. Hume's discussion of credulity at T 113), but because there can be a further mechanism at work here—one that is likewise parasitic on causal inference. Hume remarks that a skillful author will attempt to enhance the vivacity of a fantastic story by blending it with elements of fact (to produce what is today called a "docu-drama"). If the factual circumstances are well and plausibly connected with the fantastic, some of the vivacity attending our beliefs in the facts will be transmitted across the connection to the fantasy.

As long as the fantastic circumstances are obviously fictional, this connection will merely produce an agreeable "enlivening" of the fantasy, that will enhance the reader's enjoyment, but if the story is not obviously fictional, and has a certain plausibility, then its vivacity can be unusually enhanced. Thus, Hume writes that "a vigorous and strong imagination is of all talents the most proper to procure belief and authority." And, "'Tis difficult for us to withhold our assent from what is painted out to us in all the colours of eloquence; and the vivacity produc'd by the fancy is in many cases greater than that which arises from custom and experience" (T 123). Sometimes, even the author of the docu-drama, if afflicted by "an extraordinary ferment of the blood and spirits," can be "a victim to his own fire and genius," though this is a pathological case that crosses the line to "madness or folly" (T 123).

2e. Association with passions. Besides being induced by the transmission of vivacity from a previous sensory impression or memory, belief can also be induced by the transmission of vivacity from a subsequently produced sentiment or emotion. This is what happens in the case of the person suspended over an abyss in an iron cage (T 148-149). The idea of an abyss is naturally associated with that of falling, and the impression of an abyss naturally transfers some vivacity to this associated idea, so that falling is believed to be a possibility. Ordinarily, this inference would be tempered by the contrary realization that falling is not possible through the solid bars of the cage; however, in the first instant, when the idea of falling is enhanced, it arouses a feeling of fear. That feeling increases our sensitivity to the danger and makes us enhance the idea of falling. As Hume remarks,

> The passion returns back upon the imagination and inlivens the idea; which lively idea has a new influence on the passion, and in its turn augments its force and violence; and both [the] fancy and affections, thus mutually supporting each other, cause the whole to have a very great influence. (T 148-149)

A similar effect can be witnessed in the case of belief in miracle stories, urban legends, and supermarket tabloid headlines about UFO's or strange births—only here the emotions that exert an effect on belief are those of surprise and wonder:

> The passion of *surprise* and *wonder*...being an agreeable emotion, gives a sensible tendency towards the belief of those events, from which it is derived. And this goes so far, that even those who cannot enjoy this pleasure immediately, nor can believe those miraculous events, of which they are informed, yet love to partake of the satisfaction at second-hand or by rebound, and place a pride and delight in exciting the admiration of others. (EHU 117; cf. T 115, 120)

3. **Education.** An odd feature of Hume's account of belief formation is that it includes a belief-forming mechanism that is not only non-associative, but entirely non-demonstrative, in the sense that it does not proceed from any previously given premises, impressions, passions or memories. Hume takes it that the mind is so constituted that the mere repetition of an idea can enhance the vivacity with which it is entertained to the point where it comes to be believed. This is a phenomenon witnessed in liars, "who by the frequent repetition of their lies, come at last to believe and remember them, as realities" (T 86), but its most common manifestation is in education.

Hume argues for this mechanism by comparing it to the case of belief induced by causal inference. Causal inference is based on two factors: the repeated experience of a conjunction between one object and another, which leads us to associate the one with the other, and the tendency of the mind to readily think of associated objects, so that when an impression of the one occurs, an idea of the other readily takes its place, in the process taking on a good deal of the vivacity possessed by the former. But what, Hume asks, if this process were short-circuited, and the association with a second object left out, so that "a mere idea alone, without any of this curious and almost artificial preparation shou'd frequently make its appearance in the mind?" And he answers, "this idea must by degrees acquire a facility and force; and both by its firm hold and easy introduction distinguish itself from any new and unusual idea" (T 116). Here, no association with some other object or transfer of vivacity from an impression of this object onto the idea is envisioned. The mere repetition of the idea serves to enliven it.

That an idea should acquire vivacity, not from something that has vivacity, like an impression or memory, but merely from the repeated occurrence of something that has virtually none (itself), may be surprising (though it is not impossible for someone, like Hume, who believes that there is no reason why a cause should have to contain its effect). But it is made particularly difficult by the fact that Hume elsewhere remarks that "a person, who wou'd *voluntarily* repeat any idea in his mind, tho' supported by one past experience, wou'd be no more inclin'd to believe the existence of its object, than if he had contented himself with one survey of it" (T 140). Hume is here concerned to explain why the belief in a causal relation could not be induced through having just one experience and then voluntarily recalling it a number of times. But he is aware that this is very much like what does happen with education and this leads him to further qualify his account of education. The belief induced by education does not arise through mere repetition of the idea, he now stresses, but through its "*undesigned*" repetition at frequent intervals over a long tract of time (T 140, his italics). The student apparently needs to come across the idea unintentionally, as when hearing it from a number of others or coming across it in different books, not merely repeat it as an exercise or a response to questioning.

This means that the case of the student who acquires a belief by instruction cannot really be the same as the case of liars who come to believe their own lies through frequent repetition—or, for that matter, castle builders who come to believe their own system through frequent meditation. These latter would have to be pathological cases—akin to madness and mystical or "poetical" enthusiasm—arising from some defect in our cognitive constitution (see 2d above). The healthy mind is aware of its volition in producing the repetition, and this realization leads it to consider the idea to be its own invention, regardless of how much the idea may be enlivened by repetition.[20] This is not the case, however, when the idea is received from others through instruction. On the contrary, Hume takes it that the beliefs induced in the student through education can

> take such deep root, that 'tis impossible for us, by all the powers of reason and experience, to eradicate them; and this habit not only approaches in its influence, but even on many occasions prevails over that which arises from the constant and inseparable union of causes and effects. (T 116)

This, then, is a brief catalogue of the Humean belief-forming mechanisms. One of these mechanisms is rational*, meaning that it involves the derivation of belief from previously established truths by means of truth-preserving laws (those exhibiting relations of ideas), but the others are non-rational*, involving the generation of belief either by some associative mechanism for

transmission of vivacity from a related percept, memory or passion, or some mechanism for spontaneously enhancing vivacity. In neither of the latter cases is the mechanism demonstrably truth-preserving.

However, even though the latter mechanisms are non-rational*, they are not all merely instinctive or automatic. Some of them, notably statistically guided causal inference (2a[iii]), the discovery of general rules (2b), and fantastic association (2d) require conscious and deliberate effort, directed (in some cases) to observation, experimentation, analysis, calculation, and reflection.

This is not to say that these mechanisms might allow us to ascribe or withhold belief at whim. While we can choose to reflect or not, we cannot choose what the results of reflection will be and so make ourselves, by reflection, believe anything whatsoever. The outcome of reflection on the exact proportion of confirming to contrary experiments (2a[iii]) is determined by the history of observations, and the formation of general rules (2b) is determined by what regularities can in fact be discovered in the course of events. Where the observations or the regularities are lacking, a belief cannot be created in defiance of their absence, however closely one might choose to reflect. The belief-forming mechanism that comes closest to giving us the power to control our own beliefs, fantastic association, is also the most difficult to operate effectively (whatever might be said about the strength of the beliefs it induces on those rare occasions when it does work). To be effective, it requires artistic genius (the talent to make a fantastic description resemble reality) combined with an extensive knowledge of human predilections and accepted beliefs, and even then it has its strongest effect on the gullible audience (who have not decided in advance that they want to make themselves believe the fantasy). Only a pathological blindness to the distinction between what one has oneself cooked up in fantasy and what is given in experience (i.e., madness) can lead this belief-forming mechanism to influence the author.

II. Conflict and Mitigation of Belief

Since there are a number of different belief-forming mechanisms, it is possible that one might enjoin a belief that conflicts with the belief induced by another. That such conflicts occur is recognized by Hume in a number of places. T 180-181 describes a conflict between the beliefs induced by reason*, and those induced by causal inference when we reflect on the fact that we sometimes make mistakes in calculation. T 181-182 extends this point to statistically guided causal inference, noting that there is a conflict between our calculations of probability and a further judgment about the probability that these calculations might contain some mistake. T 146-147 describes a conflict between general rules and particular experience, and T 149-150 a conflict

between general rules and other general rules. T 133 describes a conflict between instinctive and statistically guided causal inference. T 116 and T 117 describe a conflict between education and causal inference and education and reason*, while T 123 describes a similar conflict between fantastic association and causal inference. Most notoriously, EHU 114-116 describes a conflict between education, passion, and causal inference based on testimony, enjoining belief in miracles, and statistically guided causal inference proving natural laws.

What happens when different belief-forming mechanisms operate at cross purposes, and produce conflicting beliefs? Hume's standard answer to this question appears to be that the conflicting beliefs cancel one another's vivacity, so that, if one is stronger, it loses as much of its vivacity as is required to counterbalance the other's, and is accepted with only the diminished strength that remains, while if both are equally strong they mutually annihilate one another and produce a suspension of belief. This is the situation Hume describes when belief in miracles comes into conflict with belief in natural laws (EHU 114-116), when belief in "probabilities" (causal regularities attested to by a preponderance, but not a totality, of experiences) comes into conflict with belief in "possibilities" (alternative successions of events witnessed in a minority of cases)(T 135-138; EHU 56-57), when belief in "chances" is weighed (T 130; EHU 57-59), and when beliefs induced by reason* or statistically guided causal inference are corrected by a reflection on the probability that an error has been made in calculation (T 181-183).

In the case of our inferences concerning the probability of causes and chances, Hume goes to some trouble to explain how conflicting beliefs cancel one another's vivacity (T I iii 11-12; EHU, Section VI). The association of causes with effects occurs as the result of a habit trained into us by past experience. Where that past experience has been uniform the resulting habit is, as Hume occasionally puts it, "perfect"—our impulse to conceive the effect upon witnessing the cause or conceive the cause upon witnessing the effect is as strong as that sort of impulse can ever get. But when we have witnessed disconfirming experiments the habit is weakened. We still tend to think of the effect when witnessing the cause, or the cause when witnessing the effect, but we also remember the result of the contrary experiment, and a part of the force of the habit is diverted in that direction, as it were. Thus, the habit is no longer "perfect." The more often some contrary outcome is witnessed, the stronger our habit to associate that outcome with the cause or effect becomes, and the habit to make the previous association is even further weakened. A similar argument holds for the conception of contrary chances.

In these cases, therefore, the reason that the weaker belief is able to annihilate a portion of the vivacity of the stronger belief, and so leave us with a mitigated conviction in the stronger belief, is that the very experiences that establish the weaker belief also serve to mitigate the habit of association that

underwrites the stronger belief. As the habit of association becomes weaker, less vivacity is transmitted from the given impression or memory to the associated idea, and the belief is weakened.

But this explanation is not able to cover cases where the conflicting beliefs are not all formed by association. Beliefs formed by reason*, for example, do not arise through the transmission of vivacity from an impression to an associated idea, but through discovering relations of ideas. Since there is no habitually induced association involved in reasoning*, there is no habit that can be weakened or broken by discovering contrary instances. Admittedly, Hume wanted to claim that the strength of beliefs produced by reason* ought to be mitigated by the reflection that our calculations are sometimes mistaken (T 180-181). But if this happens, it must be in some other way.

It might be thought that, once the possibility of error in calculation has been demonstrated by experience, reason* itself would accept this result as the premise for a demonstration that leads it to conclude that it ought to diminish the certainty it attributes to all of its own reports, and in T I iv 1 Hume seems to speak as if he takes this to be what happens. But if reason* is unable to demonstrate that our inferences from past to future experience are ever legitimate, it is unclear why it should accept this particular inference from past to future experience. It is "nature" (the memory of past errors in reasoning* tending to diminish a habit of associating the pronouncements of reason* with the truth) that compels us to form a belief in the possible erroneousness of future uses of reason*. And it remains unclear how this belief, produced as it is by association, could affect reason*, and diminish the strength of the beliefs it induces by demonstrating relations of ideas. It would seem more consistent of Hume to suppose that in this case two opposed beliefs—one based on relations of ideas and affirming the "evidence" or certainty of a particular conclusion, the other based on association and affirming that the claims of the first one are not as certain as it claims—should coexist in the mind without either one being able to mitigate the force of the other.

A similar point can be made about beliefs formed by education. Beliefs formed by education do not arise through the transmission of vivacity from an impression to an associated idea, but through the undesigned repetition of the idea. Since the idea is enlivened and believed independently of being associated with any impression, the belief in the idea can hardly be assailed by any evidence that might tend to diminish our tendency to associate it with an impression or memory—no such association is required for it to acquire its vivacity in the first place.

By the same token, it is hard to see how a belief induced by education could mitigate one induced by association. To diminish the force of a belief formed by association one must either diminish the vivacity of the originally given impression or memory that transmits vivacity, or weaken the habit of associating the idea with this impression or memory. Education does neither of these things; it merely creates a vivacious contrary idea.

It might be objected that education could prevent the formation of habits of association by blinding us to the evidence of our senses, should they ever give us impressions contrary to what education teaches. (And if contrary impressions are not recognized or accepted, then a habit of associating those impressions with constantly conjoined partners, and then subsequently forming vivacious ideas of them upon having impressions or memories of those partners, could not be developed.) But this raises the question of how such "blinding" might occur. The ideas formed by education may be very vivacious. But so are our impressions. And it is simply not evident, from Hume's account, how either one could diminish the vivacity of the other. Nonetheless, Hume remarks that the belief induced by education "not only approaches in its influence, but even on many occasions prevails over that which arises from the constant and inseparable union of causes and effects" (T 116) and that its principles "over-ballance those, which are owing either to abstract reasoning or experience" (T 117). In stating this, he reports a sad fact, but it remains a question how he can account for it.

I return to these problems below, where I argue that the only clear account Hume has to give of how beliefs grounded in reason* or education could be mitigated is one that appeals to the effects of a sceptical crisis.

III. Legitimation of Belief

So far, I have presented a "value neutral" survey of the various Humean belief forming mechanisms. But Hume's own survey is not value neutral. It is punctuated with references to "vulgar" and "philosophical" belief, to "errors" and to beliefs that are contrary to what we "ought" to accept. Let us consider some possible means by which Hume's account might account for the origin of these meta-level beliefs about the legitimacy of the different belief-forming mechanisms.

a. Reason*. Reason* condemns absurdity and contradiction wherever it arises; it demands a rational* proof of every proposition that is not immediately self-evident from experience or some other source of illumination that reason* itself can warrant. This might be supposed to put it in a position to make judgments about the legitimacy or illegitimacy of all of our other beliefs. But, if Hume is right, reason* is extremely limited in what it can prove and is unable to supply what are by its own standards acceptable demonstrations for many of the propositions that we in fact judge to be legitimate, such as those concerning the existence of external objects or the conformity of the future to the past. Though it might declare that a currently-had impression contradicts a vivacious idea instilled by education, that a belief obtained by statistically guided causal inference contradicts one obtained by instinctive causal inference from the most recent and lurid anecdotes, or that an artfully embellished miracle story contradicts a uniform past

experience, it cannot demonstrate that any one of these belief-forming mechanisms is any more legitimate than any of the others, and it is therefore incapable of resolving the contradiction by declaring the illegitimacy of the beliefs on either side of the conflict.

Indeed, if what was said earlier about the mitigation of belief is correct, reason* might not even be able to induce us to mitigate or suspend belief in the contradictory propositions. To impede the transfer of vivacity from an impression to a habitually associated idea and the consequent belief in that idea, we need to have a contrary experience that weakens the habit. But reason* does not deliver such experiences; it merely discovers a contradiction between the idea and another idea. It remains unclear why, on Hume's account, that should have any effect on the vivacity that is transferred to the idea by associated impressions. Similarly, the only thing that could mitigate a belief arising from education is the cessation of the undesigned repetition of the idea and its fading in memory. Reason*, again, does not do that, but merely demonstrates a contradiction between the idea and another idea.

The most reason* can do, therefore, is condemn the existence of contradictory beliefs, not (in most cases) determine which of the conflicting beliefs is illegitimate, and not induce a mitigation or suspension of belief. Thus, reason* cannot be the origin of most of our beliefs about the legitimacy or illegitimacy of our other beliefs.

b. Natural Strength. Hume typically takes the "force of nature" (i.e., other natural belief-forming mechanisms) to supply what reason* cannot. Since his account attributes varying strength to beliefs and, in the usual case, takes stronger beliefs to cancel the force behind contrary, weaker propositions, losing something of their own force in the process, it might seem that he could simply say that we are naturally induced to treat those propositions entertained with less vivacity as less legitimate subjects of belief, and naturally induced to take beliefs that have been occasionally contradicted by experience to be less legitimate than those underwritten by a perfectly uniform experience. But while Hume does occasionally rank beliefs on the basis of their strength—T 153-154 ranks beliefs immediately verified by experience and memory first and second, followed in order by those established by reason* (demonstration), uniform experience, and experience that, for any of a number of reasons, fails to be perfectly uniform—he frequently distinguishes between strong beliefs and legitimate beliefs, and does not suppose that we automatically take our strongest beliefs to be the most legitimate.

Hume remarks, for instance, that the beliefs instilled by education "are frequently contrary to reason, and even to themselves in different times and places" and so are "never upon that account recognized by philosophers" (T 117). But he also notes that they nonetheless "take such deep root, that 'tis impossible for us, by all the powers of reason and experience, to eradicate them" (T 116). He remarks, further, that the passage of time since gathering

evidence "has a considerable influence on the understanding, and secretly changes the authority of the...argument," even though "the difference in these degrees of evidence be not receiv'd by philosophy as solid and legitimate; because in that case an argument must have a different force to day, from what it shall have a month hence" (T 143); that "a man may receive a more lively conviction from a probable reasoning, which is close and immediate, than from a long chain of consequences, tho' just and conclusive in each part" (T 144); and that "men form general rules, and allow them to influence their judgment, even contrary to present observation and experience" (T 147). All of these pronouncements imply that we may both have a strong (or stronger) belief, and a second belief that declares that the first belief is illegitimate despite its strength, or less legitimate than some weaker rival.

c. General Rules. Hume's own way of accounting for the origin of our beliefs about the legitimacy or illegitimacy of our other beliefs appeals to the influence of general rules.

> According to my system, all reasonings [concerning matters of fact] are nothing but the effects of custom; and custom has no influence, but by inlivening the imagination, and giving us a strong conception of any object. It may, therefore, be concluded, that our judgment and imagination can never be contrary, and that custom cannot operate on the latter faculty after such a manner, as to render it opposite to the former. This difficulty we can remove after no other manner, than by supposing the influence of general rules...these rules are form'd on the nature of our understanding, and on our experience of its operations in the judgments we form concerning objects. (T 149)

Hume's idea is that by reflecting on the various belief-forming mechanisms, on the history of their reports, and on the number of times those reports have proven true or false in the past, we will come to associate some with truth and others with error, so that regardless of what specific report a belief-forming mechanism might deliver, we will consider that report with trust or scepticism, depending upon the past history of reliability of the belief-forming mechanism that offers it. Thus, we might reflect that statistically guided causal inference is more reliable than instinctive causal inference from the most recent and lurid examples, and form a general rule to that effect.

Hume mentions several examples of general rules that we form concerning the legitimacy or illegitimacy of certain beliefs. One such general rule condemns belief based on association in virtue of resemblance or contiguity. Since any of a number of different objects may resemble a given impression or may have been contiguous to it in the past, when the mind

associates on the basis of resemblance or contiguity it is aware of its own caprice in choosing to draw the association in one way rather than another. While such capricious associations do not normally transmit enough vivacity to induce belief, the very possibility of such a belief is condemned by a general rule that arises when we reflect on the past unreliability of our capricious associations (T 110).[21]

A similar general rule condemns belief induced by poetical embellishments of ideas. Hume remarks that such embellishment can greatly enliven ideas so that "the vivacity produc'd by the fancy is in many cases greater than that which arises from custom and experience" (T 123), but he also remarks that, though very great, this vivacity "feels" quite different from the vivacity transmitted through normal causal inference (T 630). The difference arises because we are aware of the poet's caprice—i.e., we are aware that the poet might have similarly embellished any of a number of other ideas, and a survey of the past reliability of propositions enjoined by such capricious embellishment establishes a general rule that condemns beliefs formed on that basis (T 631-632).

Hume is particularly concerned to remark that we form general rules that condemn other general rules—those general rules arising from hasty generalizations and false analogies and manifesting themselves in prejudices. This happens through our reflecting that, in virtually all cases, the event that we have learned to identify as the true cause of an effect is accompanied by a number of other accidental features. We then generalize these experiences to formulate the rule that any cause is a compound of the truly "efficacious" feature (i.e., the feature that is in fact regularly conjoined with the effect) and a number of accidental circumstances. This establishes the basis that makes it possible for us to go on to discover that it is generally an error to associate the effect with the accidental circumstances rather than the truly efficacious feature:

> we learn to distinguish the accidental circumstances from the efficacious causes; and when we find that an effect can be produc'd without the concurrence of any particular circumstance, we conclude that that circumstance makes not a part of the efficacious cause, however frequently conjoin'd with it. (T 149)

In this way, a "second" general rule arises that condemns a number of "first" ones.

> our general rules are in a manner set in opposition to one another. When an object appears, that resembles any cause in any very considerable circumstances, the imagination naturally carries us to a lively conception of the usual effect, tho' the object be different in the

> most material and most efficacious circumstances from that cause. Here is the first influence of general rules. But when we take a review of this act of the mind, and compare it with the more general and authentic operations of the understanding, we find it to be of an irregular nature, and destructive of all the most establish'd principles of reasonings; which is the cause of our rejecting it. This is a second influence of general rules, and implies the condemnation of the former. (T 149-150)

What Hume here describes as "taking a review of this act of the mind" is deliberately reflecting on the consequences of supposing that whatever happens to resemble a given object in some way that catches our attention must have the same effect as that object. Presumably, this act of reflection leads us to associate general rules formed in such an indiscriminate fashion with error and unreliability. In other words, it leads us to formulate a "second" general rule to the effect that our "first" general rules ought only to draw on the truly efficacious qualities of the object, and are to be condemned as illegitimate "prejudices" otherwise.

Hume draws a host of other important general rules, indeed, virtually his entire "logic," from this "second" rule. For, when we follow it, and try to base our judgments just on the connection between the truly efficacious feature and the effect, we find over and over again that the particular causes we examine are not simply regularly conjoined with their effects, but constantly so. This experience leads us make another generalization stating that the true cause always produces its effect and the same effect never occurs except after the same cause. This is none other than the general rule that marks the distinction between "vulgar" (probabilist) and "philosophical" (necessitarian) views of the probability of causes (see 2a[iii]) and it serves as the principle for the formulation of a number of other general rules, rules 5-8 of the "Rules by which to judge of causes and effects," that declare how successes or failures in the observation of supposed causal relations ought to guide us in isolating the true cause from the accidental circumstances (T 174-175).

IV. Modification of Belief

Granting that Hume is indeed able to provide an account of how we can come to form meta-level beliefs regarding the legitimacy of our other beliefs, the next question that must be considered is whether that account can provide for the possibility of our revising our other beliefs accordingly.

In light of what was said in section II, it is hard to see how this could happen in such cases as those of beliefs induced by education or reason*. Even if repeated experience of the falsity of what my teachers told me in school leads me to formulate the general rule that I ought not to believe anything on

authority, it is hard to see how this belief, or the circumstances that give rise to it, could do anything to change the fact that frequent, undesigned repetition of an idea will enhance the vivacity of that idea. As long as the indoctrination continues, the idea will be enlivened, and hence believed, and this despite the fact that the belief may be condemned by general rules. My belief in the general rule may make me embarrassed that I still accept the authority of my indoctrination, but unless it can somehow also diminish the vivacity of the enlivened ideas, it is not clear how it can prevent or mitigate that authority.

Matters are quite different, however, with the large number of cases where belief arises from the transfer of vivacity from an associated impression or memory. As noted in section II, Hume takes it that in these cases the firmness of the habit of making the association makes all the difference to how much vivacity is transmitted to the associated idea. This is why resemblance and contiguity do not ordinarily communicate enough vivacity to induce belief. Because any number of objects may resemble a given impression (especially if the resemblance is not extensive), or have been contiguous to it in the past, the mind tends not to form any fixed habit of association, but instead feels a certain "caprice." Constant conjunction, in contrast, trains a fixed habit of association into the mind, and the more constant the conjunction the more "perfect" the habit, the more vivacity transmitted as a result, and the stronger the belief (T 109-110, 124-135). Conversely, the more often a conjunction is interrupted, the weaker the habit (other things being equal). This accounts for our thought concerning the probability of causes, where contrary experiments do not produce contrary beliefs, but mitigate the strength of beliefs.

General rules can mitigate association-based beliefs in just this way. The formation of a general rule has the effect of bringing a number of previously unrelated contrary experiments to bear on a given case, and changes the balance of considerations, drastically mitigating our belief in a "probability" or perhaps even elevating the contrary "possibility" into a "probability."

For example, this is what happens when the "second" general rule is brought to bear on a prejudice—a "first" general rule formed on a purely accidental feature of the cause. When we initially formulate a prejudice, we do so because the resemblance that one object, A, bears to another, B, leads us to suppose that the effects of A must also follow from B. These prejudices can be very strong, in the sense that they will not be mitigated or abandoned even after we experience a number of contrary experiments. While ordinarily the experience of an instance of B's failing to be followed by the effect would weaken the subsequent habit to associate B with that effect, and diminish the belief, in this case A's continued constant conjunction with the effect, combined with B's strong resemblance to A, tips the scale. All the experiments that go to establish the constant conjunction for A get imported and applied to the supposedly analogous B, thus bolstering the belief in the conjunction for B,

and diminishing the force of the contrary experiments (of B's failing to be followed by the effect) far below what they ought, justly, to have.

However, when the "second" general rule is applied to the case, this situation is reversed. Once we recognize that the belief that the effect will follow from B is an instance of generalization from an accidental feature of A, a host of other cases (not involving A or B at all) is suddenly brought to bear—cases of similar generalizations on accidental features of other causes that proved to be repeatedly and spectacularly false. The mass of these new contrary experiments (which could not have been recognized as such prior to the formation of the "second" general rule) mitigates and perhaps even eliminates the prejudice.

Similar explanations can readily be provided for how "second" general rules should be able not merely to condemn, but to mitigate beliefs formed by such "unphilosophical" associative mechanisms as inference from the most recent and lurid examples, or inference artificially discounting the force of the conclusion because of the length of the argument.

V. The Role of Sceptical Arguments

a. Motivation and Effectiveness. But while our "unphilosophical" beliefs can be labeled illegitimate by "second" general rules, and can even be modified by the considerations that go to establish those rules, *will* either of these things always or necessarily happen? This is a further question that poses serious problems, particularly as it seems that both parts of it must be answered in the negative.

In order to formulate "second" general rules, we need to reflect on the reliability of our different belief-forming mechanisms. And it is clear from remarks that Hume makes in a number of places that he recognized that this is not something that we are all compelled to do, or all compelled to do to the same extent. Some of us, whom Hume called "the vulgar," do not reflect as carefully or as extensively and do not form the same general rules as those he variously refers to as "the wise" or "philosophers." Thus, while "philosophers" might reflect that true causes can never fail of their effects, the vulgar believe that causes are only probabilistically related to their effects (T 132; EHU 86-87); while "philosophers" might reflect that statistically guided causal inference is more reliable than inference from the most recent and lurid examples, "the vulgar" allow their conclusions to be influenced by appeals to contiguity or the passions (T 110, 120), and while "philosophers" might reflect that generalizations drawn from accidental features of the cause are illegitimate, "the vulgar" continue in their prejudices (T 150).

What is it that compels the latter to reflect more, and the former less, thoroughly? The question is a delicate one, for should it turn out that the causes impeding or promoting reflection have no connection with our wills,

then, in accord with the account of moral culpability laid out in EHU, Section VIII, it would follow that we could not be praised or blamed for formulating or failing to formulate general rules. This would be the case if, for instance, the formation of "second" general rules was determined simply by the chain of impressions that different knowers receive from their environments. Since one cannot will what impressions one will receive, knowers from environments poorer in contrary experiments could hardly be blamed for failing to form "second" general rules.

Hume has already claimed that "philosophers" cannot rationally* demonstrate that their beliefs about which of our other beliefs are warranted are correct (they are merely compelled by reflection on the past reliability of our different belief-forming mechanisms to form them). Indeed, when discussing the use of second general rules in condemning illegitimate belief, he is unable to resist making the "sceptical" observation that the belief-forming mechanism that produces our "second" general rules is the very same one that produces our prejudices.

> Mean while the sceptics may here have the pleasure of observing a new and signal contradiction in our reason, and of seeing all philosophy ready to be subverted by a principle of human nature, and again sav'd by a new direction of the very same principle. The following of general rules is a very unphilosophical species of probability; and yet 'tis only by following them that we can correct this, and all other unphilosophical probabilities. (T 150)

If, in addition to being unable to provide any sound demonstration of the warrant for "second" general rules, philosophers also cannot blame those who disagree with these rules, then it is not clear that Hume's naturalistic account of belief has preserved his title to do such things as criticize the vulgar for believing miracle stories or lay down rules by which we (all) "ought" to judge of causes and effects. The most he could do would be to describe what he, as a philosopher, personally feels compelled to believe, not to criticize the views of those who disagree.

The question of whether "second" general rules will necessarily lead us to modify our beliefs is also serious. To see why, one need merely recall some of the factors Hume has identified as tending to diminish our belief in a causal regularity: a lack of vivacity in the foundational representation, arising either from its having faded in memory or been faint or obscure to begin with; a long chain of deductions required to link cause to effect; an infrequent or small number of observations that are inadequate to impress us with the presence (or failure) of the regularity; and an imperfect degree of resemblance between different cases (T 154). Now it seems on an impartial survey that all of these faults must attend our attempts to establish "second" general rules and apply

them to our other beliefs. These attempts can depend on observations that are rare and difficult to make, on giving a due regard to the results of experiments that have long since faded in memory, or on performing complicated tests that demonstrate their results only with the aid of long chains of inference. When, for example, we seek to remove a prejudice by distinguishing between the true cause and the accidental circumstances accompanying that cause, a series of controlled or even blind and double-blind experiments might be required, and we may have to perform tests that take years to complete or appeal to the results of experiments performed long ago. How can the vivacity that is communicated to the conclusion under such crippling circumstances effectively impede the countervailing vivacity communicated by long education, hasty generalization, and causal inference guided by the most recent and lurid experiments?

In at least one passage, Hume indicates that "second" general rules might not always triumph.

> [W]e learn to distinguish the accidental circumstances from the efficacious causes; and when we find that an effect can be produc'd without the concurrence of any particular circumstance, we conclude that that circumstance makes not a part of the efficacious cause, however frequently conjoin'd with it. *But as this frequent conjunction* [of accidental circumstances with the true cause] *necessarily makes it have some effect on the imagination, in spite of the opposite conclusion from general rules*, the opposition of these two principles produces a contrariety in our thoughts....
>
> Thus our general rules are in a manner set in opposition to each other.... Sometimes the one, sometimes the other prevails, according to the disposition and character of the person. The vulgar are commonly guided by the first [influence of general rules], and wise men by the second. (T 149-150, my italics)

Not everyone will be led to revise their beliefs in the light of "second" general rules, Hume is admitting here. In fact, a large portion of the populace, "the vulgar," will not. They will not because, for any of a variety of reasons, they are not naturally compelled—because they have not experienced instances contrary to the "first" general rule or because they have not experienced them in sufficient number; because, though they have experienced a number of contrary instances, they have not attended to the fact due to dim wits, indifference, or obsession with other concerns (cf. EHU 107n); because, though they notice that they have been repeatedly misled, they have not admitted the fact, due to the force of education or the influence of passions (such as pride or obstinacy); or because the arguments that prove that they have been misled are so obscure, remote and involved that they fail to exert

an influence adequate enough to overcome the contrary influence of more lurid, sentimental, recent, or brief arguments. For them, the strongest beliefs will continue to be those condemned as illegitimate by "second" general rules. But how is it that even the philosophers can escape a similar fate?

b. Curiosity. Some recent writers have observed that one way Hume might deal with the problems of motivation and effectiveness is by appeal to the passion of curiosity or love of truth.[22] While curiosity cannot motivate us to accept general rules (since those rules are not established by demonstrably truth-preserving arguments, they have no particular recommendation to those concerned to discover the truth), it can motivate us to engage in the sort of reflection on the reliability of different beliefs and belief-forming mechanisms that activates those natural belief-forming mechanisms that compel us to accept "second" general rules. Moreover, by enjoining repeated, focused reflection, curiosity might lead the demonstrations of "second" general rules to recover, through frequency and familiarity, some of the force that they lose through obscurity, complexity and remoteness. Finally, since curiosity is a character trait, those who do not reason as philosophers do can be blamed for their beliefs—though not because those beliefs are demonstrably incorrect, but because adoption of "unphilosophical" belief is indicative of a mind that has not engaged in the kind of reflection that curiosity and a proper respect for the truth demand, and hence of a possible flaw in character.

However, despite these advantages—and even despite the fact that Hume seems to have identified curiosity as the cause of his own reflection and of the discoveries recounted in the *Treatise* (T 270-271)—there is some indication that he did not take curiosity to be the only or the most accessible means of enjoining reflection and belief in its results. In his essay on the rise and progress of the arts and sciences Hume remarks that "curiosity, or the love of knowledge, has a very limited influence, and requires youth, leisure, education, genius, and example to make it govern any person."[23] And in EHU, Section XII and *Dialogues* I, he suggests that there is another and more easily invoked inducement: a sceptical crisis. Indeed, EHU, Section V suggests that certain kinds of scepticism help create the conditions in which curiosity can exercise an influence:

> Nothing, therefore, can be more contrary than [the academic or sceptical] philosophy to the supine indolence of the mind, its rash arrogance, its lofty pretensions, and its superstitious credulity. Every passion is mortified by it, except the love of truth; and that passion never is, nor can be, carried to too high a degree. (EHU 41, see also 161-162)

c. Scepticism. Scepticism may at first seem an extraordinary resource for bolstering a belief in "second" general rules, since sceptical arguments are

explicitly directed to an end quite opposed to that of legitimating beliefs. But Hume held that, whatever their supposed goal, sceptical arguments cannot but have a natural effect on the mind that has once been convinced of them.

The sceptical arguments attack the legitimacy of all of our belief-forming mechanisms. The paradoxes having to do with composition and division in space and time, such as Zeno of Elea's motion paradoxes or the Zenonian paradoxes later invented by Pierre Bayle, are arguments that reason* itself produces that entail contradictory results. And since reason* itself condemns contradictions and whatever gives rise to them, it has no choice but to take this demonstration as an "evident" demonstration of the speciousness of its own claims.[24] The traditional Pyrrhonian "modes" of Aenesidemus and Sextus Empiricus establish that one of the most powerful and important beliefs produced by the associative mechanism, that in the existence of an external world, is obviously false—at least in its "vulgar" form where our perceptions are taken to be external objects.[25] They therefore serve as powerful "disconfirming experiments" working to diminish our trust in this mechanism. And though philosophers may try to evade this result by claiming that our perceptions might at least be the effects of external objects, further sceptical themes, such as the dreaming argument and the veil of perception, establish that these suggestions are not based on experience but on wishful thinking—worse, wishful thinking grounded in nothing more than the desire to persist in an evident error. (We want to consider distinct but resembling impressions to be the same impression, and invent the fiction of identity over time for no other reason than to paper over this absurdity.)[26]

As Hume remarks in the *Treatise*, the initial effect that a full appreciation of the force of the sceptical arguments has on the mind is to induce a feeling of disgust and dismay, and a subsequent distrust of reason* and our associative faculties (T 218, 268-269; EHU 161-162; DNR 131-132).

This effect is one that is rendered all the more powerful by a number of factors: The sceptical arguments are brief and simple. They are logically compelling. They appeal to observations, such as pressing the side of an eyeball with a finger, that require no specialized experimental apparatus, can be readily and repeatedly made by anyone, and can be found in countless instances (think, for example, how many different ways there are of proving that there is a distinction between appearance and reality). They lend themselves to being embellished with evocative images (Achilles and the tortoise, the visions of those with jaundice, the veil of perception, the dreaming argument). They arouse powerful emotions of amazement, disgust, and "melancholy," that make it very difficult for anyone who has once seen their conclusions to deny or forget them (T 268-269; EHU 161-162). They occur throughout history, so that the student encounters them again and again in different people. And they occur in many variations.

In light of these natural advantages, it is easy to see how repeated brood-

ing on sceptical arguments might not only weaken our tendency to trust reason* or association, but induce a kind of indifference (or "diffidence" as Hume likes to call it) to all "evidence" or vivacity, whether obtained from reason*, association, or education, and a consequent mitigation of the strength of all belief.

> The greater part of mankind are naturally apt to be affirmative and dogmatical in their opinions; and while they see objects only on one side, and have no idea of any counterpoising argument, they throw themselves precipitately into the principles, to which they are inclined; nor have they any indulgence for those who entertain opposite sentiments.... But could such dogmatical reasoners become sensible of the strange infirmities of human understanding, even in its most perfect state, and when most accurate and cautious in its determinations; such a reflection would naturally inspire them with more modesty and reserve, and diminish their fond opinion of themselves, and their prejudice against antagonists. The illiterate may reflect on the disposition of the learned, who, amidst all the advantages of study and reflection, are commonly still diffident in their determinations. (EHU 161)

This result seems inimical to the entire project of establishing a distinction between legitimate and illegitimate belief. How can establishing that our faculties are untrustworthy end up leading to such a distinction? It happens because a further player enters on the scene: human nature. The faculties continue to exist; they just make the Pyrrhonian decision that whatever they pronounce is unreliable. But because they continue to exist, they cannot help continuing to operate, continuing to enliven ideas, and continuing to generate new pronouncements concerning the "evidence" of certain relations between ideas. As Hume puts it, nature proves too strong for principle (EHU 160; cf. T 269; DNR 132-133).[27] We continue to exist; our faculties continue to operate; we continue to have experiences, and we continue to be affected by those experiences. The contrary experiments exhibited by Pyrrhonian arguments are like a weight placed on a balance scale. And though the force of that weight can be augmented by repeated brooding on those arguments, experience is continually adding new instances and new pressure to the other side.[28] Thus, while the Pyrrhonian arguments may introduce "a momentary confusion and amazement," and may temporarily tip the scale to their side, the effect does not last, and renewed experience soon compels us to believe.[29]

However, everything is not quite the same as it was before. The encounter with the sceptical arguments was powerful and disturbing; it left us with a belief in the untrustworthiness of our faculties that continues to exist and

cannot be forgotten. Since this belief is based on an association of the pronouncements of our faculties with the demonstrated absurdity, falsity or fictiveness of those pronouncements, the associative faculties—particularly statistically guided causal inference—can combat it by exhibiting their own "contrary instances" (predicted causal correlations that are subsequently confirmed). In this way, they can reduce our doubt from a "probability" to a "possibility." But where reason*, education, and the mechanisms responsible for belief in unperceived existence are concerned, it remains unclear how this sort of mitigation could occur (see section II). Instead, the doubts enjoined by Pyrrhonian arguments should continue to exist in uneasy cohabitation with the contrary beliefs enjoined by a renewed operation of the faculties, making our assent more troubled than before, and perhaps even impeding our action.

> if a man has accustomed himself to sceptical considerations on the uncertainty and narrow limits of reason, he will not entirely forget them when he turns his reflections on other subjects; but in all his philosophical principles and reasoning, I dare not say, in his common conduct, he will be found different from those, who either never formed any opinions in the case, or have entertained sentiments more favourable to human reason. (DNR 134; see also EHU 161-162)[30]

If this is correct, then what we should manage to still be able to believe after the encounter with the sceptical arguments, and after experiencing the "second" (i.e., repeated) influence of nature, is, first of all, statistically guided causal inference and, secondly, whatever it is that our faculties most frequently suggest to us.[31] To borrow a pair of examples from EHU 162, what makes us believe that a stone will fall or fire burn is that there are thousands of experiences that establish and confirm these beliefs, and no sceptical argument can overcome the effect of that reiterated training. What we experience only rarely, in contrast, is by that fact more susceptible to the residual or remaining suspicions induced by the sceptical arguments, and may even produce further spectacular failures, that go to bolster the distrust initiated by those arguments. Well-established "general rules" might go some way towards mitigating our doubt in some of these rarer cases, and allowing us to draw a conclusion from just one instance, but where there are no such rules and the suggestion is the product of an "inconstant" operation of the mind, the sceptical conclusions will retain their force, make our assent uneasy, and impede our action. And even where the operation is constant, the memory of the sceptical crisis will ensure that our belief will not be as strong as previously.

Accordingly, whenever a belief is based on a small number of instances, or contrary instances, or instances that are not exactly resembling, or hasty

generalizations, the belief should not be strong enough to overcome the contrary influence of our sceptical distrust. But because statistically guided causal inference is a belief-forming mechanism that is able to mitigate (not merely oppose) the force of sceptical arguments, it should acquire a special authority—despite the fact that its conclusions may sometimes depend on long chains of argument or old experiments. Given the strength of the sceptical arguments, what is needed for belief in a causal relation to be sustained—and all that is needed—is that "the conjunction is found by experience to be perfectly constant," and that "the object, which is present to us, exactly resembles those, of which we have had experience" (T 153). And statistically guided causal inference provides for that.

Importantly, however, not all applications of statistically guided causal inference should turn out to be equally persuasive. This should only happen when the inference concerns causes and effects that are repeatedly experienced to go together, or when it is backed up by extensive analogies or general rules drawing on demonstrably efficacious circumstances. (These are the sorts of cases that repeatedly prove to be reliable.) Inferences that pursue the causal chain out beyond the bounds of "experience and daily practice" will remain open to doubt, simply because these inferences gain no support from repeated experience.[32] This limitation on the validity of causal inference is one that Hume is particularly concerned to establish, and it is an especially tricky result that a sceptical crisis is particularly well suited to achieve.

> A correct *Judgment* observes a contrary method, and avoiding all distant and high enquiries, confines itself to common life, and to such subjects as fall under daily practice and experience; leaving the more sublime topics to the embellishment of poets and orators, or to the arts of priests and politicians. To bring us to so salutary a determination, nothing can be more serviceable, than to be once thoroughly convinced of the force of the Pyrrhonian doubt, and of the impossibility, that anything, but the strong power of natural instinct, could free us from it. (EHU 162; cf. DNR 131-132, 134-136)[33]

But, though not all instances of sceptically guided causal inference should evade our distrust, there are other beliefs, induced by other belief-forming mechanisms that should make it up over the sceptical hurdle. Reasoning* concerning matters of quantity and number is one (since that can be expected to be repeatedly verified by experience), though, had Hume been right in his claims about the paradoxical nature of infinite divisibility, that bearing on space and time would remain open to doubt (EHU 163, cf. 156). But, most notably, since the mechanisms responsible for inducing belief in external objects will be very frequently activated, the belief in external objects should

end up being accepted as well—even though it gets no support from statistically guided causal inference. So also, of course, should be the Pyrrhonian conclusions that exhibit the baselessness of this belief. This conflict between the faculties and sceptical reflections will remain with us. It is "a malady, which can never be radically cur'd, but must return upon us every moment, however we may chace it away, and sometimes may seem entirely free from it" (T 218)—but that also makes this conflict an enduring resource for those wishing to be inspired by the salutary effects attendant upon attaining a sceptical disposition. Not all the problems have been solved. A new version of dogmatism is not permissible.

VI. Hume's Ethics of Belief

So far, I have argued that a Humean account of the (natural) effect that sceptical arguments have on our belief-forming mechanisms can be used to explain how it is that we can come to be naturally compelled to accept those "second" general rules that Hume considers to be definitive of legitimate belief, and naturally compelled to revise or at least doubt our other beliefs accordingly. Or, more exactly, I have argued that a sceptical crisis provides one good explanation (curiosity provides another) of how it is that some of us have come to do these things. For, just as not everyone has a dispassionate disposition combined with curiosity, youth, leisure, education, genius and example, so not everyone has felt the force of the sceptical arguments. Those who have done these things, "the philosophers," sitting in laboratories and performing controlled experiments on statistically sound samples, or in libraries and reading articles in peer-reviewed journals, will accept and largely follow "second" general rules, such as the rules that causes can never fail of their effects, that the probability of causes is to be judged by statistically sound studies and not by passion and recent anecdotes, and that generalizations are to be drawn on the efficacious features of causes and not their accidental properties. Those who have not done these things, the vulgar, sitting in donut shops and reading tabloid newspapers, will be superstitious, gullible and prejudiced, though they will consider their credulity to be nothing other than "common sense."

Hume, of course, recognized and frequently commented on the existence of these two "epistemological classes" (for instance, T 132, 149; EHU 161). But their existence raises the problem mentioned earlier: How can the philosophers (such as Hume himself) justly condemn the vulgar for their beliefs, and claim that they ought to believe otherwise?

If having once been thoroughly convinced of the force of the sceptical arguments can by itself make the difference between a vulgar and a philosophical knower, then Hume has a ready way to deal with this problem. It is a simple matter for anyone to appreciate the force of the sceptical argu-

ments. Doing so does not require youth, wealth, education (as far as Hume is concerned, certain kinds of education can do more harm than good), an ability to attend to obscure premises or long chains of argument, or the example of one's peers. It requires nothing more than the modicum of curiosity needed to prompt one to attend to a few simple and succinct arguments gleaned from experiments that may be readily performed by anyone. The only excuses for a failure to be impressed by the sceptical arguments are willful ignorance, obstinate blindness, obtuse stupidity, lazy indifference, and a temporary unfamiliarity that, if not liable to be readily corrected, degenerates into one of the other factors just mentioned.[34] As these are all character traits determining the "willful" actions of people, the philosophers can justly blame the vulgar for ignoring the sceptical arguments and preserving in their dogmatical patterns of belief—as they can condemn those beliefs themselves insofar as they violate "second" general rules.

The case with the philosophers themselves is entirely different. Whereas the beliefs of the vulgar are, in the sense just specified, a product of their willful decision to suppress even the modicum of curiosity required to attend to sceptical arguments, those of the philosophers are the necessary consequences of the natural rebalancing of the effects of the different belief-forming mechanisms subsequent to an encounter with sceptical arguments. Admittedly, the philosophers must first contemplate the sceptical arguments and perform the simple tests and thought experiments they describe in order to be affected by them—and this presupposes an act of will. But the sorts of character traits that tend to motivate this act—such as a willingness to attend to what a sceptic is saying or a desire to oneself investigate the extent and limits of human understanding—are hardly blameworthy, even if the vulgar may not share them to the same degree. And once this attentiveness or curiosity has led the philosopher into an encounter with sceptical arguments, the outcome is no longer one that can simply be willed away. Indeed, far from being something the philosopher willfully embraces, the initial Pyrrhonian crisis induced by sceptical arguments can be intensely disagreeable (witness T I iv 7 or the close of T I iv 2).

Both the vulgar and the philosophers have their beliefs determined by natural mechanisms. But in the philosophers these mechanisms work in a different way than they do in the vulgar. What determines which way any given person's mechanisms will work is, in the case of the philosophers, a decision to attend to the force of the sceptical arguments, grounded in a laudible curiosity to learn the truth, and, in the case of the vulgar, a despicable decision to ignore not only the task of inquiry, but even any consideration of reports of the simplest results of the inquiry undertaken by others—a decision grounded in laziness, imbecility, obstinacy or other such blameworthy character defects.[35]

Intriguingly, Hume's account of belief provides for the possibility that even the vulgar might—especially if they are honest and modest—agree that

the beliefs of philosophers ought to be preferred to their own, so that it will not be just the philosophers who condemn vulgar beliefs, but the vulgar themselves who are led to have meta-level beliefs that condemn their own lower level beliefs. This can happen because even the vulgar can be supposed to be naturally compelled to accept the belief that the opinions of those who have knowledge and experience of a matter ought to be preferred to those of greenhorns. This is something that is so readily taught to us by everyday experience that it is enshrined in a common respect for the old (Hume speaks of how "the ignorance and inexperience of the young are here plainly distinguishable from the cunning and sagacity of the old" [EHU 105]) and instanced in anecdotes and tales (Hume tells the story of an old greyhound, who "will trust the more fatiguing part of the chace to the younger, and will place himself so as to meet the hare in her doubles" [EHU 105]).

Everyone, therefore, whether vulgar or philosopher, who wishes to declaim on the subject matter of the warrant for belief, should accept that they must either investigate that subject and acquire some experience of it, or defer to the judgment of those who have done so. Either route, however, leads to the conclusion that the beliefs of philosophers ought to be accepted in preference to those of the vulgar—the one route by way of an encounter with the sceptical arguments and a subsequent compulsion to accept only statistically guided causal inference in preference to the dictates of "unphilosophical" belief-forming mechanisms, the other route by way of submission to the testimony of authorities (who will have followed the first route).

Even the vulgar, therefore, insofar as they are honest and modest, will adopt a "meta-level" belief that the beliefs of the philosophers are to be preferred to their own, even though they themselves may feel naturally compelled to do otherwise.

Before concluding, there is one final matter bearing on an ethics of belief that merits some passing comment. This paper began with the citation of Hume's remark that the statement of his rules by which to judge of cause and effect was perhaps "not very necessary, but might have been supply'd by the natural principles of our understanding." If what I have said is correct, then this remark should be taken very seriously indeed. For it appears that we cannot simply decide to follow the rules by which to judge of causes and effects. We must either be directly motivated to do so by a degree of curiosity that requires "youth, leisure, education, genius, and example to make it govern any person," or we must have been "obliquely" led to this conclusion by exercising the modicum of curiosity needed to have at least once seriously attended to the sceptical arguments—a task that produces a sceptical crisis that has as its natural outcome a tendency to form beliefs in accord with "second" general rules. No textbook of logic will be able to help the vulgar person, who has neither the resources to act on curiosity, nor an acquaintance with sceptical arguments. Such a person could read the textbook, perfectly under-

stand and appreciate its contents, and be entirely unable to follow its injunctions, simply because the mechanisms naturally enlivening ideas are likely to transmit much more vivacity than the dry arguments of the book, and will therefore continue to govern that person's belief. The person who has once felt the force of the sceptical arguments, in contrast, will be naturally compelled to follow the rules by which to judge of causes and effects, even before having had the benefit of studying them in the book.

This is a circumstance that has an evident pedagogical implication—an implication that Hume appears to have taken seriously to heart.

NOTES

I am indebted to Peter Millican and Jack Lyons for critical responses to an earlier version of this paper, and to David Owen for illuminating discussions of many of the issues dealt with here. I owe a special debt to David Norton, whose extensive and detailed comments occasioned significant revisions and corrected numerous errors.

1 Because of the number of other projects undertaken in this paper, I will not have room to address the issue of whether the argument of the *Enquiry* is significantly different from that of the *Treatise*. As argued in notes 24, 30, 33, and 35 below, I maintain that Hume's position in the *Enquiry* is in some respects more sophisticated than that in the *Treatise*, but that his explanations of the mechanisms determining belief are more complete in the earlier work. This has made it most convenient to proceed as if the two works were statements of essentially the same position.

2 They claim, for instance, that "A correct *Judgement*...avoiding all distant and high enquiries, confines itself to common life, and to such subjects as fall under daily practice and experience" (EHU 162); that "If the cause be known only by the effect, we never ought to ascribe to it any qualities, beyond what are precisely requisite to produce the effect" (EHU 136); that "A wise man...proportions his belief to the evidence" and that "we ought not to make an exception to this maxim in favour of human testimony" (EHU 110, 111); that, in every judgment of knowledge or probability, "we ought always to correct the first judgment, deriv'd from the nature of the object, by another judgment" concerning the likelihood that the first judgment was made correctly (T 182-183); that the "rules by which to judge of causes and effects" are "some general rules, by which we ought to regulate our judgment" (T 149); that judgments inferring similar effects from objects that resemble previously experienced causes only in "accidental" respects are "errors" (T 146-147); that to try to refute a hypothesis by showing that it is dangerous to religion is a "blameable method of reasoning" (paraphrasing T 409); that, even though "where there is an opposition of arguments, we ought to give the preference to

such as are founded on the greatest number of past observations," the agreeable passions of surprise and wonder, induced by hearing of improbable events, can give "a sensible tendency towards belief of those events" so that "when anything is affirmed utterly absurd and miraculous, [the mind] rather the more readily admits of such a fact, upon account of that very circumstance, which ought to destroy all its authority" (EHU 117), and that even though someone suspended over an abyss in an iron cage will naturally feel fear, the "contrary circumstances of support and solidity...ought to give him a perfect security" (T 148).

3 In this paper I will frequently have occasion to mention a distinction between rational or logical justifications for belief and non-rational causes of belief. I intend this distinction to be drawn in light of the conception of "reason" current in Hume's day. According to this conception, reason is the faculty or capacity to draw a conclusion from given premises by means of an intermediate series of steps. Understood in this broad sense, "reason" or "reasoning" is normatively indeterminate—it can be good or bad, depending on whether the inference from premises to conclusions is warranted or unwarranted (think of Hume's remark, "We have, therefore, no choice left but betwixt a false reason and none at all" [T 268], which obviously invokes the notion that reasoning may be "false" as well as "true"). However, taken in a narrower sense, "reason" or "reasoning" consists just in drawing inferences from given premises by means of laws that are demonstrably truth-preserving. By calling a law of inference truth-preserving, I mean that as long as it is applied to true premises it either cannot yield false conclusions or cannot yield conclusions that have only a low probability of being true. A system of such laws is a logic. And reasoning in accord with logical laws is not normatively indeterminate—such reasoning warrants its conclusions, so that we can think that we "ought" to accept them.

In this paper I will take a natural cause of belief to be any cause that in fact induces us to accept a belief, whether by derivation or not, and if by derivation whether by truth-preserving laws or not. Thus, if reasoning in the narrow sense is actually able to induce us to accept beliefs, it will be one natural cause of belief. But for Hume there are other causes as well. Some, like the belief that similar events will occur in similar circumstances, involve derivation (here we "derive" the belief that the similar events will occur from the experience of the similar circumstances, but—if Hume is right—the "law" we rely upon in doing so, that the future must resemble the past, is not demonstrably truth-preserving). Others, like the beliefs inculcated by education, do not involve derivation at all.

As has been remarked by a number of scholars (most recently, Peter Millican, "Hume's Argument Concerning Induction: Structure and Interpretation," in *David Hume: Critical Assessments*, vol. 2, edited by Stanley Tweyman [London: Routledge, 1995], 91-144, esp. 130-131; but see also: R. W. Connon, "Hume's Naturalism," in *McGill Hume Studies*, edited by David Fate Norton, Nicholas Capaldi, and Wade L. Robison [San Diego: Austin Hill Press, 1979], 121-145, esp. 129-130; Barbara Winters, "Hume on Reason," *Hume Studies* 5 [1979]: 20-35; David Fate Norton, *David Hume: Common-Sense Moralist, Sceptical Metaphysician* [Princeton: Princeton University Press, 1982],

96n; Annette Baier, *A Progress of Sentiments* [Cambridge, Mass.: Harvard, 1991], 60-61, and David Owen, "Philosophy and the Good Life: Hume's Defence of Probable Reasoning," *Dialogue* 35 [1996]: 485-503, esp. 488), Hume himself sometimes uses the term "reason" in just the narrow sense I have specified, but at other times he uses it more broadly. In this broader, Humean sense, "reasoning" is any process whereby new beliefs are derived from antecedently given beliefs, whether by truth-preserving laws or not, and if not, whether by some other warranted means (should there be such) or not. (It should not, however, be confused with non-inferential or intuitive belief.) In this broader sense, believing that similar events will occur after having witnessed similar circumstances counts as "reasoning" (e.g., T 82 and the texts cited by Winters, 24-25), even though the law that similar events will occur in similar circumstances is not demonstrably truth-preserving, even inductively. Correspondingly, the term "logic" can have a similarly broad sense. For Hume, a "logic" can be any system of rules that governs the derivation of new beliefs from previously given beliefs, regardless of whether those rules are demonstrably truth-preserving or not, and if not whether they have any other kind of warrant or not. Thus, the rules by which to judge of causes and effects constitute, in his words, a "logic" (T 175) even though no causal inference is legitimated by a demonstrably truth-preserving law. To avoid the ambiguity that consequently plagues Hume's own discussion, I will not use the terms "reason," "rational," "logic," or "logical" in this broader way. All references to "reason" or "rationality" in this paper (those contained in quotations from Hume excepted) should be taken to refer just to the narrow sense, where reason consists in deriving conclusions from premises in accord with demonstrably truth-preserving laws. As a constant reminder that this usage does not in all cases conform to Hume's, such references will be followed by an '*'.

Though my use of "reason*" in this paper is restrictive, I do go on to raise the question of whether some of the beliefs that are non-rational in the narrow sense might nonetheless still be warranted in some other way. If there are such beliefs, then they might deserve to be called "rational" in an intermediate sense (Millican has suggested this), but I will not employ such a sense of "rational" in this paper either, and will refer instead to "non-rational* but nonetheless warranted" beliefs.

4 For accounts of the two dominant traditions see the remarks on the history of Hume scholarship in Norton, *Hume*, 3-9; Nicholas Capaldi, "Introduction: The Problem of Hume," in *McGill Hume Studies*, 3-4; Terence Penelhum, "Hume's Scepticism and the *Dialogues*," in *McGill Hume Studies*, 253-278, esp. 253-254; Donald W. Livingston, "Introduction," in *Hume: A Re-evaluation*, edited by Donald W. Livingston and James T. King (New York: Fordham, 1976), 1-4; following upon T. E. Jessop, "Some Misunderstandings of Hume," *Revue Internationale de Philosophie* 20 (1952), reprinted in *Hume: A Collection of Critical Essays*, edited by V. C. Chappell (Garden City, N.Y.: Doubleday, 1966), 35-52; and Wade L. Robison, "Hume's Scepticism," *Dialogue*, 12 (1973): 87-99, esp. 87-89, 97-98. For discussions of the problems posed by Hume's normative claims concerning belief, see Penelhum, 261-263; Norton, *Hume*, 208-221, and "How A Sceptic May Live Scepticism," in *Faith, Scepticism and Personal Identity*, edited by J. J. MacIntosh and H. A. Meynell

(Calgary: University of Calgary Press, 1994), 119-139, esp. 128-136; Millican, 127-138; Owen; John Immerwahr, "A Skeptic's Progress: Hume's Preference for the First Enquiry," in *McGill Hume Studies*, 227-238; Fred Wilson, "Hume's Theory of Mental Activity," in *McGill Hume Studies*, 101-120, and "Hume's Defence of Causal Inference," *Dialogue* 22 (1983): 661-694; John Passmore, "Hume and the Ethics of Belief," appended to his *Hume's Intentions* (London: Duckworth, 3rd ed., 1980), 160-176; David Pears, "The Naturalism of Hume's *Treatise of Human Nature*, in *Rationalism, Empiricism, and Idealism: British Academy Lectures on the History of Philosophy*, edited by Anthony Kenny (Oxford: Clarendon Press, 1986), 104-123; Barry Stroud, "Hume's Scepticism: Natural Instincts and Philosophical Reflection," *Philosophical Topics* 19 (1991): 271-291, esp. 287; Tito Magri, "The Evolution of Reason in Hume's *Treatise*," *Philosophical Forum* 25 (1994): 310-332, and Don Garrett, *Cognition and Commitment in Hume's Philosophy* (New York: Oxford University Press, 1997), esp. 205-241. I am indebted to David Owen and Don Garrett for allowing me to see prepublication copies of their work.

5 See, for example, the discussion of the views of Ayer and Moore in Connon, 131-132, or those of Passmore and Flew in Garrett, 206.

6 Passmore, 165-166, makes this point of "Hume the Pyrrhonian sceptic"; Immerwahr, 231, of Hume in the *Treatise*. Penelhum, 258-261, 263-264, and Anthony Flew, *Hume's Philosophy of Belief* (London: Routledge, 1961), 96-99 make the charge without qualification. Both the sceptical and the naturalistic attitudes to the normativity of belief are combined in Richard H. Popkin, "David Hume: His Pyrrhonism and His Critique of Pyrrhonism," in *Richard H. Popkin, The High Road to Pyrrhonism*, edited by Richard A. Watson and James E. Force (San Diego: Austin Hill, 1980), 103-132, and Yves Michaud, "Hume's Naturalized Philosophy," *Hume Studies* 13 (1987): 360-380.

7 Pears, 105, 114. Pears believes that Hume's naturalistic account ultimately fails in this regard, however. Similar opinions have been expressed by Immerwahr, Penelhum, Flew, Popkin, and Michaud, all of whom claim that the resources available to Hume's naturalist account are ultimately inadequate to sustain a distinction between legitimate and illegitimate belief. For attempts to argue to the contrary, see Wilson, Stroud, Magri, Millican, Owen, and Garrett.

8 One version of the sceptical reading of Hume charges that his claims about which belief we ought to adopt or reject are nothing more than descriptions of the sorts of beliefs that some of us (the "wise" or "philosophers") are in fact naturally compelled to adopt or reject, not normative claims about what beliefs are warranted or unwarranted. See, for instance, D. C. Stove, *Probability and Hume's Inductive Scepticism* (Oxford: Oxford University Press, 1973), 123-124, but also Popkin, 115, 127, 130-131, and Penelhum, 262-263.

9 Contrast Passmore (170, 174-176), whose ultimate position appears to be that the only way Hume can provide for an "ethics of belief" is by abandoning the naturalistic thesis, at least where "the wise" are concerned, and holding that they come to have a capacity to resist the influence of natural belief-forming mechanisms. In pursuing the opposite view I am following a track cut by Norton, "Scepticism," 128-136, and *Hume*, 208-209, 214-215,

219-220. Norton's approach is grounded on the insight that for Hume "reflective" deliberation, induced through voluntary activity, is no less a natural cause of belief than our more "reflexive," automatic or instinctual tendencies to enhance the vivacity of our ideas, and can sometimes be strong enough to mitigate or revise the latter tendencies (*Hume*, 208-209, 212-215, "Scepticism," 135, 136, but see *Hume*, 226-227, for nuances—Norton's use of "reason" and "naturalism" is different from that specified in note 3 above, leading him to claim that he is rejecting what he calls a "naturalist" reading of Hume, but purely verbal differences aside, his point is that Hume takes the natural [in my sense] causes of belief to include willful deliberation as well as instinct). For example, the mitigation of belief can often be the deliberate result of a decision to recall contrary outcomes or entertain sceptical arguments ("Scepticism," 128-129; *Hume*, 230). Beyond supplying a detailed analysis of Humean belief-forming mechanisms to further support this interpretation, the main contribution I have to make in this paper consists in providing an account of precisely how it is, for Hume, that we are led to perform the kind of reflection Norton draws our attention to, and how it is that this reflection can in turn lead us to either mitigate our beliefs or hold them only in the presence of an accompanying doubt. Norton takes it that we can be inspired to engage in this activity by discovering that it can satisfy curiosity, correct errors in our more instinctive beliefs, discover new beliefs (*Hume*, 215-219), and generally improve our condition ("Scepticism," 130), whereas I propose to lay more stress on the influence of an encounter with Pyrrhonian conclusions. He has also stressed (in correspondence) that his goal in "Scepticism," was not to explain how assessments of the legitimacy of different beliefs might be possible for Hume, but how mitigation of all beliefs might be possible, given Hume's purported commitment to a naturalistic account that makes all belief involuntary. In contrast, I want to establish how the kind of reflection induced by an encounter with Pyrrhonian arguments can provide for the disproportionate mitigation of certain beliefs—that is, for the development of an ability to reject illegitimate beliefs while accepting (though more weakly than previously) legitimate ones.

In this respect, the line of interpretation to be defended here approximates most closely that presented by Garrett, 205-241. As do I, Garrett concludes "that Hume—audaciously enough—regards his skeptical arguments as essential preparation for a satisfactory grounding and reconfirmation of our commitment to reason and its products [i.e., warranted belief]" (Garrett, 208). The main differences between Garrett's approach and my own focus on our accounts of the manner in which sceptical arguments achieve this effect. Garrett takes it that Hume's sceptical arguments only go so far as to establish that certain of our beliefs are not based on what he calls "demonstrative or probable reasoning" (i.e., reason* or causal inference), but not that these beliefs are false or unwarranted. I adopt a more narrowly mechanistic approach in what follows, arguing that Hume's sceptical arguments work like weights on a balance scale, opposing the contrary force exerted by our natural belief-forming mechanisms. These arguments diminish the strength of all beliefs equally, inducing a generalized doubt (in this I agree with Norton), but certain belief-forming mechanisms are better able to exert a countervailing

force than others, and they are less affected by what would otherwise be the overwhelming force of the sceptical arguments—or are only momentarily checked by them.

10 The significance of the clash between Pyrrhonian scepticism and dogmatism (or our more immediate, naturally induced beliefs) has been recognized before. Popkin, 115, 127, 130-131; Penelhum, 262-263; Stroud, 278, 280, and Stanley Tweyman, *Scepticism and Belief in Hume's* Dialogues Concerning Natural Religion (Dordrecht: Martinus Nijhoff, 1986), 6-9, have remarked that Hume takes the clash to be responsible for mitigated scepticism. Norton, *Hume*, 227-235, argues that the outcome of the clash between dogmatism ("instinctive naturalism") and scepticism ("philosophical reflection") is "mitigated naturalism" (235). (While it might seem to come to the same thing to say, following Popkin, that the clash between naturalism and scepticism produces mitigated scepticism or, following Norton, mitigated naturalism, the change in emphasis is instructive. What is mitigated is not simply the sceptical tendency to doubt all beliefs, but the naturalist tendency to immediately accept whatever ideas are enlivened, independently of any further considerations.) Norman Kemp Smith, *The Philosophy of David Hume* (London: Macmillan, 1964), 129-132, and "The Naturalism of Hume," *Mind* 14 (1905): 169 and 169n.2; and Robert Fogelin, *Hume's Skepticism in the* Treatise of Human Nature (London: Routledge, 1985), 2, 6-7, 23, have intimated (though neither goes into much detail) that, for Hume, the clash not only produces mitigated scepticism or a generally mitigated naturalism, but also gives rise to a natural disposition to adopt only warranted beliefs. Garrett not only intimates this, but explains in detail how it happens—though, as stated in the previous note, his position differs in some important ways from the one to be defended here.

11 *Ex hypothesi*, insofar as "relation to a memory" is explicitly included as an alternative cause of belief.

12 Hume allowed that "repeated meditation" upon certain arguments can generate a conviction that would otherwise be lacking (T 114), and that "reflection" can correct certain propensities to ascribe belief (T 148). He also took it that observation has a strong influence on belief (T 133), so that labour invested in obtaining observations or attention devoted to their analysis can modify belief (EHU 107n).

13 Note, for instance, the role of the imagination in formulating the experiments of T II ii 2—experiments that go to confirm the truth of a theory. Another use of imagination, that involved in fantastic association, is discussed at T 122-123, and Hume's claim that passions can affect belief (T 120) provides a further avenue for the imagination to exercise an influence, since that faculty is often responsible for inflaming the passions.

14 I owe this example to Norton, *Hume*, 236-237.

15 The best prior analysis of this material is Wilson, "Causal Inference," 680-686, though from the portions I have seen of it in advance of publication, Garrett may improve even on that account. In what follows I disagree with Wilson on some minor particulars. I have also tried to improve on the systematic order and completeness of his account.

16 "This force and this vivacity are most conspicuous in the memory; and therefore our confidence in the veracity of that faculty is the greatest imaginable, and equals in many respects the assurance of a demonstration. The next degree of these qualities is that deriv'd from the relation of cause and effect; and this too is very great, especially when the conjunction is found by experience to be perfectly constant, and when the object, which is present to us, exactly resembles those, of which we have had experience" (T 153).

17 I am interpolating somewhat in order to explain Hume's claim at T 132 that "however philosophers and the vulgar may differ in their explication of the contrariety of events, their inferences from it are always of the same kind, and founded on the same principles."

18 Hume has some difficulty coming up with cases of the influence of contiguity and only ever supplies two: that of pilgrims who find their belief strengthened by a trip to the holy land (T 110-111), and that of travelers returning to familiar places who find their thoughts of neighbouring but unseen objects enlivened by the experience of their surroundings (T 100; EHU 52). This is a significant omission, as it seems that Hume should have taken contiguity every bit as seriously, and accorded it just as much force, as constant conjunction. It is belief induced by the contiguity relation that allows me to find my way home in the evening or make my way through a darkened room. When engaging in these sorts of navigational exercises my present impressions excite vivacious ideas of the objects, places and routes that I have experienced to be contiguous to them in the past, and, far from being weak, these beliefs guide my actions. This belief is not causal (I do not believe that the intersection I am approaching is the cause of the street), but concerns what unseen objects are contiguous to what currently seen ones.

19 The text where Hume discusses this phenomenon, T 122-123 including reference to T 630-632, speaks of "imagination" rather than fantasy. However, it is clear from his discussion that what Hume has in mind is just the use of the imagination to construct fantastic stories and ideas, not the use of the imagination in, say, perceptual inference or thought experiments designed to test the facts (such as those of T II ii 2).

20 For one other case where the enlivening of an idea does not produce an impulse to believe, see the discussion of T 630-632.

21 Though Hume does not remark upon it here, in the case of resemblance this effect would have to be mitigated depending on the extent of the resemblance. The more extensive the resemblance the more readily the mind should make the association and the less its sense of its own caprice should be. This is implied by T 142 and required by Hume's claim that general rules can sometimes be very strongly believed. Since general rules are themselves merely particular causal rules extended to resembling objects, it is hard to see how they could be strongly believed if the resemblance were weak and capricious.

22 For discussions of the influence of this passion see Wilson, "Causal Inference," 670, and "Mental Activity," 117; and Norton, *Hume*, 215-219.

23 David Hume, "On the Rise and Progress of the Arts and Sciences," in *Essays Moral, Political, and Literary*, edited by Eugene F. Miller (Indianapolis: Liberty Fund, 1987), 113.

24 EHU 156-158. In the *Enquiry*, Hume wisely decided that these enduringly puzzling arguments were better suited to make his point than the original attack on reason* he had mounted in T I iv 1. (In light of what was said in section II about the difficulty of explaining how a contrary experiment could diminish the evidence of a relation of ideas, this move appears especially wise). Appealing to the paradoxes meant, however, giving up his own attempt at a solution in T I ii—though he could not resist alluding to that solution in a note (EHU 158n). The note concludes with the remark that he is not prosecuting this "hint" because leaving the paradoxes of the continuum unanswered "seems the readiest solution of these difficulties"—and because "it certainly concerns all lovers of science not to expose themselves to the ridicule and contempt of the ignorant by their conclusions"!

25 T 210-212; EHU 152-153. In the *Treatise*, Hume employs Sextus's fourth mode, in the *Enquiry* the fifth. Though in the *Enquiry* he twice dismisses the traditional modes as "trite" (EHU 151) and "weak" (EHU 158), they are the very arguments he elsewhere takes to be employed by "the slightest philosophy" (EHU 152) to establish that there is a distinction between perceptions and objects and that we are only ever aware of our perceptions. Hume remarks that, far from being trite or weak, this latter line of reasoning is one at which "the profounder and more philosophical sceptics will always triumph, when they endeavour to introduce an universal doubt into all subjects of human knowledge and enquiry" (EHU 153).

26 T 214, 215, 266; EHU 153-154, 155. One might add, as a footnote to Hume's two, grand demonstrations of the conflict of reason* with itself, and of association with evident experience, a third demonstration grounded in the conflict of the "first" and "second influence" of general rules with one another. Hume's remark on the "pleasure" a sceptic receives from discovering that it is an accidental turn of the same thought pattern that generates prejudices that is responsible for correcting them (T 150) is a foreshadowing of the more serious conflicts to come. Intriguingly, however, Hume does not devote any effort in either the *Treatise* or the *Enquiry* to sceptical attacks on the third major belief-forming mechanism: repetition and education. As will become clear momentarily, this omission is highly significant, even if it may have been an oversight. Though sceptical attacks on education can be readily thought of (the observation that different authorities hold contradictory opinions goes back at least as far as Sextus), it is not clear that these arguments could have an effect on anyone who had been "educated" to adopt an idea by frequent, unintended repetition. The demonstration of an evident contradiction will impress and dismay reason*; the experience of a contrary experiment will weaken a habit of association and so diminish the quantity of vivacity reflected from an impression onto an idea; but what can diminish the vivacity induced by the effect of the frequent, unintended repetition of an idea? Not the frequent, unintended repetition of a contrary idea—that will only educate us into believing a contradiction. And not even the frequent, unintended repetition of the idea that education is unreliable—that will not obviously diminish the vivacity of any other frequently and unexpectedly repeated idea, and so will only educate us into believing both what we have been educated to believe and that our education is unreliable.

27 Note that in the *Dialogues* Hume employs a different speaker, Cleanthes, to make this point. This is entirely appropriate, given that what is occurring here is, in effect, a war between two forces, scepticism and nature. I take it that the peace treaty is then proposed by Philo and that Cleanthes's subsequent objection—how can matters of "daily practice and experience" be taken to include the remote theses of astronomy and the physics of light, but exclude natural religion—serves as the introduction of the major problem the *Dialogues* was written to resolve: how can scientific belief be reconciled with religious disbelief? The solution to this puzzle, stated by Philo and reiterated in the long note to DNR, Section XII, is that insofar as natural religion conforms to the canons of science, the conclusion it derives is so anemic as to be indistinguishable from paganism or atheism.

28 In effect, therefore, it is repetition (the belief-forming mechanism at the root of education) that saves us from Pyrrhonism!

29 Compare the following passage from DNR 221, which makes a similar point about the relative effacy of natural belevolence and religious threats in inducing moral behaviour:

> A man's natural inclination works incessantly upon him; it is for ever present to the mind; and mingles itself with every view and consideration: Whereas religious motives, where they act at all, operate only by starts and bounds; and it is scarcely possible for them to become altogether habitual to the mind. The force of the greatest gravity, say the philosophers, is infinitely small, in comparison of that of the least impulse; yet it is certain that the smallest gravity will, in the end, prevail above a great impulse; because no strokes or blows can be repeated with such constancy as attraction and gravitation.

It is worth remarking that references to the eventually overpowering effect of repeated or enduring inducements are not confined to Hume's philosophical writings, but occasionally appear in his explanations of historical events. Thus, in *The History of England*, vol. 2, chap. 20, when discussing the defection of the Duke of Burgundy, Hume remarks, "Revenge alone had carried Philip to these impolitic measures [an alliance with the English]; and a point of honour had hitherto induced him to maintain them. But as it is the nature of passion gradually to decay, while the sense of interest maintains a permanent influence and authority; the Duke had, for some years, appeared sensibly to relent in his animosity against Charles" (Indianapolis: Liberty Fund, 1983), 411. "Interest" is a motive that Hume frequently appeals to in the *History*, and that he considers to be among the most powerful determinants of human action just for this reason.

30 Compare the rather different T 269. Hume there recounts that, though these are sentiments of "spleen" and "indolence" that eventually pass, his initial reaction to the memory of the sceptical encounter is to rebel and try to return to an indolent life governed by naturally induced belief (and naturally induced folly), rather than try to "strive against the current of nature." (This point is also made in DNR 132-133, where, however, it is attributed to Cleanthes as an objection that Philo goes on to answer in the passage cited.)

31 Compare Garrett's rather different "Title Principle" (Garrett, 234). It is not exactly liveliness and certainly not mixture with some propensity that I take to be the determining factor distinguishing legitimate from illegitimate belief for Hume, but what is repeatedly suggested by experience, or by experience in combination with the belief-forming mechanisms that it activates.

32 Hume's position here needs to be carefully nuanced; see note 27.

33 Hume's position in the *Treatise*, in contrast, is complicated by the fact that, in this early work, he had doubted that it is always possible to restrict our investigations to matters of "common life and daily practice and experience," as he later declared we ought to do in the *Enquiry* (T 271). Accordingly, he saw both philosophy and vulgar opinion as capable of extending themselves to remote matters. He saw the extension of vulgar opinion beyond common life as occurring primarily in the sphere of religion, where it tends to engender systems of superstition ("superstition" was a technical term in Hume's day for a particular way of being religious; see "Of Superstition and Enthusiasm" in *Essays* and the opening paragraph of *The Natural History of Religion* VI for particularly good descriptions). And he saw the extension of philosophical opinion beyond common life as occurring in metaphysics—an activity to which these supposedly more careful thinkers were no less drawn than the vulgar are to superstition. On the other hand, he praised those of the vulgar who were able to confine themselves to everyday matters and wished that the founders of philosophical systems could receive

> a share of this gross earthy mixture, as an ingredient, which they commonly stand much in need of, and which wou'd serve to temper those fiery particles, of which they are compos'd. While a warm imagination is allow'd to enter into philosophy, and hypotheses embrac'd merely for being specious and agreeable, we can never have any steady principles, nor any sentiments, which will suit with common practice and experience. (T 272)

Indeed, it is the thought of effecting this marriage of contempt for remote speculation, popular among the "gross earthy" segment of the vulgar, with a philosophical determination to follow statistically guided causal inference, that ultimately leads him to abandon all the anguished doubts of T I iv 7 and declare that we might still have hope of making progress in the science of human nature.

34 It might be objected that there is one other factor that I am neglecting to include on this list: a sound demonstration of the unsoundness of those arguments. However, as my task here is principally to show how Hume's own naturalistic theory of belief formation allows him to go on to make normative claims about another's beliefs, and as Hume purports to demonstrate the soundness of sceptical arguments, I will not pursue that possibility here.

35 I should acknowledge that, though this solution to the problem of the ethics of belief can be readily drawn from Hume's statements in *Enquiry* XII and DNR, Section I, it is not stated in so many words in those texts, and that in the *Treatise*, Hume explicitly takes a different approach to the problem, seeking to ground epistemological ethics in practical ethics. He there takes the choice between the vulgar and philosophical views to be ultimately based on

considerations of which is most likely to satisfy our aspirations and least likely to do harm.

> We ought only to deliberate concerning the choice of our guide, and ought to prefer that which is safest and most agreeable. And in this respect I make bold to recommend philosophy, and shall not scruple to give it the preference to superstition of every kind or denomination. For as superstition arises naturally and easily from the popular opinions of mankind, it seizes more strongly on the mind, and is often able to disturb us in the conduct of our lives and actions. Philosophy, on the contrary, if just, can present us only with mild and moderate sentiments; and if false and extravagant [i.e., in metaphysics, see note 33], its opinions are merely the objects of a cold and general speculation, and seldom go so far as to interrupt the course of our natural propensities.... Generally speaking, the errors in religion are dangerous; those in philosophy only ridiculous." (T 271-272; cf. EHU 11, 147, 162; DNR 134, 220-227)

The main problem with this approach, as Hume himself later came to acknowledge, is that unless metaphysical speculations can somehow be checked, they will serve as a refuge and support for superstitious ones, and will ultimately become subservient to the ends of superstition (EHU 11, 133; *The Natural History of Religion* XI, but cf. EHU 147 where Hume reiterates the position of T 271-272—without, however, adequately addressing the point made by his "friend" at EHU 133). *Enquiry* I accordingly rejects the recommendation of the *Treatise*, insisting on the importance of confining even "abstruse philosophy" to matters of everyday concern and experience, and proposing to do this by providing a "true metaphysics," that will convince us, by means of an exact examination of human understanding, that our cognitive powers are not adequate for remote speculations.

Received January 1996
Revised September 1996