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Belief, Probability, Normativity

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Although Hume gave the title, "Of knowledge and probability," to Part 3 of Book 1, he discusses knowledge only in its first section, and only cursorily. The real topic is *probability*. In Part 3, Hume is primarily interested in beliefs that go beyond our immediate perceptions and memories: beliefs that are the product of inferences from what we have observed to what we haven't observed.

Hume accepts the traditional absolute categorial distinction between knowledge (*scientia*) and belief (*opinio*).[1] Unlike our current conception of empirical knowledge as justified true belief, on this scheme, the two categories have different objects. In Hume's terminology, knowledge is concerned with *relations of ideas*; belief is concerned with *matters of fact*.

While Hume follows Locke in calling the category of belief, "probability," he argues that Locke's scheme isn't fine-grained enough. It requires us "to comprehend all our arguments from causes or effects under the general term of probability." But it isn't *merely probable* that the sun will rise tomorrow, or that all human beings will die, so "in common discourse we readily affirm, that many arguments from causation exceed probability, and may be receiv'd as a superior kind of evidence."

To capture this feature of ordinary language, Hume creates a special subdivision in the category of probability for "those arguments, which are deriv'd from the relation of cause and effect, and which are entirely free from doubt and uncertainty."[2] Hume calls these probabilities, "proofs." They are based on constant conjunctions, while (mere) probabilities – "that evidence, which is still attended with uncertainty" (T 1.3.11.2; SBN 124) – are based on variable or "irregular" conjunctions: rhubarb doesn't always purge; opium isn't always a soporific. But he notes that

> the gradation . . . from probabilities to proofs is in many cases insensible; and the difference betwixt these kinds of evidence is more easily perceiv'd in the remote degrees, than in the near and contiguous. (T 1.3.12.2; SBN 131)

Hume emphasizes that the distinction between proofs and probabilities isn't absolute: appropriate experiences may elevate what was formerly a probability to a proof, while others may demote a proof to a probability.[3]

Hume maintains that we are "determined by custom to transfer the past to the future in all our inferences." If we're "wise," we transfer events in the same proportions as we have experienced them in the past, assigning to each "a particular weight and authority" (EHU 6.1.4; SBN 58). But where we've experienced that different effects follow from what appear to be similar causes, we factor in all of them, in proportion as we have found them to be more or less frequent. For Hume, "A wise man . . . proportions his belief to the evidence" (EHU 10.1.4; SBN 110).

Hume's discussion of probability begins in section 2 and culminates in his account of the "Rules by which to judge of causes and effects" in section 15. The pivotal argument of Part 3, however, occurs in section 6, "Of the inference from the impression to the idea," where Hume argues that our inferences from the observed to the unobserved are not "determin'd by reason," but are solely products of custom and habit.

This argument, whose details are discussed in 6: CAUSATION, is perhaps the most familiar piece of philosophy ever written in English. Hume considered it the centerpiece of Book I, and perhaps of the entire *Treatise*, for on the title page of the *Abstract*, clearly referring to the *Treatise* as a whole, he called it "the CHIEF ARGUMENT of that BOOK" (A title page; SBN 641).

Long taken to be an entirely negative argument, it is largely responsible for Hume's reputation as a skeptic. On this reading, inaugurated by his contemporary, Thomas Reid, Hume exposed the latent skepticism in "the way of ideas" he inherited from Locke and Berkeley, in order to push empiricism to its logical, absurd limits. Thomas Hill Green ensured that this picture became orthodoxy by making it the focal point of his and Thomas Grose's edition of Hume's *Philosophical Works* (1874–5).

No Hume scholar today entirely accepts this traditional reading, but there is by no means a consensus as to how his famous argument should be read. Its structure, content, and conclusion are still widely debated. In addition to debates about its details, there is a further question about the argument's aim and intent, even for those who acknowledge that Hume's purpose isn't purely negative: If Hume is a skeptic, what is the nature of his skepticism?

Answering this question is made more difficult by the fact that Hume's contemporary readers use "skeptic" and "skepticism" in a variety of incompatible ways. And even though the terms "skeptic" or "skepticism" don't appear in Part 3 until much later (in T 1.3.13), Hume is nonetheless partially responsible for encouraging those who see his argument as in some sense skeptical. When he recast the argument for the first *Enquiry*, he called the section in which it appears, "Sceptical doubts concerning the operations of the understanding." In the *Abstract*, just after summarizing it, he states:

> By all that has been said the reader will easily perceive, that the philosophy contain'd in this book is very sceptical, and tends to give us a notion of the imperfections and narrow limits of human understanding. (A 27; SBN 657)

Whether Hume means by our "imperfections and narrow limits" nothing more than the cautious fallibilism, or "mitigated skepticism," he endorses in the *Enquiry*, or whether he has something stronger in mind, remains a source of considerable controversy.

Hume's argument is certainly *negative* in that it purports to show that our causal inferences aren't "determin'd by reason." But in arguing for this conclusion, he also maintains that our causal inferences have "no just foundation" (T 1.3.6.10; SBN 91), that there are no just inferences from either demonstration or probability that could yield the Principle of the Uniformity of Nature as a "just conclusion" (T 1.3.6.4–7; SBN 88–90), and that no "conclusions from causes and effects are based on solid reasoning" (T 1.3.6.8; SBN 90).

Hume's use of "just" conforms to two prominent uses of that term. In the *Oxford English Dictionary*, one prominent entry for "just" is "having reasonable or adequate grounds; well founded." Another closely related entry is "in accordance with reason, truth, or fact. Right; true; correct," as in this couplet from Alexander Pope's 1725 translation of Homer's *Odyssey*:

> Much he knows, and just conclusions draws,
> From various precedents, and various laws.

In using "just" this way, Hume is telling us that there are no inferences, foundations, or conclusions concerning reasoning from causes and effects that have adequate grounds or are otherwise well founded. In so doing, he moves beyond *description* to *prescription*. Hume doesn't endorse these inferences and he believes we shouldn't *shouldn't* as well.[4] In this sense, Hume's argument in T 1.3.6 has a negative normative conclusion. Understanding this feature of Hume's argument also helps us see how it might also be regarded as skeptical.

Locke's normative theory of probable reasoning in the *Essay concerning Human Understanding* sets out the principles by which he believes we "ought to regulate our Assent, and moderate our Perswasions" (Locke 1975: 1.1.3). It is a theory that Hume clearly has in mind throughout Part 3.[5] If Hume's argument is correct, Locke has failed to provide such a theory. Locke's theory isn't based on "just foundations" and "just inferences"; it yields no "just conclusions" based on "solid reasoning." A Lockean confronted with Hume's argument might well conclude that skepticism about probable reasoning is an unavoidable consequence of the argument.

But we *do* form beliefs as the result of causal reasoning. Hume's conclusion in the argument of T 1.3.6 also contains an account of *how* we form them. This signals a positive turn, with which he is mostly concerned in the remainder of Part 3.

Even Hume's positive theory of belief, however, is a subject of contemporary debate. Are Hume's results simply descriptive contributions to cognitive psychology, or do they sketch a normative epistemology? Hume's avowed objective in the *Treatise* – "An ATTEMPT to introduce the experimental Method of Reasoning into MORAL SUBJECTS" (T title page; SBN xi) in order to develop a science of human nature – seems purely descriptive. His discussion of belief, however, also seems to go beyond mere description, endorsing some patterns of belief formation while condemning others. He even specifies some "general rules by which we *ought* to regulate our judgment concerning causes and effects" (T 1.3.13.11; SBN 149; my emphasis). Thus his theory of belief seems to include prescriptive or normative elements. How do these elements square with his descriptive theory of belief formation? Is it even possible for a naturalistic theory like Hume's to be genuinely normative? And if it *is* possible, what is the *source* of normativity in his theory?

Hume's Theory of Belief

The nature of belief

The positive descriptive conclusion of Hume's argument in T 1.3.6 is "one part of the definition of an opinion or belief, that 'tis *an idea related to or associated with a present impression*" (T 1.3.6.15; SBN 93).

Hume's definition is partial because it is incomplete. As it stands, it fails to distinguish between mere conception and genuine belief. While an idea is an essential component in any belief, it can't be all there is to belief, since an idea is also involved whenever we conceive of something we don't believe. We need to be able to distinguish between simply conceiving of Petra and believing it to be an ancient Nabatean trading center located in what is now southwestern Jordan.

Hume maintains that in trying to make this distinction, the following dilemma is inevitable. Either the belief is some new idea, such as that of *reality* or *existence*, which we join to the simple conception of an object, or it is merely a peculiar *feeling* or *sentiment* (T Appendix 2; SBN 623).

Hume argues that we don't have an abstract idea of existence that is distinguishable and separable from our ideas of particular objects, so there is in fact no idea available to add to my idea of Petra to convert my conception of it into a belief. Further, since we can permute and combine ideas in imagination as we please, if belief consisted simply in adding a new idea to our original conception, we would be free to believe anything we choose to believe. Finally, if belief consisted in altering the parts or the composition of an idea, the resulting belief would be a different idea altogether from what we originally conceived (T 1.3.7.1–2; Appendix 2; A 19–22).

The situation is similar with distinguishing disbelieving and believing, or incredulity and belief. If belief added to or otherwise altered some of the *qualities* of the

idea involved, it would make disagreements about existence or other matters of fact impossible. If I believe that Petra was an ancient Nabatean trading center and you think it merely the product of legend, our disagreement depends on our having similar ideas of Petra (T 1.3.7.3; SBN 95).

Hume concludes that the differences between mere conception, incredulity, and belief must lie in the different *manners* in which we conceive the idea involved. He initially explains this difference in terms of force and vivacity. Beliefs are more forceful and vivid ways of conceiving ideas. To capture this difference, he maintains that "belief may be most accurately defin'd: A LIVELY IDEA RELATED TO OR ASSOCIATED WITH A PRESENT IMPRESSION" (T 1.3.7.5; SBN 96).

But Hume realizes his definition isn't sufficient for an adequate account of belief. While having coffee with my colleague, Petra Visscher, I happen to think of the ancient Nabatean trading center whose name she bears. Here I have a lively idea of the city associated with present impressions of my friend, but in a way that fails to capture what Hume wants his definition to capture – the *connection* between the impression that generates the belief and the belief itself. My idea of Petra the city was already lively. The definition fails to explain how it *became* enlivened.

Hume responds by introducing a causal element into his account: beliefs are ideas enlivened by force and vivacity transmitted from an associated impression, making the idea almost as vivid as an impression:

> I wou'd willingly establish it as a general maxim in the science of human nature, *that when any impression becomes present to us, it not only transports the mind to such ideas as are related to it, but likewise communicates to them a share of its force and vivacity.* (T 1.3.8.1; SBN 98)

The impressions that enlivened my idea of Petra were those I received when I read Guzzo and Schneider's (2002) *Petra*. Before I read this book, I thought Petra was a legendary city. But taking *Petra* to reliably present factual information, my perceptions formed an associative bond with my idea of Petra, enlivening it. This makes the causal element explicit. Hume tacitly modifies his definition (first at T 1.3.7.6; SBN 97, then at T 1.3.8.14; SBN 105) to include it.

Because Hume, following Locke, uses "probability" as a name for the category of belief, any belief that isn't produced by the senses and memory is "determin'd by custom" in this manner, and

> as we call every thing CUSTOM, which proceeds from a past repetition, without any new reasoning or conclusion, we may establish it as a certain truth, that all the belief, which follows upon any present impression, is deriv'd wholly from that operation. (T 1.3.8.9; SBN 102)

Only through "custom operating on the imagination" can we "draw any inference from the appearance of one [object] to the existence of another." The result

of such inferences is belief, and belief is a change in the manner in which the idea in question is conceived, which Hume in turn identifies with a change in feeling or sentiment. Therefore it follows, he adds provocatively, that "all probable reasoning is nothing but a species of sensation" (T 1.3.8.11; SBN 103).

Extending the theory

Although Hume thinks his theory of belief is the only "satisfactory and consistent explication" of our idea of belief, many of his readers have disagreed. They've criticized his reliance on force and vivacity as both empirically inadequate and incapable of doing the work the theory requires (see 3: IMPRESSIONS AND IDEAS). In his afterthoughts in the Appendix, even Hume himself seems ambivalent about the adequacy of his characterization of belief (T 1.3.7.7; SBN 628–9).

But careful readers of the *Treatise* should consider that the remaining sections of Part 3 considerably augment Hume's initial theory, providing it with additional resources that don't force him to rely exclusively on terms of phenomenal intensity, such as force and vivacity. Hume's presentation of his extended theory also shows that he doesn't take it to be dealing exclusively with belief formation. He is equally interested in the conditions under which beliefs are legitimately or illegitimately formed, which adds a prescriptive or normative dimension to the theory.

While my discussion cannot exhaustively examine all its elements, in what follows I sketch the central components of Hume's extended theory of belief, highlighting the prescriptive dimension he adds to it.

Testimony

Hume maintains that his definition of belief is "entirely conformable to everyone's feeling and experience." He illustrates the point with a contrast between reading a book *as* fiction and *as* history. Although I "receive the same ideas, and in the same order" in both cases, my "manner of conceiving" them is significantly different. I *relate* differently to them. In reading *Petra as* history, I *take* Guzzo and Schneider's words in a different way than I would have had I thought I was reading a work of fiction. What they say is not just phenomenally more intense for me; it has more "solidity," more "steadiness," more "influence."

Hume's emphasis on how we *take* the work signals that we take a more active role in belief formation than his initial account suggests.[6] Not only must I make a decision as to how *Petra* is intended, I must also consider its authors' "characters and motives." I must assess their competence, reliability, and accuracy. While we often make these decisions tacitly, doing so requires that we accept further testimonial evidence. My belief that *Petra* is trustworthy is largely based on my beliefs about its publisher, the University of Chicago Press, beliefs that depend on the testimony of others. Even with a reliable work, critically accepting its particular claims may require considerable reflection in assessing what others have said on

these matters as well as the authors' evidence for them. *Taking* is in this sense a far more complex process than is generally recognized.[7]

Assessment is evaluation, and evaluation contains a prescriptive or normative component. It is something I can do carefully, thoroughly, and critically, or carelessly, cursorily, and uncritically.

Hume emphasizes the normative element in evaluating testimony in his discussion of *credulity*, our "too easy faith in the testimony of others" (T 1.3.9.12; SBN 112). We have "a remarkable propensity to believe whatever is reported . . . however contrary to daily experience and observation," a "weakness" Hume thinks the influence of resemblance explains. Since words are intimately connected with ideas in the mind of the person giving testimony, and these ideas are connected with the facts or objects they represent, this latter connection "commands our assent beyond what experience will justify." But Hume argues that we are capable of correcting this "rash" tendency by regulating our acceptance of testimony by our "experience of the governing principles of human nature." That is, we can correct our initial rash judgment by reminding ourselves of our own propensity to want to believe and where this propensity, if unchecked, has led us in the past, as well as by checking the current testimony with our own experience and the experience of others, since "experience be the true standard of this, as well as of all other judgments" (T 1.3.9.12; SBN 113).

Not only do we take an active part in "receiving" and assessing testimony, it is a part we can play in a better or worse manner. Evaluation of testimony is itself subject to evaluation and thus criticism and correction. Others may criticize my assessments, and I may criticize theirs. Since assessment is criteria- or standards-based, it has a public component: my assessments aren't just what I *prefer*; they are what I *commend* to others as well. Since testimony is an unavoidable and pervasive cause of belief, assessing or evaluating testimony is equally unavoidable and pervasive, which necessarily brings a prescriptive or normative element into virtually all areas of our lives.

Two systems of "*realities*"

In addition to the reflective and normative elements involved in receiving and accepting testimony, Hume considerably augments his theory of belief by emphasizing the systemic elements involved in distinguishing belief in matters of fact from "other ideas, which are merely the offspring of the imagination."

In taking *Petra* to be "a true history," I not only assess the credentials of its authors and the accuracy of its claims, but also I take it to depict accurately what is real. I decide to give the ideas I get from it a place in the system of interconnected perceptions that form my picture of the world.

Whatever is present to the memory, Hume maintains, "must easily distinguish itself above the mere fictions of the imagination" because of its superior force and vivacity, "which resembles an immediate impression." We "form a kind of system"

of our memories. When it is enlarged by our present perceptions, this "system" constitutes what "we are pleas'd to call a *reality*."

Through custom and causation, our system of the memory and senses becomes intimately connected with a second system that "peoples the world, and brings us acquainted with such existences, as by their removal in time and place, lie beyond the reaches of the senses and memory." Since we feel that we are

> in a manner . . . necessarily determin'd to view these particular ideas, and that the custom or relation, by which [we are] determin'd, admits not of the least change, [we] form them into a new system . . . (T 1.3.9.3; SBN 108)

Because these ideas are involuntary, "precise," "solid and real," "certain and invariable," and "fixed and unalterable" (T 1.3.9.7; SBN 110), we also "dignify" this system "with the title of *realities*."

Petra is beyond the direct reaches of my senses and memory, but the perceptions I received in reading *Petra* have become connected through custom and causation with my idea of Petra. While these connections make my idea livelier through transfer of force and vivacity, the involuntary character of those connections reminds me that my idea is no mere "fiction of the imagination." These connections help *fix* the idea in my mind, giving it a firmness and solidity it didn't have before, as well as providing details I can't alter at will, making my idea more determinate. Now that I know that Petra was located in what is now southwestern Jordan, and that it flourished at the time of Alexander the Great, Petra *fits* into my general picture of the ancient world in a way it didn't before.

Nonetheless, Hume insists, "all this, and every thing else, which I believe, are nothing but ideas." Even so

> by their force and settled order, arising from custom and the relation of cause and effect, they distinguish themselves from the other ideas, which are merely the offspring of the imagination. (T 1.3.9.4; SBN 108)

Here "settled order" becomes at least as important as "force." With his emphasis on the systemic character of "*realities*," Hume introduces an element of *coherence* into his theory of belief. While ideas of objects are representative, and therefore capable of truth and falsity for Hume, their truth or falsity isn't decided by comparison with "objects," conceived as things that are independent of my perceptions. Deciding whether I regard a candidate for belief as true or false is to decide whether it fits – or *should* fit – into the settled order of my belief system. Making this decision sometimes requires that I reflectively assess the evidence for including it. Hume emphasizes the need for decision here by calling the second system of *realities*, "the object . . . of the judgment." For although causation is responsible for enlivening the ideas that form this second system, the causes are my perceptions of the words and images in *Petra* that constitute my testimonial

evidence about Petra's existence. Accepting this evidence, as we've seen, is not automatic. It involves assessment and evaluation, adding another element of prescriptivity or normativity to Hume's account.[8]

Legitimate versus illegitimate belief

At this point, Hume is satisfied that he has shown how his theory successfully distinguishes between genuine belief and "the mere fictions of the imagination." He is, however, aware that others may object, since on his theory,

> our assent to all probable reasonings is founded on the vivacity of ideas, it resembles many of those whimsies and prejudices, which are rejected under the opprobrious character of being the offspring of the imagination. (T 1.3.9.19n.; SBN 117)

Prejudices may be just as vivid as any other belief. "Philosophers" like Locke reject them as products of the imagination. But how can *Hume* reject them, since on his theory probable reasoning is also the product of the imagination?

In the footnote at T 1.3.9.19; SBN 117–18, Hume considers one way of distinguishing probable reasoning from "the offspring of the imagination" *within* the imagination: use "reason" to cover demonstrative and probable reasoning, and assign all the other deliverances of the fancy to "imagination." Hume admits that he has "often been oblig'd to fall into" using this distinction, but he makes clear that doing so is a serious mistake, for "nothing is more contrary to true philosophy than this inaccuracy."

There are at least two reasons why Hume thinks this distinction is "contrary to true philosophy." The first is that making the distinction in terms of "reason" gives the misleading and mistaken impression that he is committed to a *faculty* of reason, which he isn't (see Garrett 1997).

But a more serious problem is that Hume thinks that many of the beliefs "philosophers" dismiss as "offspring of the imagination" are products of probable reasoning themselves. This is nowhere more evident than in the way philosophers treat beliefs that arise from *education*. They reject education "as a fallacious ground of assent to any opinion" (T 1.3.10.1; SBN 118), because it is "an artificial and not a natural cause," one whose "maxims are frequently contrary to reason, and even to themselves."

Hume's response is that beliefs arising from education are "built almost on the same foundation of custom and repetition as our reasonings from causes and effects" (T 1.3.9.18; SBN 117), so there is no principled way of rejecting them on the basis of the mechanisms that formed them. If we are to reject false, unreasonable, and even inconsistent beliefs that arise from education, we need to find some other way of picking them out.

Hume's discussion of "unphilosophical probabilities" further reinforces his response. After considering "probabilities of chance" in 1.3.11 and "probabilities of causes" in 1.3.12, he begins the next section by remarking:

> All these kinds of probability are receiv'd by philosophers, and allow'd to be reasonable foundations of belief and opinion. But there are others, that are deriv'd from the same principles, tho' they have not had the good fortune to obtain the same sanction. (T 1.3.13.1; SBN 143)

The "others" include the products of prejudice, bias, salience, and of course "education." They are *unphilosophical* because philosophers don't endorse them. They are *probabilities* because they involve the transfer of force and vivacity from a present impression to the ideas involved. They always have "a considerable influence on the understanding" and not infrequently exert "a superior influence on the judgment" (T 1.3.13.1–2; SBN 143).

Locke, of course, would deny that unphilosophical probabilities are derived from the same principles as the probabilities of chances and causes. His account of probable reasoning in the *Essay* treats chances and causes as products of the understanding and therefore "reasonable foundations of belief and assent," while the associations Hume calls unphilosophical probabilities are merely deliverances of the imagination. "Association," for Locke, "is as frequent a cause of mistake and error in us as anything else that can be named, and is a disease of the mind as hard to be cured as any" (Locke 1993: 101). He regards association as an unnatural process akin to "madness," which "gives Sence to Jargon, Demonstration to Absurdities, and Consistency to Nonsense" (Locke 1975: 2.23.18; see also Locke 1993: 106).

But Hume has already argued that probable inferences can't be established by reason, but only by the very associative mechanisms Locke dismisses. Hume explains the probabilities of chances and causes in terms of the operations of those same mechanisms. "All reasonings," he stresses repeatedly, "are nothing but the effects of custom" (T 1.3.13.11; SBN 149). Philosophical and unphilosophical probabilities are thus both "deriv'd from the same principles." This doesn't mean that Hume endorses the products of education, bias, and prejudice, but it does mean that he must find another way to reject them. Hume's account of general rules provides the vehicle that shows how he can distinguish beliefs we should endorse from those we should reject. Prejudices, Hume maintains, result from our tendency to "rashly" form general rules, as when someone concludes, from a few cases, that Irishmen are witless. But

> shou'd it be demanded why men form general rules, and allow them to influence their judgment, even contrary to present observation and experience, I shou'd reply that, in my opinion it proceeds from those very principles, on which all judgments concerning causes and effects depend. (T 1.3.13.8; SBN 147)

Custom operates, not just when there is constant conjunction, but when objects *resemble* those we have experienced. The weaker the resemblance, the weaker the belief, but custom still has some force as long as traces of resemblance remain.

Paradoxically, even though custom is "the foundation of all our judgments," still it sometimes affects the imagination "in opposition to the judgment," producing "a contrariety in our sentiments concerning the same object."

A Lockean might argue that this points to a fatal flaw in Hume's account. On Locke's theory, there is no problem in explaining a conflict between the two faculties of judgment and imagination: probable reasoning caused the judgment, while association caused the enlivening of the imagination. But since there is nothing but custom on Hume's account, why doesn't the most vivid idea simply win out? How can there really be a conflict?

Hume responds:

> In almost all kinds of causes there is a complication of circumstances, of which some are essential, and others superfluous; some are absolutely requisite to the production of the effect, and others are conjoin'd only by accident. Now we may observe, that when these superfluous circumstances are numerous, and remarkable, and frequently conjoin'd with the essential, they have such an influence on the imagination, that even in the absence of the latter they carry us on to the conception of the usual effect, and give to that conception a force and vivacity, which make it superior to the mere fictions of the fancy. (T 1.3.13.9; SBN 148)

Consider someone securely strapped into an ascending ski lift chair.[9] He can't control his vertigo because his fear of falling, reinforced by the enlivening effect of his fear upon the idea of falling, powerfully affects his imagination. "The circumstances of depth and descent strike so strongly upon him" that he is convinced he will fall, despite "the contrary circumstances of support and solidity, which ought to give him a perfect security" (T 1.3.13.10; SBN 148). Hume calls this application of custom and experience to his present situation "the first influence of general rules." He thinks it is possible for the person to resolve the "contrariety" that results from the circumstances of depth and descent on the one hand, and his awareness of the safety and security of his situation on the other, by "reflection on the nature of those circumstances." Reflection leads him to correct his initial conviction. When we compare that judgment "with the more general and authentic operations of the understanding, we find it to be of an irregular nature, which is the cause of our rejecting it" (T 1.3.13.12; SBN 150).

Hume calls this "a second influence of general rules, alluding to the general rules he introduces in T 1.3.15 as "rules by which to judge of causes and effects" (hereafter, "c&e rules"). He describes them as "rules that are form'd on the nature of our understanding, and on our experience of its operations in the judgments we form." The eight rules Hume sketches in T 1.3.15 range from summaries of the conditions for causation (rules 1–3) and a statement of what Mill calls "the method of concomitant variation" (rule 7), to variations on the theme that "like causes like" (rules 4–6 and 8). Hume admits that the rules have very little specific content, so little that it is appropriate to regard them as "formal" (Dauer 2000). Applying them

"requires the utmost stretch of human judgment," because the rules "are very easy in their invention but extremely difficult in their application" (T 1.3.15.11; SBN 175). They are difficult to apply because they demand that those who use them pay close attention to the particular circumstances of the case at hand, and make careful judgments about the similarities to and differences from other cases.

Nevertheless, if the skier is "wise," when he applies the c&e rules Hume thinks he will realize that his initial reaction was the product of an "irregular" projection of his experience, "irregular" because it ignored relevant circumstances in the situation – the "support and solidity" the lift provides. Had he taken these circumstances into consideration at the beginning, he would have made a different judgment. Applying the c&e rules thus results in a "more authentic," regulated judgment.

But both his initial reaction and his revised reflective judgment arise from "the influence of general rules"; both are products of the operation of the associative mechanisms, and are derived solely from custom and experience. "Sometimes the one, sometimes the other prevails, according to the disposition and character of the person. The vulgar are commonly guided by the first, and wise men by the second" (T 1.3.13.12; SBN 150). However, when "our general rules are set in opposition to each other," as in the skier's case, "philosophers" attribute the initial inference to the imagination because it is "more capricious and uncertain," and the second to the judgment, "as being more extensive and constant." But in Hume's view, nothing is "more contrary to true philosophy," since both general rules are the products of the same mechanisms.

Because of this, Hume is aware that his account will appear paradoxical, even skeptical, to traditional philosophers:

> Mean while the skeptics 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 than we can correct this, and all other unphilosophical probabilities. (T 1.3.13.12; SBN 150)

Hume, of course, doesn't think he has really unearthed "a new and signal contradiction in our reason," although to a philosopher like Locke it might appear that he has. He has explained, in his own terms, how the alleged conflict between judgment and imagination arises, and how it is sometimes resolved. If he is correct, then the attempts of philosophers to provide an absolute means of partitioning off the legitimate principles of belief-formation are doomed to failure. Whether we regard the partition as being between two faculties, or between two compartments of the imagination, the partitioning itself isn't sufficient to determine which beliefs are legitimate and which are not.

Hume's explanation, however, invites another question. He rejects certain general rules, such as the belief that all Irishmen are witless, while endorsing the c&e rules. What is the basis for his prescriptive preference for them?

For Hume, no a priori principles of abstract reasoning can successfully determine how we should regulate our causal judgments, which is why

> our scholastic headpieces and logicians shew no superiority above the merely vulgar in their reason and ability, as to give us any inclination to imitate them in delivering a long system of rules and precepts to direct our judgment, in philosophy. (T 1.3.15.11; SBN 175)

Since "any thing may produce any thing" (T 1.3.15.1; SBN 173), the only way we can determine whether something is "really" a cause or an effect is through experience, which takes us to the heart of Hume's often misunderstood naturalism.

Hume intends us to take the c&e rules as informal codifications of the causal inferences that we regard as having been successful in our collective experience. He believes they are reliable guides to forming more fine-grained beliefs. They help us "learn to distinguish the accidental circumstances from the efficacious causes" (T 1.3.13.11; SBN 149), by which we can accurately distinguish the circumstances that "are absolutely requisite to the production of the effect," from others "only conjoin'd by accident" (T 1.3.13.9; SBN 148). This is why Hume believes that the c&e rules are

> all the LOGIC I think proper to employ in my reasoning; and perhaps even this was not necessary, but might have been supply'd by the natural principles of our understanding. (T 1.3.15.11; SBN 175)

Making causal judgments – whether tacitly or explicitly – in accordance with the c&e rules is the only way, Hume believes, that we can accurately distinguish beliefs that are formed legitimately from those that are not.

Normativity

The c&e rules are clearly norms for causal reasoning. Hume doesn't merely *describe* how we regulate our conduct: he *endorses* certain ways of forming beliefs and *rejects* others. Then he goes one step further and recommends that *we* endorse them as well. He characterizes the c&e rules as "general rules, by which *we ought* to regulate our judgments concerning causes and effects" (T 1.3.13.11; SBN 149; my emphasis).

But there is still a question about whether his theory is *genuinely normative*. Is Hume correct in thinking that we too should place our confidence in the c&e rules and regulate our judgments in accordance with them?

To decide the issue, we must appeal to some normative perspective from which we assess the norms for causal reasoning and either endorse or reject them. But since we have no access to the world except through the process of causal

reasoning, there is no transcendent point of view from which we can assess these norms of causal reasoning. The only point of view from which we can assess the norms of causal reasoning is that of causal reasoning itself.

While he agrees there is "undeniable evidence of normativity" in Part 3, David Owen (1999) has argued that Hume's account is normative only in the limited sense that it provides standards for correct and incorrect ways of making causal judgments. The c&e rules are criteria for the right way to participate in the practice of probable reasoning, but they don't tell us why we should prefer that practice to others, such as superstition.

Owen draws an analogy with the practice of augury, where Roman priests observed and interpreted sacrificed sheep's entrails in order to make predictions that directed public policy. Although there are criteria for when the entrails have been read correctly and when they haven't, those standards don't tell us why we should prefer augury to other methods of prognostication.

For Hume, however, the questions Owen tries to distinguish – the question of the standards governing causal reasoning and the question of the reasons for preferring the practice of causal reasoning to other practices, such as augury – aren't really separate. Even though augury is practiced according to a set of standards, reading the entrails and making predictions from them is itself a form of causal reasoning. The practice aims at accurate prediction, so it should be judged by the standards that govern causal reasoning. Even the best–conducted auguries will be "irregular," for they systematically ignore relevant circumstances experience has shown to be significant for successful prediction.

Similar irregularities are found in liars, in the superstitious, and in beliefs that are inculcated through "education." Pathological liars may eventually believe their lies, but their beliefs don't fit into a coherent and stable system of "realities." The superstitious uncritically accept the testimony of unreliable sources and questionable authorities. Educators may say what they will when indoctrinating their hapless captive pupils, but what they say can ultimately be rejected if it is inconsistent, or runs counter to well-founded causal reasoning.

By acting in accordance with the c&e rules, explicitly or tacitly, we refine our causal expectations in the light of experience. Successful predictions will be brought into our system of "realities." When our expectations are "methodized and corrected" in the light of further experience and by their fit with a set of coherent and well-confirmed beliefs, they become at first practical wisdom and eventually the basis for Humean science. Little more is needed for "the wise" to reject belief in miracles, the products of education, and unreliable testimony. Prejudices, whimsies, and superstitions may die hard, but their failure to satisfy the norms of causal reasoning will weaken their hold. Once we make a habit of regulating our beliefs by the c&e rules, there is little chance our prejudices, whimsies, and superstitions will be "reinvigorated" (Rawls 2000).

Fortunately, this process is not something we must do alone. Our range of observations and experiences is widened considerably by testimony, as well as by

cooperative, collaborative, and collective endeavors in everyday practical matters, and for those whose talents run in that direction, in a scientific community. The results of these endeavors are, in a very real sense, a social construction.

But natural as all this may appear, it is not a simple process, especially as our causal beliefs become more refined and complex. Hume acknowledges and accommodates this complexity:

> All the rules of this nature are very easy in their invention, but extremely difficult in their operation; and even experimental philosophy, which seems to be the most natural and simple of any, requires the utmost stretch of human judgment. There is no phenomenon in nature, but what is compounded and modify'd by so many different circumstances, that in order to arrive at the decisive point, we must carefully separate whatever is superfluous, and enquire by new experiments, if every particular circumstance of the first experiment was essential to it. These new experiments are liable to a discussion of the same kind; so the utmost constancy is requir'd to make us persevere in our enquiry, and the utmost sagacity to choose the right way among so many that present themselves. (T 1.3.15.11; SBN 175)

Satisfying these standards, fallible and dynamic as they are, will nonetheless ultimately suffice to undermine a wise person's misplaced confidence in prejudices, whimsies, and superstitions. Since scientific and superstitious expectations are products of the same sorts of processes, they stand or fall by the same standards. Hume provides us with a set of standards by which science succeeds and superstition fails. If he is correct, there is no *separate* problem of providing support for our practice of causal reasoning over and above the problem of providing standards for causal reasoning itself.

The only way to test causal reasoning is by causal reflection. When we reflect on the origins and processes of causal reasoning, beliefs that we formed in accordance with the c&e rules will increase in their force and settled order, while those that were not so formed lose force and stability. Beliefs formed in accordance with the c&e rules will also cohere with my "system of *realities*," while those that are not will not have that "fixed and unalterable" character. Applying reflective causal reasoning to our reflection-produced standards for causal reasoning doesn't undermine our confidence in those standards, it can only increase our confidence in them. In this sense, Hume's account of the norms of causal reasoning is genuinely normative.[10]

See also 6: CAUSATION; 9: HUME'S CONCLUSIONS IN "CONCLUSION OF THIS BOOK".

Notes

1 See Hacking (1975, esp. chs. 1–4, 19), for a helpful discussion of the pervasiveness of this distinction in early modern philosophy, and for a provocative thesis about how

the transformation in the notion of *opinio* made possible the emergence of the skeptical problem of induction.

2 Hume takes this distinction over into the first *Enquiry*, where he defines proofs as "such arguments from experience as leave no room for doubt or opposition," explicitly mentioning "Mr. Locke" (EHU 6.1 n. 1; SBN 56 n. 1).

3 Hume emphasizes this feature of proofs and probabilities in section 10, "Of miracles," of the first *Enquiry* more than he does in the *Treatise*. However, it is generally agreed that section 10 is very similar, if not identical, with a portion of the text Hume deleted from the manuscript of the *Treatise* when "castrating my work, that is, cutting off its nobler parts; that is, endeavouring it shall give as little offence as possible" (Hume 1969, I: 6, letter to Henry Home) to (Bishop) Joseph Butler, in hopes of receiving a favorable reading from one of the leading moral philosophers of his day. In that letter, Hume mentions that he is enclosing "some *Reasonings concerning Miracles*," which he says he has removed from the manuscript. It is generally agreed that the section would have appeared in Part 3 of Book 1, although opinions differ about where it would have been placed. David Wootton (1990) places it at the end of 1.3.13, "Of unphilosophical probabilities," but I agree with Traiger's (1994) conjecture that a more plausible location is in or following 1.3.9, "Of the influence of belief," where there seems to be a clear allusion at T 1.3.9.4; SBN 120 to these arguments. Hume says, in a discussion of credulity, belief, and the passions, that we are fascinated with the "magnificent pretensions" and "miraculous relations" of "quacks and projectors," to the extent that our "astonishment" "so vivifies and enlivens the idea, that it resembles the inferences we draw from experience." He then adds: "This is a mystery, with . . . which we shall have farther occasion to be led into in the progress of this treatise."

4 *Pace* Don Garrett, who argues that Hume's conclusion in the argument of 1.3.6 "is a claim in cognitive psychology, not in evaluative epistemology," and that Hume doesn't engage in evaluative epistemology until the very end of 1.4.7 (Garrett 1997: 214; see also 9: HUME'S CONCLUSIONS IN "CONCLUSION OF THIS BOOK"). While I agree that *part* of Hume's conclusion is a claim about how our causal expectations are formed, which may thus be regarded as a claim in cognitive psychology, I find it difficult to see how Hume's repeated assertions that there is no "just foundation" in reason and no "just inference" to a "just conclusion" for our causal inferences, bear a purely descriptive reading. David Owen defends a view similar to Garrett's by maintaining that these phrases simply refer to the production of belief by reason or inference (Owen 1999: 139–40 n. 38). Loeb (2002: 19 n. 23; 43–4 n. 13) and I, for similar reasons, find this reading of "just" implausible.

5 While it is clear that Locke is perhaps Hume's most prominent target in Part 3, his arguments are generic enough that their effectiveness isn't limited to Locke alone. As Morris (1988) and Baier (1991) have emphasized, Hume's aim is broad enough to cover any "intellectualist" attempt to show that our causal inferences are "determin'd by reason," and thus include not only Locke but also his rationalist predecessors.

6 Traiger (1994: 249) also stresses the importance of "how one takes words or utterances" in "fixing the relation between impressions of language and the ideas which we form," even down to "the most basic 'taking' – taking a sound or set of marks as a word."

7 Traiger (1994) is of course a notable exception.

8 The importance of Hume's often-neglected discussion of the "two systems of *realities*" is given its due in Loeb (2002: chs. II.1, II.3, and III.1), who emphasizes the role of stability in the two "systems."

9 Hume's example is of the "familiar instance" of someone who is "hung out from a high tower in a cage of iron" and who "cannot forebear trembling, when he surveys the precipice below him, tho' he knows himself to be perfectly secure from falling" (T 1.3.13.10; SBN 148). The updated, ski lift version of the example is due to Traiger 2005.

10 Annette Baier has argued that the c&e rules are the result of a "successful turn of self-consciously sensitive and custom-dependent causal reasoning on itself, a reflexive turn that leads to endorsement, as rules, of those habits that had survived the test of reflexive employment" (1991: 97). The inferences "we endorse are the ones that can become successfully reflexive. *Successful reflexivity is normativity*" (pp. 99–100). Baier, however, does not really explain how the reflexive endorsement test works.

Don Garrett, on the other hand, maintains that "while it is clear that" the c&e rules "are rules for engaging in induction, and that they are produced and justified by their inductive success, any overall endorsement of induction is at best implicit" (1997: 249 n. 2). Garrett argues that Hume makes no normative claims until very late in Book 1 (at T 1.4.7.11; SBN 270), where Hume announces what Garrett dubs "the Title Principle": "Where reason is lively, and mixes itself with some propensity, it ought to be assented to. Where it does not, it never can have any title to operate upon us" (Garrett 1997: ch. 10, esp. pp. 232–7. See also 9: HUME'S CONCLUSIONS IN "CONCLUSION OF THIS BOOK"). If I understand Garrett correctly, the reason induction is not normatively successful is not just that Hume offers no overall endorsement of induction in Part 3, it is because one central component of the "dangerous dilemma" Hume constructs in T 1.4.7 challenges the account of Part 3. Garrett believes that the Title Principle successfully defuses the threat posed by the dangerous dilemma, giving Hume a basis for "a skeptical recommitment to reason." I am not convinced that the Title Principle has enough content to play this role. For an alternative reading of Part 4, which doesn't read Hume as challenging his results in Part 3, see Morris 1989, 2000a, and 2000b.

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