History of Philosophy Quarterly
Volume 25, Number 4, October 2008

TWO PUZZLES IN HUME'S EPISTEMOLOGY

Mark Collier

There are two major puzzles in Hume's epistemology. The first involves Hume's fall into despair in the conclusion of Book One of the *Treatise*. When Hume reflects back upon the results of his research, he becomes so alarmed that he nearly throws his books and papers into the fire. Why did his investigations push him toward such intense skeptical sentiments? What dark discoveries did he make? The second puzzle concerns the way in which Hume emerges from this skeptical crisis and proceeds with his investigations. Why the sudden change of heart? What accounts for the return of hope? Each of these puzzles represents a serious challenge to traditional approaches to Hume's epistemology. A proper solution to them requires a careful examination of Hume's claims about the untrustworthiness of our cognitive faculties as well as his strategy for improving their performance.

The Fall into Despair

In the introduction to Book One of the *Treatise*, Hume begins his project with unbridled confidence. He promises that his new experimental approach to philosophy will bring even greater "honour" and "glory" to Great Britain than the celebrated achievements of its natural philosophers.[1] Indeed, he expresses hope that his science of human nature will prove itself to be "much superior in utility to any other of human comprehension."[2] In the conclusion of Book One, however, we encounter the author in a radically different mood. His enthusiasm and confidence have given way to intense feelings of "melancholy" and "despair."[3] The man who originally set out to champion a revolutionary approach to philosophy is now ready to quit the field entirely.[4] What explains this dramatic fall into despair?

This puzzle represents a prima facie challenge for naturalist interpreters of Hume's epistemology. After all, the naturalists maintain that Hume's skeptical phase "clears the stage" for his "positive" thesis that

our fundamental beliefs about the world are based upon the faculty of imagination rather than reason.[5] But this reading makes it difficult to understand the location of Hume's skeptical pronouncements. Hume's skeptical remarks do not appear at the *beginning* of Book One, as one would expect if they were intended to set the stage for his naturalistic account; rather, they occur at the *end* of Book One, when he surveys the results of his investigations. Moreover, the naturalist interpretation makes it hard to see why these reflections would give rise to such intense feelings of despair. After all, the main conclusion of his positive account is that human cognition is "founded on the imagination."[6] According to the naturalist account, then, Hume's project has been a smashing success.

There is no doubt that the imagination is, as H. H. Price once put it, "the keyword of Hume's whole theory of knowledge."[7] But precisely what role does this faculty play in his epistemology? Some naturalist interpreters understand Hume's claim about the primacy of the imagination as a descriptive thesis. According to Don Garrett's interpretation, for example, this claim falls within the domain of "cognitive psychology": that is, Hume sets out to establish that the "primary representational faculty" of the mind is not reason, but the imagination.[8] Other naturalists take Hume's claim about the imagination to be normative in character. Just as reason is slave to the passions in the practical sphere, so too reason *is, and ought to be*, subordinate to the imagination in the realm of theory.[9]

On either version of the naturalist interpretation, however, we would not expect Hume to become so dispirited when he reflects back upon the primary role that the imagination plays in human cognition. If Hume is making a recommendation concerning the faculty that should be responsible for our beliefs about the world, then he would be rather pleased with his results; the faculty that ought to govern our beliefs is the one that does. Hume's fall into despair becomes just as mysterious on the descriptive reading. If Hume set out to show that the imagination is the primary representational faculty, he would have achieved his goal by the time he reaches the conclusion. Moreover, if Hume is merely making psychological claims about the mechanisms and processes that underlie our beliefs, then it becomes difficult to grasp why he would draw any evaluative conclusions at all.

Why does Hume shudder at the thought that the imagination plays such a prominent role in the formation of our beliefs? In order to solve the first puzzle, we must attempt to understand the reasons why Hume comes to distrust this faculty. The main problem with the naturalist interpretation of Hume's epistemology is that it fails to appreciate the

mischievous nature of the imagination. Hume does not merely take himself to have shown that the imagination gives rise to our fundamental beliefs about the world; he also takes himself to have established that the imagination is an unreliable and untrustworthy faculty which is responsible for an outrageous series of "errors, absurdities, and obscurities."[10]

Suspicions about the imagination are raised quite early in the *Treatise*. In Book One, Part Two, for example, Hume discovers that this faculty plays a worrisome role in the production of our beliefs about space and time. We commonly believe that we are acquainted with instances of *empty space* and *time without change*, even though these ideas cannot be traced back to any sensory impressions. Why do we acquire these beliefs if they lack empirical content? Hume maintains that the faculty of imagination is directly responsible for these mistakes. It causes us to "falsely imagine" that we have an idea of empty space by confusing the closely related ideas of darkness and real extension.[11] In similar fashion, the imagination "confounds" us into entertaining "fictitious" thoughts about changeless time.[12]

The reason why the faculty of imagination is unreliable, according to Hume, is that it causes us to make what we might call a "fallacy of substitution."

> For we may establish it as a general maxim in this science of human nature, that wherever there is a close relation betwixt two ideas, the mind is very apt to mistake them, and in all its discoveries and reasonings to use the one for the other.[13]

Hume takes himself to have discovered an important fact about human psychology: we have a propensity to substitute closely related ideas, without any conscious awareness that we have done so. The imagination is untrustworthy, in other words, because it not only associates ideas, but it also runs them together. Hume warns the reader, somewhat ominously, that "[o]f this we shall see many instances in the progress of this treatise."[14]

Why does the imagination lead us to commit the fallacy of substitution? The principles of association can account for the way in which ideas *suggest* one another, but not for the fact that they become *switched*. In order to account for our propensity to confuse similar ideas, Hume is pushed to appeal to mysterious fluid dynamics in the brain.

> [T]he mind is endow'd with a power of exciting any idea it pleases; whenever it dispatches the spirits into that region of the brain, in which the idea is plac'd; these spirits always excite the idea, when they run precisely into the proper traces, and rummage that cell,

> which belongs to the idea. But as their motion is seldom direct, and naturally turns a little to the one side or the other; for this reason the animal spirits, falling into the contiguous traces, present other related ideas in lieu of that which the mind desir'd at first to survey. This change we are not always sensible of; but continuing still the same train of thought, make use of the related idea, which is presented to us, and employ it in our reasoning, as if it were the same with what we demanded.[15]

Human beings are prone to the fallacy of substitution, in other words, because the spread of activation between memory traces sometimes swerves in unexpected directions. Of course, Hume admits that this "dissection of the brain" is entirely speculative, and he cautions the reader not to put too much stake in it.[16] Even if we have reservations about this talk of animal spirits, however, we should not doubt the reality of the fallacy of substitution. Indeed, the conflation of these distinct issues would serve as an "evident instance" of that fallacy.[17]

The fallacy of substitution also plays a crucial role in the development of our belief in the continued and distinct existence of objects. According to Hume's analysis, we ordinarily believe that *that our perceptions exist unperceived*.

> Whoever wou'd explain the origin of the common opinion concerning the continu'd and distinct existence of body, must take the mind in its common situation, and must proceed upon the supposition, that our perceptions are our only objects, and continue to exist even when they are not perceiv'd.[18]

This common belief, however, does not survive critical reflection. As Hume puts it, "a very little reflection and philosophy is sufficient to make us perceive the fallacy of that opinion."[19] When we think about it carefully, we quickly realize that *perceptions can only exist in conscious minds*.

Why would anyone think otherwise? In order to account for the "source of the error and deception," Hume turns to the same propensity of the imagination that he has "already prov'd and explain'd" in his discussion of space and time.[20] In this case, the faculty of imagination causes us to substitute similar *sequences* of ideas; when we observe two closely related series of perceptions, it is "very natural for us to mistake the one for the other."[21] It is in this way that the imagination "seduces" us into attributing continued existence to our perceptions.[22] As Hume puts it, there is a "natural propensity of the imagination" to make this "error."[23]

There is another important reason why Hume comes to distrust the faculty of imagination: it plays a troublesome role in the formation of

our ordinary belief in causation. The dialectic is familiar. We commonly believe that we are directly acquainted with necessary connections between causes and effects; but this belief does not survive critical scrutiny: philosophical reflection teaches us that we only observe constant conjunctions between events.

> 'Tis natural for men, in their common and careless way of thinking, to imagine they perceive a connexion betwixt such objects as they have constantly found united together; and because custom has render'd it difficult to separate the ideas, they are apt to fancy such a separation to be in itself impossible and absurd. But philosophers, who abstract from the effects of custom, and compare the ideas of objects, immediately perceive the falsehood of these vulgar sentiments, and discover that there is no known connexion among objects.[24]

The imagination is once again assigned responsibility for this confusion. Hume maintains that we have a "great propensity" to substitute any impressions that "make their appearance at the same time."[25] The crucial point is that this applies to *impressions of reflection* as well as *impressions of sensation*. Since the feeling of necessity occurs at the same time that we observe constant conjunctions, we have a natural tendency to mistake it for a sensory impression.

We can now see why Hume becomes so alarmed when he reflects back upon the prominent role of the imagination in the development of our fundamental beliefs about the world. The imagination has been unmasked as an "inconstant and fallacious" faculty which leads us systematically into "errors."[26]

> Men of bright fancies may in this respect be compared to those angels, whom the scripture represents as covering their eyes with their wings. This has already appear'd in so many instances, that we may spare ourselves the trouble of enlarging upon it any farther.[27]

In short, the track-record of the imagination is shockingly poor: it is causally responsible for a series of false beliefs about the nature of space, time, objects, and causation. This lesson would be particularly worrisome to Hume, moreover, given the self-reflexive character of his science of human nature.

> When we trace up the human understanding to its first principles, we find it to lead us into such sentiments, as seem to turn to ridicule all our past pains and industry, and to discourage us from future enquiries.[28]

The problem is that Hume must rely upon his cognitive faculties in order to carry out his investigations. When he discovers that these faculties are unreliable, he pulls the rug out from beneath his own feet.

According to the naturalist interpretation, Hume's skeptical phase precedes his positive account of belief formation. But as we have seen, Hume falls into skeptical despair after he completes his investigations. There is a similar structure in the *Enquiry Concerning Human Understanding*, where Hume endorses a version of "consequent" skepticism concerning the "fallaciousness of our mental faculties."[29] Antecedent skeptics begin with a priori concerns about the reliability of our cognitive faculties, whereas consequent skeptics arrive at a posteriori doubt once they have examined their actual performance. The ancient skeptics raise consequent doubts, for example, by citing perceptual illusions, such as the fact that oars appear bent in water.[30] Hume regards these classical tropes as too weak to serve their purpose, however, since these illusions can be corrected by taking additional facts into consideration, such as the refractive properties of water. Nevertheless, he takes his own investigations to supply "more profound" arguments against the reliability of our cognitive faculties, since the errors that he describes cannot be easily explained away.[31]

According to one prominent version of the naturalist interpretation, Hume appeals to the faculty of imagination because he recognizes that the contents of our ordinary beliefs cannot be explained solely in terms of sensory impressions.[32] Hume advances on his empiricist predecessors, on this reading, because he acknowledges that we cannot account for the possibility of experience without invoking contributions from the mind. If we read Hume as a consequent skeptic, however, the story changes dramatically. Hume does not assign a constructive role to the imagination in order to account for the possibility of *experience*; rather, he does so in order to explain the possibility of *error*. His distrust of the imagination places him squarely in the philosophical tradition, from Plato to Descartes, which regards this faculty as a source of deception. Thus, Hume's theory of the imagination is not, as Barry Stroud would have it, the centerpiece of an optimistic "vision of man."[33] Rather, it is part and parcel of his skepticism concerning the reliability of our cognitive faculties.

This is not to deny that Hume presents a descriptive account of the role that the imagination plays in belief formation. The crucial point is that such descriptions do not exhaust his epistemological concerns. Hume does not merely ask the psychological question ("Why do we believe what we do?"), but he also asks the normative question ("Do we believe what we should?"). If any comparison is to be made between Hume and contemporary naturalized epistemology, therefore, it should not be to those followers of Quine who attempt to replace epistemology with psychology. Rather, the genuine descendants of Hume's approach are those in cognitive science who take their investigations to reveal

"profound, systematic, and fundamental errors" in our intuitive judgments.[34] These researchers provide support for Hume's contention that a careful examination of our everyday beliefs raises serious concerns about the reliability of our faculties; they also agree with Hume that these cognitive shortcomings are caused by the principles of association.[35] In fact, one influential proposal is that these mistakes result from our propensity to "substitute" related attributes without any awareness that we have done so.[36]

The Renewal of Hope

Does this signal a return to the traditional skeptical interpretation of Reid and Green? It must be admitted that these interpreters provide a straightforward solution to the first puzzle in Hume's epistemology. Hume rejects our commonsense beliefs, on this reading, but he has nothing to offer in their place.[37] In such circumstances, they might say, sentiments of melancholy and despair would be entirely appropriate. But these interpreters have a much harder time with the second puzzle in Hume's epistemology. The Reid-Green view is that Hume draws entirely negative conclusions about the prospects of human understanding. But this makes it difficult to account for the return of hope in the final pages of Book One. After all, Hume's skeptical crisis does not receive the last word in the *Treatise*: he goes on to write Books Two and Three. The main challenge for the traditional skeptical interpretation, then, is to accommodate the fact that Hume proceeds with his investigations.

Richard Popkin provides an ingenious solution to this problem: Humean skeptics continue to philosophize, and they do so on skeptical grounds. According to Popkin, Hume offers the only "consistent" response to skepticism.[38] Ancient Pyrhhonists such as Sextus Empiricus unwittingly betray their own skeptical commitments when they suspend judgment about the nature of things and limit themselves to reporting the phenomenology of appearances. The problem with such a position is that it dogmatically assumes that these judgments are within our control.

> It is really only on a basis of a psychological investigation that one can determine when, in actual life, we do suspend judgment. . . . [T]he ancient Pyrrhonians . . . were guilty of too much dogmatism, in thinking that one should and could suspend judgment on all questions.[39]

Hume manages to avoid this difficulty because he recognizes that it is psychologically impossible to suspend our fundamental beliefs about the world. The Pyrrhonians were right to point out that we cannot control how things appear to us, but they failed to see that our commonsense judgments about the world are also involuntary.

It might very well be the case that one cannot live the life of a skeptic. But does this entail that Hume must continue with his science of human nature? Popkin's interpretation explains why Hume continues to embrace ordinary beliefs about the world, but it does not account for the fact that he proceeds with his investigations. Clearly, human beings are not compelled to pursue experimental philosophy. At one point, Popkin acknowledges that nature does not force everyone to investigate such abstruse topics, but he points out that such a pursuit is "required" for "some of us."

> Not only does nature require us to make judgments on all these matters, though we lack adequate evidence for these judgments, but, also, some of us are required to philosophize. The skeptic may realize that no speculative questions can ever be settled, but this does not mean that he can avoid reasoning and even holding opinions about them. The pleasures and satisfactions of philosophizing, regardless of the merits of the enterprise, are often sufficient to entice even the skeptic, and make him enter into so futile a task.[40]

It is an autobiographical fact about Hume that he "cannot forebear having a curiosity" about the principles of human nature.[41] This is enough to solve the second puzzle in Hume's epistemology: a consistent Pyrrhonian simply follows the dictates of nature wherever they lead.

Popkin's solution, however, comes at a tremendous cost. Hume continues with his investigations in Books Two and Three, on this interpretation, because he is inescapably curious about why human beings feel and act as we do. But this leaves Hume without any reasonable hope of satisfying his curiosity about these subjects. After all, Hume has discovered that he cannot trust his cognitive faculties, and thus he must acknowledge that he cannot make any genuine progress. In short, Hume's decision to proceed with his science of human nature would be a fool's errand; it is hard to see how there is any value or meaning in the pursuit of a goal which cannot possibly be achieved. Popkin's account solves the second puzzle, then, but it does so by rendering Hume's project entirely *absurd*.

One must admit that Popkin's solution is consistent with Hume's theory of motivation, according to which we are always moved by our strongest desires. It would be perfectly legitimate for Hume to say that he will proceed with his investigations because this is *what he really wants to do*.[42] But his practical philosophy also entails that this decision would be entirely *unreasonable*. Hume's official position is that our plans and projects are "contrary to reason" when they are predicated upon "means insufficient for the desing'd end."[43] But this clearly applies to the case at hand: Hume wants to satisfy his curiosity about human

nature, but given the sorry state of his cognitive faculties, he lacks the ability to do so.

Nevertheless, one need not saddle Hume with such an uncharitable position. Hume does say that he will continue with his experimental philosophy because he is extremely curious about the principles of human nature. But he also makes it clear that it would be an "abuse of time" to proceed with this project if there was no reasonable hope of making any progress.[44] Hume is aware that there would be no reason for him to take his future enquiries seriously unless he could somehow improve upon the performance of his cognitive faculties.

Hume is initially dismissive toward this ameliorative option because it never worked in the past. Indeed, he regards the history of philosophy as a litany of failed attempts to replace our ordinary beliefs with ones that philosophers deem respectable. Consider the pale substitute that philosophers offer for our fictitious belief in the continued and distinct existence of perceptions. These philosophers recognize that perceptions can only exist in conscious minds, and so they ascribe the properties of continuity and distinctness to mind-independent objects.[45] Philosophers offer a similar remedy for our vulgar belief in causation. They are aware that we do not directly perceive necessary connections, and as a result, they direct us to search for them *in the objects*.

> They have sufficient force of genius to free them from the vulgar error, that there is a natural and perceivable connexion betwixt the several sensible qualities and actions of matter; but not sufficient to keep them from ever seeking for this connexion in matter, or causes.[46]

This is a common thread in the history of philosophy: ancient philosophers seek these connections in the qualities of matter, whereas modern philosophers try to find them in the powers of a divine being.[47]

This revisionary maneuver, however, merely piles fictions upon fictions. As Bishop Berkeley teaches us, there is no reason to believe in what cannot stand in either causal or resemblance relations to our perceptions.[48] In terms of empirical support, therefore, the philosophical system is no better off than the ordinary one; as Hume puts it, "the most refin'd and most vulgar understandings are equally at a loss in this particular."[49] Of course, one might respond that, at a minimum, these philosophical corrections represent an improvement over our unreflective beliefs. After all, one usually prefers to have *unverifiable* convictions than ones that are *demonstrably false*. But this is not the case. The vulgar have confused beliefs about causation, but they are far too indolent to act upon them. Philosophers, on the other hand, pursue their fictions with relentless fervor and zeal. Indeed, Hume regards the

fate of these philosophers as so lamentable that he compares it to the mythical punishment of Tantalus.

> For what can be imagin'd more tormenting, than to seek with eagerness, what for ever flies us; and seek for it in a place, where `tis impossible it can ever exist?[50]

Those who search for causal connections *in the objects* are destined to remain dissatisfied, in other words, because they forever reach for what must elude their grasp.

The traditional ameliorative strategy fails to improve our epistemic situation; indeed, it only serves to make matters worse. But Hume refuses to draw a pessimistic conclusion from the failures of the past.

> While a warm imagination is allow'd to enter into philosophy, and hypotheses embarc'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. But were these hypotheses once remov'd, we might hope to establish a system or set of opinions, which if not true (for that, perhaps, is too much to be hop'd for) might at least be satisfactory to the human mind, and might stand the test of the most critical examination. Nor shou'd we despair of attaining this end, because of the many chimerical systems, which have successively arisen and decay'd away among men, wou'd we consider the shortness of that period, wherein these questions have been the subjects of enquiry and reasoning.[51]

This remarkable passage points toward an alternative, and more attractive, solution to the second puzzle in Hume's epistemology. Hume does not persevere with his investigations because he is psychologically compelled to do so. Rather, he continues with his science of nature because he "hopes" that it might contribute to the "advancement of knowledge."[52]

Why does Hume think that he can make progress, whereas previous philosophers could not? The crucial point is that his experimental philosophy gives a "different turn to the speculations of philosophers."[53] The science of human nature does not simply pick up where traditional philosophy leaves off; rather, it involves a reformation of the goals and methods of inquiry. Previous philosophers have failed because they have pursued topics beyond their grasp. Hume's own research program is modest in comparison: he does not attempt to penetrate into the ultimate nature of minds and bodies, but merely searches for the general principles of human nature. This is the only subject, as he puts it, where philosophers can expect "assurance and conviction."[54]

It is not enough, of course, to reform the goals of inquiry. If our cognitive faculties are unreliable, one cannot hope to make progress on any problem, whether lofty or mundane. When Hume conducts his investigations, however, he does not rely upon the unregulated biases of his imagination.[55] Rather, he employs what he calls the "rules for judging causes and effects."[56] These methodological rules serve to "correct" the "propensities" of the imagination, and as a result, they enable him to avoid the fallacy of substitution which characterizes our everyday attributions.[57] It must be admitted that Hume describes "true philosophy" as a return to the "situation of the vulgar."[58] But the crucial point is that it does not involve a complete return: Hume makes it clear at several points that a wise person "rejects" the trivial qualities of the imagination.[59]

The opening section of the *Enquiry Concerning Human Understanding* provides a clear articulation of this reformist approach.[60] Hume once again condemns the "fruitless efforts" of metaphysicians who vainly attempt to "penetrate into subjects utterly inaccessible to the understanding."[61] He also repeats his refusal to draw a pessimistic conclusion from the failures of the past.

> [T]he motive of blind despair can never reasonably have place in the sciences; since, however unsuccessful former attempts may have proved, there is still room to hope, that the industry, good fortune, and improved sagacity of succeeding generations may reach discoveries unknown to former ages.[62]

How can we "improve" upon our "sagacity"? Hume's solution to the second puzzle remains unchanged: the "remedy" for our natural propensities toward error lies with "accurate and just reasoning."[63] We cannot reasonably "hope" to make genuine discoveries about the principles of human nature unless we conduct our investigations with "care and attention" and perform "careful trials."[64]

The main virtue of this interpretation is that it rescues Hume's project from the charge of absurdity. According to Popkin's skeptical solution, Hume is forced to continue with his investigations while fully aware that he cannot make any real progress. But this would render his fate even more pathetic than the plight of those philosophers who are bound to forever chase after fictions. These philosophers are engaged in a futile task, it might be said on their behalf, but they do so with blissful ignorance; it appears to them, at least, that their pursuits are valuable. The ameliorative solution to the second puzzle is much more charitable: Hume continues with his philosophical pursuits because he believes that he might satisfy his curiosity about human nature.

Hume compares himself at one point to a sailor whose leaky vessel has washed upon an uninhabited shore. In such dire straights, he is momentarily tempted to "resolve to perish upon the barren rock."[65] But when he thinks things through, he realizes that he should at least attempt to repair the damage and set sail again. There is no guarantee that he will make it across the boundless ocean. But he can at least hope for success. There is nothing absurd or ridiculous about this situation. Indeed, it seems rather heroic. In the end, it might serve as a metaphor for our search after truth.

University of Minnesota, Morris

NOTES

1. David Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge and P. H. Nidditch (Oxford: Clarendon Press, 1978), p. xvii.

2. Ibid., p. xix.

3. Ibid., p. 264.

4. Ibid., p. 269.

5. B. Stroud, *Hume* (London: Routledge and Kegan Paul, 1977), p. 15.

6. Hume, *Treatise*, p. 265.

7. H. H. Price, *Hume's Theory of the External World* (Oxford: Clarendon Press, 1940), p. 15.

8. D. Garrett, *Cognition and Commitment in Hume's Philosophy* (New York: Oxford University Press, 1997), pp. 39–40; cf. R. Fogelin, "Garrett on the Consistency of Hume's Philosophy," *Hume Studies*, vol. 24 (1998), pp. 161–169.

9. N. Kemp Smith, *The Philosophy of David Hume* (London: MacMillan, 1941), p. 84; cf. Stroud, *Hume*, pp. 10–11.

10. Hume, *Treatise*, p. 267.

11. Ibid., p. 58.

12. Ibid., p. 65, 37.

13. Ibid., p. 60.

14. Ibid., p. 61.

15. Ibid.

16. Ibid., p. 60.

17. Ibid.

18. Ibid., p. 213.

19. Ibid., p. 210; cf. David Hume, *Enquiry Concerning Human Understanding*, ed. L. A. Selby-Bigge and P.H. Nidditch (Oxford: Clarendon Press, 1975), p. 152.

20. Hume, *Treatise*, p. 202.

21. Ibid., p. 204.

22. Ibid., p. 209.

23. Ibid., p. 210.

24. Ibid., p. 223.

25. Ibid., p. 167.

26. Ibid., p. 265.

27. Ibid., p. 267.

28. Ibid., p. 266; cf. pp. 264–265.

29. Hume, *Enquiry*, p. 150.

30. Ibid., pp. 150–1.

31. Ibid., p. 151.

32. Stroud, *Hume*, p. 9; cf. Kemp Smith, *Philosophy of David Hume*, p. 9.

33. Stroud, *Hume*, p. 1.

34. R. Nisbett and L. Ross, *Human Inference: Strategies and Shortcomings of Social Judgment* (Englewood Cliffs, N.J: Prentice Hall, 1980), p. 6.

35. D. Kahneman, P. Slovick, and A. Tversky, *Judgement under Uncertainty: Heuristics and Biases* (Cambridge: Cambridge University Press, 1982), pp. 13–14.

36. D. Kahneman and S. Frederick, "Representativeness Revisited: Attribute Substitution in Intuitive Judgment," in *Heuristics and Biases*, ed. T. Gilovich, D. Griffin, and D. Kahneman (New York: Cambridge University Press, 2002), pp. 49–81.

37. T. Reid, *Philosophical Works*, volume 1 (Hildesheim: Georg Olms Verlagsbuchhandlung, 1967), p. 102; T. H. Green, "General Introduction," in *The Philosophical Works of David Hume*, volume 1, ed. T. H. Green and T. H. Grose (Darmstadt: Scientia Verlag Aalen, 1964), p. 297–299.

38. R. Popkin, "David Hume: His Pyrrhonism and His Critique of Pyrrhonism," in *Hume: A Collection of Critical Essays*, ed. V. C. Chappell (Garden City, N.Y.: Anchor Books, 1966), p. 95.

39. Ibid., p. 92.

40. Ibid., p. 84.

41. Hume, *Treatise*, pp. 270–271.

42. Ibid., p. 271.

43. Ibid., p. 416.

44. Ibid., p. 270.

45. Ibid., p. 215.

46. Ibid., p. 223.

47. Ibid., pp. 158–159.

48. Hume, *Treatise*, p. 212; cf. Hume, *Enquiry*, pp. 152–153.

49. Hume, *Treatise*, pp. 158–159.

50. Ibid., p. 223.

51. Ibid., pp. 272–273.

52. Ibid., p. 273.

53. Ibid.

54. Ibid.

55. M. Collier, "Why History Matters: Associations and Causal Judgment in Hume and Cognitive Science," *Journal of Mind and Behavior*, vol. 28 (2007), pp. 180–181.

56. Hume, *Treatise*, pp. 173–175.

57. Ibid., p. 148.

58. Ibid., p. 223.

59. Ibid., p. 150; cf. p. 225.

60. D. Owen, *Hume's Reason* (Oxford: Oxford University Press, 1999), pp. 211–212.

61. Hume, *Enquiry*, p. 11.

62. Hume, *Enquiry*, p. 12.

63. Ibid.

64. Ibid., p. 14.

65. Hume, *Treatise*, p. 264.