17. IS HUME A SCEPTIC WITH REGARD TO REASON?

FRED WILSON
UNIVERSITY OF TORONTO

ABSTRACT. This paper argues that, contrary to most interpretations, e.g., those of Reid, Popkin and Passmore, Hume is not a sceptic with regard to reason. The argument of Treatise I, IV, i, of course, has a sceptical conclusion with regard to reason, and a somewhat similar point is made by Cleanthes in the Dialogues. This paper argues that the argument of Treatise I, IV, i is parallel to similar arguments in Bentham and Laplace. The latter are, as far as they go, sound, and so is Hume's. But the limitations of all mean that they cannot sustain a general argument against reason. Hume the historian is quite aware of these limitations. So is Hume the philosopher. A careful examination of the other references in the Treatise to the argument of I, IV, i reveals that Hume not only rejects but constructs a sound case against accepting the sceptical conclusion, arguing that reason can indeed show the sceptic's argument to be unreasonable. A close reading of the Dialogues shows that Hume there also draws the same conclusion. The thrust of the paper is to go some way towards showing that it is a myth that Hume is a pyrrhonian sceptic.

It has recently come to be recognized that there is a good sense in which Hume is not a sceptic with regard to induction. There has been less attention paid to whether or not Hume is a sceptic with regard to reason—to use the title of Book I, Part IV, sec. i of the Treatise. But that, too, I believe is a myth. At least, that is what I propose to argue. More specifically, I shall argue that the strategy, by which, in the mentioned section, reason undermines itself, is, according to sec. vii of the same Part, not a strategy that is reasonable to pursue.

The issue is interesting in its own right. But it is important also to the more general issue whether Hume is a sceptic, or at least in what sense he is a sceptic. Thus, in a perceptive discussion of Hume, Popkin argues that there is a good sense in which Hume is a pyrrhonist, where "pyrrhonism" is taken in Bayle's sense: "the art of disputing about all things and always suspending one's judgment." Popkin reads Hume as arguing to the conclusion that all propositions are without ade-
quate reasonable foundation, since "all is uncertain and ... our judgment is not in any thing possessed of any measure of truth and falsehood." As part of his argument for this reading, Popkin cites the argument of Book I, Part IV, sec. 1 of the *Treatise*. He takes Hume's point to be that the considerations of this section "utterly subvert all belief and opinion", and that reasoning is saved only by the fact that we cannot, as a matter of psychological fact, continually hold such long chains of reasonings before our mind. "Thus", Popkin concludes, "what preserves our faith in our reasonings is not rational evidence, but only some psychological quirks of our constitution, and hence the Pyrrhonian contention that we have no rational basis for defending our opinion is once illustrated". Popkin goes on to mention other aspects of Hume which he takes to illustrate the same point. Now, in this paper I cannot deal with all of these. In fact, I shall be dealing only with the argument for "scepticism with regard to reason". To that extent, I cannot hope to conclude that Hume is not a pyrrhonist, in the sense indicated. However, if I can show that Hume is not a sceptic with regard to reason, then I shall have removed one, at least, of the major supports for Popkin's case.

Popkin holds that "In the conclusion to Book I of the *Treatise* [i.e., sec. vii of Part IV] Hume revealed despairingly that this epistemological Pyrrhonism was all that philosophy could lead us to". He takes Hume to be arguing here that all the beliefs we suppose to be knowledge are in fact founded on irrational psychological quirks of the imagination. Again I think that this is not a correct reading of the concluding section of the *Treatise*. Again, I cannot deal with all aspects of Popkin's case. But again, at least some of it I shall deal with, since much of the conclusion of the *Treatise* forms, I think, a reply to one who accepts the argument Hume has previously presented for scepticism with regard to reason. Hume is concerned about reason coming into conflict with itself, and is concerned to show that there are rational grounds for rejecting the argument of the earlier section. Popkin cites the following passage in support of his position:

Shall we, then, establish it for a general maxim, that no refined or elaborate reasoning is ever to be receive'd? Consider well the consequences of such a principle. By this means you cut off entirely all science and philosophy: You proceed upon one singular quality of the imagination, and by a parity of reason must embrace all of them: And you expressly contradict yourself; since this maxim must be built on the preceding reasoning, which will be allow'd to be sufficiently refined and metaphysical. What party, then, shall we choose among these difficulties? If we embrace this principle, and condemn all refined reasoning, we run into the most manifest absurdities. If we reject it in favor of these reasonings, we subvert entirely the human understanding. We have, therefore, no choice left but betwixt a false reason and none at all.

But, I shall argue, it is to seriously misread this passage to take it as supporting a reading of Hume as a pyrrhonist. In fact, I shall argue that this passage should be construed as part of Hume's argument that one may reasonably reject the conclusion of the argument for "scepticism with regard to reason". Popkin also quotes from the *Dialogues concerning Natural Religion*:
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... if reason be considered in an abstract view, it furnishes invincible arguments against itself, and that we could never retain any conviction or assurance, on any subject...

However, I think Popkin misreads the import of this passage also, as I shall try to show.

My aim, then, is not to show that Hume is not a sceptic, or, rather, not a pyrrhonist, or, rather, not a pyrrhonist in Bayle's sense. It is only the more modest task of showing to be unsound just one of the arguments used—not only by Popkin, but by many others from Reid to Prichard and Passmore—to support the view that Hume is a sceptic. I shall argue that Popkin et al seriously misread the Humean texts. My strategy will be both to analyze the Humean texts and to provide a careful exegesis of them.

Now, the argument for "scepticism with regard to reason" is one based on probabilities, that is, it is a species of causal argument. A careful analysis of it therefore presupposes a clear understanding of Hume's view on causation. So it is there that we must begin. In Part I, then, I look briefly at how Hume justifies adopting certain "rules by which to judge of causes", summarizing points I have made in more detail elsewhere. I try to bring out that what is involved is a mind motivated actively to discipline itself, observing and monitoring its own activities, and adjusting them, better adapting itself to the attaining of its self-imposed ends, and, in particular that of satisfying the end of curiosity; it is rational to adopt as the norms of "proper" causal inference the rules of scientific method, that is, the "rules by which to judge of causes and effects" because, as Hume argues in detail, conforming to these norms is the best means for satisfying the motive of curiosity. In Part II, I outline the strategy Hume suggests reason might use to undermine itself, establish a totally sceptical position. It is argued that the probabilistic reasoning that Hume has the sceptic using is, as far as it goes, sound, again summarizing points that I have made elsewhere. But how far does it go? In Part III, I discuss Hume's treatment of the strategy elsewhere in his work. Not surprisingly, we find Hume rejecting it, and adopting other strategies. Now, Hume holds that it is psychologically impossible to be a total sceptic and therefore psychologically impossible to rely consistently upon the strategy outlined previously by which reason destroys itself. But it still does not follow that scientific reason is the most rational. Perhaps any inference habits will do. And if so, then the sceptic will have, in effect anyway, triumphed. For there will be no distinguishing science from superstition. In Part IV of this paper I argue that Hume does go on to provide grounds for rationally preferring the experimental philosophy to, say, religion. Relative to the end, curiosity, that justifies as the most reasonable to adopt the rules of scientific inference, the strategy of the sceptic is not effective. Hume's sceptic's argument is reasonable, relative to the end of curiosity, only if other strategies are excluded as less effective as means to that end; and this the sceptic does not succeed in doing: there are in fact other, as experience tells us, more effective strategies.

One point that is crucial to this argument is the recognition that the mind is active--active, of course, in a way compatible with Hume's
account of causation, but nonetheless active--active in the sense that it can consciously adjust the shape its own processes so as better to attain ends it sets for itself. This goes against a fairly long tradition of Hume scholarship. Thus, recently we find Bennett telling us that

In considering any belief’s intellectual standing, all Hume will do is demand its birth-certificate

... Hume represents our predictions as vastly more involuntary, unreflective and instinctive than they often are; and ignores all the cases where we do, and the others when we could but don’t, pause and consider.

Hume's over-insistence on our intellectual passivity also ignores the causal judgments which look interrogatively rather than confidently towards the future.

... Hume does not address himself to predictions in general but only to beliefs about the future; and his theory does not cover non-credulous, tentative, interrogative predictions.

This is just wrong, however. As for tentative predictions, Hume does quite explicitly deal with them, in the chapter "Of The Probability of Causes". As for when Bennett tells us that, for Hume, "causes tend to shoulder aside reasons," by way of response, one can only insist that reasons are causes, that reasons and good reasons are among the things that cause beliefs. But more importantly, the Humean mind is not passive, it is active. In considering the standing of a belief, a birth-certificate is not sufficient; only some birth-certificates are good enough. There is, as it were, not an aristocracy, but a meritocracy among beliefs. Thus, for causal beliefs, anyway, one must ask whether, in the process leading to their acquisition, the mind has followed the "rules by which to judge of causes". It is just because mental processes are law-governed, that the philosopher is able systematically so to discipline his mind that good reasons more consistently cause his beliefs than is usual among mankind. It is of the essence of Hume’s case that reasons must be among the causes of belief, and that the mind be able to discipline itself so as to believe only what merits belief. In other words, it is, according to Hume, the mark of an unreasonable belief that it is "involuntary, unreflective and instinctive". What Bennett succeeds in doing is imply that, for Hume, all belief is unreasonable. No doubt Bennett’s thought is moving in conformity with a pattern established as early as Kant and Coleridge. But conformity to established habit is no test of truth—as Hume argued. My thesis, then, is that once we break out of such habits, and recognize the role of activity in Hume's account of mind, we shall be able to see that he is no sceptic with regard to reason.

(1) The Rationality of Causal Inference

According to Hume's second definition of 'cause', one has a causal relation only if an association has been established. Such an association is a regularity: Whenever one kind of thing is presented or thought of then the other kind is thought of. But this regularity is not unconditional: it holds only under certain conditions. The description of the
conditions which regularly bring about such associations is the task of the science of psychology; and, specifically, of learning theory. Hume describes a number of these lawful connections. (These laws of psychology are, of course, themselves subject to a Humean analysis.) What these laws of learning describe are (among other things) the conditions under which various habits of causal inference come to be acquired. There are a number of sufficient conditions for coming to have such habits. Frequent repetition by itself is one. So is frequent repetition under the further condition that the "rules by which to judge of causes" have been conformed to. So is the wish that is father to the belief. Let us call a pattern of causal inference successful just in case the predictions it yields turn out to be true. If we are guided by the aim of discovering, so far as we can, the truth, then we shall be aiming to acquire successful habits of causal inference. What we discover are regularities to the effect that certain conditions bringing about habits of causal inference are more likely than others to yield successful inference habits. These regularities are inductions about making inductions. (Hume has, of course, already established that, for any induction, there is an inevitable logical gap between sample and population.) The infirmities attaching to all inductive inference thus attach to these, and doubly so, if you wish. Yet we can and have tested them. Thus, of the three conditions we have mentioned, the third is much more likely than not to yield unsuccessful habits of causal inference. The first, too, except in very special cases, is unreliable. Only the second is in general relatively efficient in producing successful habits of causal inference. This is a lawful fact we discover about ourselves, the world, and our interactions with it. We discover that if we are curious, serious about matter of fact truth, then we should put aside the pieties of religion (it is a "blamable method of reasoning" to condemn a doctrine because it is dangerous to religion) and the platitudes put into us by education ("an artificial and not a natural cause" of belief) and even induction by simple enumeration; and rely instead upon the "rules by which to judge of causes", the norms of "experimental philosophy". Faced with the inevitable logical gap between sample and population, one can well ask why it is reasonable to adopt Hume's "rules by which to judge of causes", rather than some other set of rules, as conditions which rationally justify acquiring certain inference-habits, and not others. We now have Hume's answer to that question: Given that our end is to come to believe general truths, then what we discover is that, as a matter of lawful fact, conformity to these rules is the best or most efficient means for achieving, so far as we are able, that end. What we must do, then, is so discipline ourselves that we adopt the attitude of belief towards a generality only under these conditions, not the others. Such self-discipline is, of course, difficult: the utmost constancy is required to make us persevere in our enquiry, and the utmost sagacity to choose the right way among so many that present themselves. But such discipline is possible. And if our motive is curiosity, that is, if our end is that of truth then, it is a discipline we ought to practice. That is, we ought to because upon the basis of our systematic exploration of our truth-discovering capacities we learn that this, as a matter of lawful fact, is (so far as we can tell) the best means to satisfy curiosity, to achieve that end of coming to know (so far as we can) the truth. Thus, it is the elements of feedback and self-discipline in the
light of self-knowledge which are crucial to Hume's account of why his "rules by which to judge of causes" are those which reasonably render a law-belief subjectively justified. Hume's account of the reasonability of some but not all causal inferences relies upon the modern discovery—or, perhaps better, the Protestant discovery—of a mind which is motivated actively to discipline itself, one which can observe itself, monitor its own activities, and better adapt itself to the attaining of its self-imposed ends, including such an end as that defined by simple curiosity.

(II) THE ARGUMENT AGAINST REASON

We shall now turn to a second case in which the mind observes itself, monitors its own activities, and adjusts the latter in accordance with certain principles and strategies, a second case of what Hume would call a "reflex act of the mind." I refer, of course, to the discussion in the section of the Treatise entitled "Of Scepticism with regard to Reason". Here also Hume takes the mind as reflecting upon its own activities and applying these discoveries about itself in order appropriately to adjust its responses.

Our reason must be consider'd as a kind of cause, of which truth is the natural effect; but such-a-one as by the irruption of other causes, and by the inconstancy of our mental powers, may frequently be prevented. By this means all knowledge degenerates into probability; and this probability is greater or less, according to our experience of the veracity or deceitfulness of our understanding, and according to the simplicity or intricacy of the question.

Consider an actual case of inference. This leads to a state of belief or affirmation. But one can form the hypothesis that this process of reasoning was in fact one which introduced an element of error. Knowing we have reasoned poorly in the past, this hypothesis has a certain probability. On its basis we must as a matter of reason reduce the probability of the first affirmation. This reduction of probability is itself a matter of reasoning, however. Therefore about it, also, one can form the hypothesis that it is erroneous, and that the probability of the original affirmation was not reduced sufficiently. On the basis of this new hypothesis we must as a matter of reason reduce still further the probability of the first affirmation. And so on: as I reflect upon my use of reason, "all the rules of logic require a continual diminution, and at last total extinction of belief and evidence". The result here of the mind applying to its own activities what it discovers about itself is its ceasing to make any causal inferences. Feedback here yields the attitude of total scepticism, in the sense of rendering it reasonable that one ought totally to suspend judgment.

To be sure, Hume does hold that no one is in fact such a total sceptic:

Nature, by an absolute and uncontrollable necessity has determine'd us to judge as well as to breath and feel; nor can we any more forebear viewing certain objects in a stronger and fuller light, upon account of their customary connexion with a present impression, than we can hinder ourselves from thinking as long as we are awake, or see the sur-
Inferences from sample to population are inevitably fallible, and this is the best we can do, given the logical gap between sample and population. The argument for "scepticism with regard to reason" concludes not only that such inferences are fallible, that they may be wrong, but more strongly that we have the strongest of reasons for supposing that they are wrong. This is, of course, incompatible with the point Hume makes earlier in the Treatise, when he includes the section on the "Rules by which to judge of causes and effects", that we can have good (though not infallible) reasons for supposing that certain inferences that may be wrong are in fact not wrong. Indeed, in the argument we are now looking at Hume seems to be arguing against his earlier discussion. This is, of course, not true. As Hume makes clear, his intention is quite otherwise:

My intention then in displaying so carefully the arguments of that fantastic sect [that is, the total sceptics], is only to make the reader sensible of the truth of my hypothesis, that all our reasonings concerning causes and effects are deriv'd from nothing but custom; and that belief is more properly an act of the sensitive, than of the cogitative part of our faculty.

which means that he must also intend to show how, upon his principles, the reasoning which leads to the "total extinction of belief and evidence" must at some point turn out to be bad reasoning, or, more accurately, to be a form of reasoning it is not rational to pursue. There are two questions. The first is: how, psychologically, is it possible that reason's "extinction of belief and evidence" cannot be maintained? And the second is: are the beliefs that destroy this "extinction of belief evidence" reasonable beliefs? As for the first, Hume's account is perfectly straight-forward. The process of reasoning by which belief and evidence are extinguished requires a high degree of attention. A new impression then strikes us. This shifts our attention. Custom has established an association such that this impression is associated with other ideas. Given Hume's account of causation, this association is, of course, a causal belief. This association is, as a matter of psychological fact, sufficiently strong as to over-come the long train of reasonings designed to attenuate its strength. As for the second question, what it amounts to is whether the conquering association is justified or the long chain of reasonings. To this second question, Hume does give an answer, and it is that it is (usually) the conquering association which is rationally the more justified.

But we must become clearer about the reasoning that leads to "scepticism with regard to reason". We can do this if we note that Hume has, earlier in the Treatise, referred to this reasoning. In Book I, Part III, sec. xiii, "Of unphilosophical probability", Hume has a footnote that refers us to Part IV sec. i, i.e., the section on "scepticism with regard to reason". The context of this reference is very important for a clear understanding of the argument of the latter section, and also for a clear picture of Hume's evaluation of that argument.

At the point where the reference occurs, Hume is talking about a third sort of unphilosophical probability, that is, one of the kinds of
probability that are not "receiv'd by philosophers and allow'd to be rea-
sonable foundations of belief and opinion". These are unreasonable
grounds for belief, in contrast, of course, to reasonable grounds such
as those based on the "rules by which to judge of causes and effects".
The third sort of such unreasonable patterns of belief formation occurs
when a belief can be supported only by a long chain of reasonings; the
chain of reasonings, simply by virtue of its length, may well fail to pro-
duce the conviction that a short argument or an immediate impression
may produce, even though each step in the long chain be sound.

Sometimes this distance [from immediate impression to the fi-
nal link of the chain or arguments] has a greater influence
than even contrary experiments would have; and a man may
receive a more lively conviction from a probable reasoning,
which is close and immediate, than from a long chain of con-
sequences, tho' just and conclusive in each part. Nay 'tis
seldom such reasonings produce any conviction; and one
must have a very strong and firm imagination to preserve
the evidence to the end, where it passes thro' so many
stages.

It is unphilosophical, unreasonable, to let one's degree of certainty be
determined not by soundness of reasons but by the mere length of the
chain of reasoning.

Nonetheless, it does happen that way. Thus, "... tho' our rea-
sonings from proofs and from probabilities be considerably different
from each other, yet the former species of reasoning often degenerates
insensibly into the latter, by nothing but the multitude of connected ar-
guments". Note that in the argument for "scepticism with regard to
reason" we also have proofs degenerating into probabilities, and prob-
abilities decreasing with distance along a chain of connected arguments.
But it is harder to dismiss this latter case, precisely because in it each
step is justified: it is not a case of unphilosophical probability. In the
present case, what one has is unphilosophical probability, and what is
required is self-discipline, the conscious and active training of oneself
to conform to the standards of right reason. In the present case, what
we have are reasonable rules competing with unreasonable rules, and
that creates no problem of principle. However, what we have in the
section on "scepticism with regard to reason" is reasonable rules chal-
lenging themselves, and that does create a problem.

But return to Hume's discussion of how proof can degenerate into
probability. He has argued that this happens because of a natural ten-
dency of the mind to be unable to keep a long chain of arguments care-
fully in mind. After making this point he turns immediately to consider
a possible counter-example.

'Tis evident there is no point of ancient history, of which
we can have any assurance, but by passing thro' many mil-
ions of causes and effects, and tho' a chain of arguments
of an almost immeasurable length. Before the knowledge of
the fact cou'd come to the first historian, it must be con-
vey'd thro' many mouths; and after it is committed to writ-
ing, each new copy is a new object, of which the connexion
with the fore-going is known only by experience and observ-
ation.
It would thus seem that knowledge of, say, Julius Caesar, will eventually be lost as the chain of causes increases in length. This, however, is obviously wrong, contrary to common sense. Hence, it would seem that one must either give up the principle that vivacity (i.e., degree of certainty) decreases with the length of the chain of causes, or the point that belief is not to be analyzed into vivacity. Hume responds to this objection by slightly modifying his principle: He suggests that in the chain of causes leading from the historical event to present belief, all of which "depend on the fidelity of Printers and Copists", are all extremely similar to each other—as Hume puts it, "There is no variation in the steps"; and where the steps resemble each other, "the mind runs easily along them jumps from one part to another with facility, and forms but a confus'd and general notion of each link", with the consequence that vivacity in such cases is not reduced as much as it normally would be. Hume thus shows how to account for the apparent exception to the principle he has stated.

Note, however, that this principle, even when so qualified, remains a principle of unphilosophical probability, one that is not reasonable. The reasonable way to form beliefs in these cases is to look at the links in the chain. The final report is to be as trusted as the original impression, provided that in the chain of testimony one can rely upon, as Hume puts it, "the fidelity of Printers and Copists". Whether or not they are faithful will, of course, vary from case to case, each of which must be examined on its own merits.

It is in this context, that of a discussion of chains of testimony, that Hume has introduced a special case of diminution of vivacity, i.e., of degree of certainty. This is introduced just after the general problem is posed and just before the solution is offered. In this special case, one takes account of the fact that one can assume only with a certain probability that each link in the chain of testimony is faithful. Here "the connexion betwixt each link of the chain in human testimony has been...suppos'd not to go beyond probability, and to be liable to a degree of doubt and uncertainty". At this point we must quote the crucial passage in full:

And indeed it must be confess, that in this manner of considering the subject, (which however is not a true one) there is no history or tradition, but what must in the end lose all its force and vivacity. Every new possibility diminishes the original conviction; and however great that conviction may be suppos'd, 'tis impossible it can subsist under such re-iterated diminishations. This is true in general; tho' we shall find[*] afterwards, that there is one very memorable exception, which is of vast consequence in the present subject of the understanding.

Where the asterisk occurs we find a footnote that refers us to Part IV, sec. i of Book I, that is, to the section on "scepticism with regard to reason".

Now, the first, and most important point to be gathered from this reference in this context, is that the chain of inferences discussed in the later section is taken to be analogous to a chain of human testimony.
Second, Hume accepts the argument that when probabilities are re-iterated in the way indicated, then conviction cannot subsist. "This is true in general", he tells us. This is, I take it, in general this form of reasoning from probabilities is sound. He himself makes this very point in The Natural History of Religion, where he tells us that

An historical fact, while it passes by oral tradition from eyewitnesses and contemporaries, is disguised in every successive narration, and may at last retain but very small, if any, resemblance of the original truth, on which it was founded. The frail memories of men, their love of exaggeration, their supine carelessness; these principles, if not corrected by books and writing, soon pervert the account of historical events . . . .

Hume thus quite clearly accepts the regress of testimony as leading to a diminution of probability tending to zero as the chain grows longer. But note that he also gives one a way out: the infirmities of the oral tradition do not beset the written tradition in the same way.

Thus, third, as he says in the passage for the Treatise that we are examining, the regress to zero probability that besets a chain of oral testimony is not the correct way to evaluate historical claims for which one has a chain of written texts. So, as Hume tells us, since we are considering events for which a textual tradition is available, "this manner [that of assuming that one can apply the rule that there will be regress towards zero probability in the chain of testimony] of considering the subject . . . is not a true one". It could not be, for it flies in the face of the common sense that it is credible to believe in, say, Julius Caesar, as Hume has just finished pointing out. And the correct procedure, as he will go on to indicate in the next paragraph, is not simply to generally impugn long chains of testimony, but to evaluate at each link the "fidelity of the Printer or Copist" and of testifiers in general. Hume does not, of course, elaborate this latter point. For, he is in the midst of a discussion of one sort of unphilosophical probability, and what are emphasized are the themes that are relevant to that topic. So the point about the fidelity of testifiers is only briefly mentioned. Yet it is mentioned.

We should also note, by the way, that the connection between the links in the chain of testimony, that is, in effect the reliability of authorities, is a sort of matter-of-fact causal knowledge; it is "known only by experience and observation."

Finally, we must note, in the fourth place, that while the diminution of conviction upon re-iteration of probabilities is "true in general", there is nonetheless, Hume tells us, one exception to this, that is, quite clearly, one case in which it is not true that re-iteration of probabilities leads to a diminution of conviction. Thus, diminution of conviction upon the described re-iteration of probabilities is in general justified, but in this one exception it is not justified. And this one exception turns out to be, when we follow up his reference, the line of reasoning that leads to "skepticism with regard to reason". Now, the latter purports to reduce all conviction to the vanishing point. So what Hume is telling us is that in this one exception the diminution of conviction is not justified. Or, in other words, what Hume is here telling us is that the argu-
ment that purports to destroy all belief ought not to be accepted. What Hume is doing, then, is warning us of his later argument, and is telling us what his final evaluation of it will be. This evaluation does not occur in the section in which the argument is laid out in detail and which is entitled "Of Scepticism With Regard to Reason". So what Hume is warning us of, is that this latter section does not exhaust his treatment of that argument, and specifically that we must look for a still later discussion in which he will present his final evaluation, and indeed refutation, of the argument that purports to lead to "scepticism with regard to reason". We are not to be surprised, then, when in Part IV, sec. vii, the "Conclusion of this book", we find another footnote which refers us back to the sec. i of the same part, that is, the section on "scepticism with regard to reason". And we may expect that what follows this reference contains Hume's evaluation of the sceptic's argument, and his case that this argument is unreasonable. We shall of course later look at what Hume says in the "Conclusion". But we may already say that Hume himself tells us that he intends the "Conclusion" to contain his response to the sceptic's attack on reason. This strongly argues already that Popkin's reading of the "Conclusion" as a statement of pyrrhonism is mistaken.

This puts the argument that leads to "scepticism with regard to reason" in the total context of Book I of the Treatise. Let us now look once again at that argument, and specifically in the light of Hume's analogy to the case of a chain of testimony.

When Hume turns to "scepticism with regard to reason", he is explicit in once again taking an inference, that is, an act of inferring, to be a case of authority, something that testifies to the truth of the conclusion inferred to.

'Tis certain a man of solid sense and long experience ought to have, and usually has, a greater assurance in his opinions than one that is foolish and ignorant, and that our sentiments have different degrees of authority, even with ourselves, in proportion to the degrees of our reason and experience. In the man of the best sense and longest experience, this authority is never entire; since even such a one must be conscious of many errors in the past, and must still dread the like for the future. Here then arises a new species of probability to correct and regulate the first, and fix its just standard and proportion. As demonstration is subject to the control of probability, so is probability liable to a new correction by a reflex act of the mind, wherein the nature of our understanding, and our reasoning from the first probability become our objects.

Hume is not alone in making this analogy. Sextus, for one, recognizes that proof, or an argument qua actually used, is a kind of sign or testimony to the truth of what is to be proved. But in any case, the analogy is there, and once it is recognized then one can apply to it the reasoning concerning chains of testimony that leads to the conclusion that the longer the chain then the lower the probability of what is testified to.

Now, testimony is explicitly discussed elsewhere by Hume, most notably in his essay "Of Miracles". The crucial point about testimony is
that as a rule whenever someone testifies that $S$ then $S$.

This principle, that when someone testifies to $S$ then $S$, is not necessary truth; the connection between testimony and reality is matter-of-fact, since language itself is conventional. Our confidence that this rule applies, that is, our confidence in witnesses, is based on our knowledge of an inclination in men "to truth and a principle of probity", to their shame if detected in a falsehood, and on the moderate reliability of memory. On the other hand, there are infirmities of character that have the consequence that the principle does not hold universally, only as a rule. Witnesses with a doubtful character, or an interest in the matter, are to be treated with caution, as are those who deliver their reports in an unusual or uneven manner. There are always variations in both the type and amount of evidence given by a witness, and in the manner and motive in giving it, all of which are relevant in assessing its probability. Because there are these reasons for error, it is important to adhere to the principle of proportioning belief to the evidence.

It will, I think, help, if we spell the logic of this out in a little detail.

We can say that a person $a$ is a truth-testifier with respect to sentences $s$ of a set $S$ just in case that

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(1) \ (s) [s \in S \supset (s \text{ is true } \equiv s \text{ is testified to by } a)]
$$

where, to say that $s$ is testified to by $a$ is to say, among other things, that if $a$ is asked about $s$ then $a$ asserts $s$. As for the set $S$, this might be, for example, sentences the truth-value of which is calculated by a according to rules of arithmetic, or sentences stating what $a$ himself has witnessed, or sentences that $a$ has heard from an accepted authority. In any case, however, $S$ must consist of sentences to which $a$ has some special relation; otherwise, the "if and only if" of (1) would not work. Thus, to say that

$$
s \in S
$$

is to say something like

$$
a R s
$$

so that (1) is the law

$$
(2) \ (a) [a R s \supset (s \text{ is true } \equiv s \text{ is testified to by } a)]
$$

If we restrict the range of the variable to the appropriate $s$ in $S$, then (2) may be written more simply as

$$
(3) \ (s) [s \text{ is true } \equiv s \text{ is testified to by } a]
$$

However, (3) does not capture the idea that it is only as a rule and not invariably that testimony is true. Sometimes even the best of truth-testifiers will miscalculate, or mis-observe, or mis-hear, or there will be a slip in his memory, and so on. As Hume puts it, "Our reason must be considered as a kind of cause, of which truth is the natural effect; but such—a—one as by the irruption of other causes, and by the inconstancy of our mental powers, may frequently be prevented." Every mind is afflicted with what Hume would call the "infirmities of reason". (3) is
thus only true as a rule, only conditionally true, holding only when cer-
tain conditions are present, or, what amounts to the same, when the in-
firmities of reason are absent: in order to infer the truth of a sentence
s to which a truth-testifier a testifies, we must assume that in respect
to s the infirmities of reason do not afflict a. Let

\[ s \overset{C}{=} a \]

represent that in respect to s the infirmities of reason do not afflict a.
This means that the law we want is not (3) but rather

\[ (4) \quad (s) \; [(s \text{ is true } \equiv s \text{ is testified to by } a) \equiv s \overset{C}{=} a] \]
or, to put it briefly,

\[ (4^1) \quad (F \equiv H) \equiv G \]

The relative frequency of S's that are G will, by (4^1), be the relative
frequency that S's are such that F \( \overset{=}{} \) H obtains with respect to them.
In order to find the relative frequency that F \( \overset{=}{} \) H obtains in S's, we
take a sample of S's that are F. This percentage can then be used as
an estimate of the probability for S's that an S that is H is also F. But
for s to be H is for a to testify to s and for s to be \( \overset{=}{} \) F is for s to be
true. Hence, this probability is the probability, when a testifies to
something, that what he testifies to is the case. And in turn, this
probability that an authority is testifying truly is the amount to which
we must diminish the degree of certainty with which we affirm a sen-
tence when that sentence is testified to by that authority.70

As for when the authority testifies to the truth of s and s is
false, then we can "explain away" that failure by citing the presence in
this case of certain infirmities of reason. If a testifies to the truth of a
sentence \( s_1 \), and \( s_1 \) is false, then we have

\[ (5) \; s_1 \text{ is } H \]

and

\[ (6) \; s_1 \text{ is } F \]

From these and (4^1) one can infer that

\[ (7) \; s_1 \text{ is } G \]

that states that the infirmities of reason are present in a with respect
to \( s_1 \). We can now explain (6) ex post facto using the argument

\[ T = (4^1) \]
\[ C = (5) \& (7) \]
\[ E = (6). \]

We have positive evidence that tends to confirm (4).71 Upon the
basis of (4), we can predict the presence of F (truth) on the basis of H
(testimony), provided that G is present (infirmities of reason are ab-
sent). However, often it is difficult to discover whether G is in fact
present or absent.72 On some occasions we can have excellent reasons
for inferring the absence of $G$, even if that fact cannot be verified by observation. This is so in the case of testimony to miracles. Here the evidence is so overwhelming that $F$ (truth) is absent that we may reasonably infer on the basis of (4) that $G$ is absent, the infirmities of reason present. In other cases, however, we may have no independent grounds either for affirming or denying the presence of $F$. It is under just those conditions that we wish to affirm the presence of $F$ simply by predicting it using (4), and the fact of $H$, of testimony. This inference is not possible unless we know something about whether $G$ is present or absent. The basis on which to proceed is to attempt to estimate the frequency with which $H$'s are $F$'s. If the frequency of $F$'s in $H$ is such and such then, with a certainty diminished to that amount we may, upon the basis of testimony, affirm that which is testified to.

The inference produces, that is, causes a state of belief or affirmation: "our reason must be consider'd as a kind of cause of which truth is the natural effect." Hume does not say that the inference that we are considering does not produce truth, i.e., a true belief. But there is the possibility that it does not. Nor is this a bare possibility: a probability can be attached to it. One can form the hypothesis about causes that the infirmities of reason are present, that this process of reasoning was in fact one which introduced an element of error. One does not know that this hypothesis is true. But one does know a certain probability that this causal hypothesis is true; as Hume puts it, it "may frequently" occur. Knowing that we have reasoned poorly sometimes, though not always, in the past, the hypothesis that we have on this occasion reasoned poorly, the hypothesis that on this occasion the infirmities of reason are present, has a certain probability, and we know this even though we have not verified the hypothesis for this particular occasion. On the basis of this unverified but somewhat probable causal hypothesis we must as a matter of reason reduce the probability we attach to the belief or affirmation that was produced by the original inference. This reduction of probability is itself a matter of reasoning, however. Therefore, about it, also, one can form the hypothesis that it is erroneous, and that the probability of the original affirmation was not reduced sufficiently. On the basis of this new hypothesis we must as a matter of reason reduce still further the probability of the first affirmation. And so on: as I reflect upon my use of reason, "all the rules of logic require a continual diminution, and at last a total extinction of belief and evidence." Feedback here yields the attitude of total scepticism, in the sense of rendering it reasonable that one ought totally to suspend judgment.

That this reasoning is not to be rejected a priori can be seen if we recognize, once again, the analogy to chains of testimony. Exactly the same regress of probabilities tending towards zero has been used to argue for the exclusion of hearsay testimony at trials, that is, exclusion of testimony that derives from a chain of testifiers.

In his Rationale of Judicial Evidence, Jeremy Bentham noted that Hume's regress provides, at bottom anyway, the grounds for excluding hearsay evidence:

All modifications of unoriginal evidence that are of the nature of, or bear similitude to, hearsay evidence...
out of the question) they afford an additional chance of incorrectness and incompleteness.\(^7\)

and he continues a little later:

Suppose extrajudicially stating or narrating witnesses may have stood in a series of any length, one behind another. The causes of untrustworthiness applying to every human being, and, to every being of which nothing more is known than that he or she is human, with equal force. . .it is evident that, the longer the line of these supposed witnesses, the less is the probative force of their supposed testimony.\(^8\)

The idea is clear enough: the longer the chain of testifiers, then the more likely it is that at least one of the testifiers has been infected by the "infirmities of reason".

. . . between the mouth of the percipient witness and the ear of the judge, any number of mouths may have intervened; of which that one, by which the statement was conveyed, without the invention of any other, to the ear of the judge, is the mouth of the deposing witness. For everyone of these intervening mouths, the evidence, it is manifest, cannot but lose a proportionate share of its probative force. In like manner, between the pen of a percipient witness and the eye of the judge may intervene any number of pens: like loss of force for every intervening pen as for every intervening mouth; though not in equal degree from the intervention of pens as from the intervention of mouths.\(^9\)

Jeremy Bentham was effectively the first to provide any extended treatment of the rules of evidence in legal situations.\(^1\) As one authority puts it, "Among the theorists Bentham stands first, though possibly not the first in time . . ."\(^2\) He made use of such inferences as the above, though using only relatively crude notions of probability.\(^3\) George Bentham used relative frequencies to provide some analyses, but not probabilities.\(^4\) J.S. Mill recognized the relevance of probabilities.\(^5\) He also recognized the relevance of choosing a population and estimating such probabilities. To attack the credibility of a witness is to try to place him in a population with respect to which the probability of \(G\) is low, i.e., with respect to which one assents to what is testified to only with a relatively low degree of assent. Hume's discussion of miracles\(^6\) is, as Hacking has pointed out,\(^7\) an exemplification of Hume's ideas on probability, applied specifically to the case of testimony. His aim is, of course, to attack the credibility of any witness who testifies to a miracle. It was these same general principles that Jeremy Bentham used to rationalize the rules of legal evidence. In an important essay Waldman has argued that ". . . the need for a systematic treatise on evidence was most pressing after a philosophical theory of evidence regarding the practical affairs of men had been stated".\(^8\) The philosophical theory Waldman has in mind is that of the "mitigated scepticism" of Glanvill, Wilkins, and so on, in which the ideal of absolute certainty comes to be replaced by that of moral certainty, and in which a proposition not absolutely certain remains acceptable so long as it is not open to reasonable doubt.\(^9\) But its philosophical foundations were given by Locke in his \textit{Essay}.\(^1\) Essentially, its basis is the rejection of the infallible
knowledge of objective necessary connections, the rejection of scientia. Once this goes the theory of legal evidence must be given a basis in empirical fact. But the point here is not to trace these developments in detail, but rather to note that Bentham and others argue that a regress of probabilities tending towards zero occurs in a chain of testimony. It can in fact be shown that this reasoning is, according to the calculus of probabilities, valid.\(^3\) Laplace, for one, and a significant one at that, was clear about this:

It now remains for us to consider the influence of time upon the probability of facts transmitted by a traditional chain of witnesses. It is clear that this probability ought to diminish in proportion as the chain is prolonged. If the fact has no probability itself, such as the drawing of a number from an urn which contains an infinity of them, that which it acquires by the testimony decreases according to the continued product of the veracity of witnesses. If the fact has a probability in itself; if, for example, this fact is the drawing of the number 2 from an urn which contains an infinity of them, and of which it is certain one has drawn a single number; that which the traditional chain adds to this probability decreases, following a continued product of which the first factor is the veracity of each witness diminished by the ratio of the probability of his falsehood to the number of numbers in the urn less one; so that the limit of the probability of the fact is that of this fact considered a priori, or independently of testimonies, a probability equal to unity divided by the number of numbers in the urn.

The action of time enfeebles then, without ceasing, the probability of historical facts just as it changes the most durable monuments.\(^3\)

But Hume's sceptic's argument designed to extinguish all belief and evidence involves the same regress of probabilities. We must, therefore, accept the sceptic's argument as valid. Thus, contrary to many critics, Hume's argument for "scepticism with regard to reason" far from being a "tissue of sophistries" is a valid inference. It would seem, then, that the sceptic triumphs after all!

We may summarize Hume's account of "scepticism with regard to reason". On this account what the total sceptic does is apply certain lawful facts about testimony to his own reason taken as testifying to the truth of the conclusions its affirms. What then begins to happen is just what happens with respect to hearsay in contrast to direct testimony: the greater the number of steps it is from what is to be affirmed the less is the degree of certainty with which the affirmation can be made. The degree of certainty tends to diminish towards zero: all "evidence and belief" is extinguished. But not even this can be affirmed with certainty. For one has arrived at this conclusion by cases of reasoning, and reason may apply the same sort of reasoning to these cases. In this way, the beliefs which constitute the very foundation of the reasoning which "extinguishes" all "evidence and belief" are themselves extinguished. All reasoning is undermined. All reasoning is weak including the reasoning that all reasoning is weak.
The upshot of the preceding section would seem to be that Hume should accept the argument of the sceptic, that he should be (as Popkin asserts him to be) a pyrrhonian. Nevertheless, as we argued in the same section, Hume does not accept this conclusion. How does he escape it?

Hume's argument has a series of stages. In the first place, he points out that, even if reason is destroyed, nature or human psychology will not, as a matter of lawful fact, let man remain in the sceptical state of no belief, total suspension of judgment. Psychology thus destroys scepticism. Indeed, as we saw, it was Hume's intention in the section on "Scepticism with regard to reason" to establish this very fact. But it does not follow from this fact that we ought to reject scepticism, that it is rational to reject scepticism. Hume wishes to argue the latter, that is, to argue that it is reasonable or rational to reject the sceptical conclusion of Bentham regress as applied to reasoning. "Reason", according to Hume, "is the discovery of truth or falsehood". Its patterns are therefore strategies the aim of which is the discovery of truth. It is this conception of reason that Hume explores as he develops his reply to the sceptic. Specifically, he asks about the strategies reason might employ whether they are good or efficient or effective strategies. If they are, then it is reasonable to employ them, while if they are not, then it is not reasonable to employ them. He considers three goals. The first, which is derived from ancient rejections of pyrrhonism, is that simply of avoiding scepticism. But, he argues, aiming at the goal in fact is ineffective, for it produces a strategy that does not achieve that goal! The second goal he considers is that of indolence, asserting what "feels natural" or "comes easily" to the mind. This, too, he rejects. The third goal he considers is that provided by the motive or passion of curiosity, or love of truth. If this be one's motive—and it arises naturally in us, he holds—then the sceptic's strategy is not effective and is therefore unreasonable while there are strategies that are more effective and which it is therefore reasonable to adopt.

What we have outlined and defended in the preceding section is a strategy of reason by which it deploys arguments about itself based upon investigations of its own activities. But: is it a good strategy? Is it an efficient strategy? To answer those questions, one must ask, as we have just said, relative to what end? Now, clearly, if one's aim is truth, then the strategy is hardly efficient at all. In the present section we look at how Hume uses strategies of reason concerning testimony elsewhere in his works. We shall discover that he does not employ the Benthamite strategy of "scepticism with regard to reason". He deploys other strategies that are more efficient in getting at the truth. This will make plausible the case we go on to develop in the next section for Hume's having argued that strategies other than the sceptic's are more efficient with respect to the discovery of truth, and that the sceptic's inference is therefore to be rejected as unreasonable.

As John Stuart Mill pointed out, in considering a line of reasoning closely related to Hume's sceptic's, also based on considerations of relative frequency, if one is interested in truth in assessing the worth of testimony, what one does is consider a number of causal hypotheses,
discover (if one can) which the facts eliminate, so as to discover the causes actually operating with respect to the witness, thus to discover if his testimony is or is not worthy of evidence:

In the case of a witness, persons of common sense would draw their conclusions from the degree of consistency of his statements, his conduct under cross-examination, and the relation of the case itself to his interests, his partialities, and his mental capacity, instead of applying so rude a standard (even if it were capable of being verified) as the ratio between the number of true and the number of erroneous statements he may be supposed to make in the course of his life.96

That is, in Hume's terms, one tries to approach the question of the fidelity of the witness and testimony97 directly, rather than through the examination of chains of probabilities based on hypotheses about the presence or absence of infirmities of reason. Mill's reasoning, here, parallels that of Hume's in the essay "Of Miracles". In this essay, in which Hume attempts to undermine assertions that miraculous events have occurred, he does not use Bentham's argument for dismissing hearsay evidence, which is to say, the strategy he himself employed in the section "Of scepticism with regard to reason". Rather, he employs a strategy akin to that outlined by John Stuart Mill.

Hume's aim, in the essay "Of Miracles", is not merely sceptical. He is not interested merely in subverting belief in the occurrence of miraculous events. Hume is also interested in truth. He aims to discover (so far as is possible) the truth about what did occur. To this end, Hume introduces independent evidence for the non-occurrence of the miraculous events. Basically, he relies upon the factual evidence that renders justified the assertion that nature is regular. However widespread is the testimony to an event violating a known law of nature, e.g., that someone rose from the dead, Hume concludes that

All this might astonish me; but I would still reply, that the knavery and folly of men are such common phenomena, that I should rather believe the most extraordinary events to arise from their concurrence, than admit of so signal a violation of the laws of nature.98

As for where widespread testimony is to an event which is not to be expected but which violates no known law of nature then the task is to undertake research, in accordance with the rule that every event has a cause.99

... it is evident, that our present philosophers, instead of doubting the fact, ought to receive it as certain, and ought to search for the causes whence it might be derived.100

If one is interested in the truth of s one does not proceed simply by reflecting upon the testimony to s and then upon the testimony to the testimony to s and then upon the testimony to the testimony to s and so on. Rather, one searches for other reasons for affirming or denying the truth of s. That is, we discover that if our aim is truth then as a matter of fact there are strategies more efficient than
that of the total sceptic in arriving at what are, so far as we can tell, successful patterns of causal inference.

The same point can be made by reference to Hume's work as an historian. Here Hume must evaluate testimony, and chains of testimony, concerning events long past. Instead of simply looking at long chains of testimony in terms of probabilities, Hume looks more specifically at individual links and estimates the probabilities in each case to the extent to which he might rely on the "fidelity" of the testifier. For example, in his History of England, vol. I, he considers the massacre of the Danes under Ethelred. He reports all ancient sources recording the massacre as universal. But then, as in "On Miracles", he argues that it is unlikely that all Danes were killed, given that in large areas of Britain they were the sole inhabitants. He then distinguishes this general population from a special military unit of Danes that the Saxon kings had kept. "It seems probable, therefore, that it was these Danes only that were put to death". Similar considerations are used to criticize records that claim Edward the Confessor explicitly willed the kingdom to the Conqueror. Hume later argues for one source as superior to a second for the history of Becket: the first source was a friend of Becket, but that balances the enmity of the second; however, the second was moved by interest, as well as enmity, to calumniate Becket; moreover, actual calumnies can be proved to be present in the second source; and so on. Bentham, not surprisingly, also appeals to such facts in assessing the worth of testimony. For example, he tells us that "the greater the number of deposing witnesses, the more seldom it will happen that any...concert, and that a successful one, has been produced, as is necessary to give effect to a plan of mendacious testimony, in the execution of which, in the character of deposing witnesses, divers individuals are concerned". But the point is that Hume again and again introduces in the Notes to his History such considerations as these in evaluating the worth of testimony.

He adds a general comment before embarking on the reign of Henry VII:

Thus have we pursued the history of England through a series of many barbarous ages; till we have at last reached the dawn of civility and science, and have the prospect of both greater certainty in our historical narrations, and of being able to present to the reader a spectacle more worthy of his attention. The want of certainty, however, and of circumstances, is not alike to be complained of throughout every period of this long narration: This island possesses many ancient historians of good credit, as well as many historical monuments; and it is rare, that the annals of so uncultivated a people, as were the English as well as other European nations, after the decline of Roman learning, have been transmitted to posterity so complete, and with so little mixture of falsehood and fable. This advantage we owe entirely to the clergy of the church of Rome... This is hardly the attitude of a pyrrhonian. And neither is it the attitude of one who evaluates the worth of testimony solely in terms of the length of the chain from the original event to the present. One who is concerned to get the best possible picture of the past does not adopt
the latter strategy. Rather, a concern for the truth demands an alternative strategy of research.

Chains of testimony are not simply hypothetical, for they consist of a series of cause-effect inferences concerning testimony that "is at first founded on those characters and letters, which are seen or remember'd . . . ", and proceeds backward to the eye-witness and spectator testimony caused by the observation of the historical event in question. In order to establish where the chain creates truth, i.e., a true belief, the best strategy is to examine the strength of the links, the strength of what we, who are later in time, can only treat hypothetically, as known by inference rather than by direct observation. And this examination of the links can be carried out in a variety of ways in addition to Bentham's strategy with respect to hearsay. The latter alone leads me to ever-diminishing probabilities. But the other strategies can yield data that raise the probabilities above those generated by the Bentham method. Hume himself does use these other strategies when he writes as an historian. Indeed, he describes these alternatives in a little detail right in the Treatise, when he discusses the force of moral evidence, which "is nothing but a conclusion concerning the actions of men, deriv'd from the consideration of their motives, temper, and situation".

Thus when we see certain characters or figures describ'd upon paper, we infer that the person, who produced them, would affirm such facts, the death of Caesar, the success of Augustus, the cruelty of Nero; and rememb'ring many other concurrent testimonies we conclude, that those facts were once really existent, and that so many men, without any interest would never conspire to deceive us; especially since they must, in the attempt, expose themselves to the derision of all their contemporaries, when these facts were asserted to be recent and universally known.

The situation here with respect to testimony about the past is parallel to all sorts of other quotidiens and reasonably reliable inferences:

The same kind of reasoning runs throu' politics, war, commerce, economy, and indeed mixes itself so entirely in human lie, that 'tis impossible to act or subsist a moment without having recourse to it. A prince, who imposes a tax upon his subjects, expects their compliance. A general, who conducts an army, makes account of a certain degree of courage. A merchant looks for fidelity and skill in his factor or super-cargo. A man, who gives orders for his dinner, doubts not of the obedience of his servants. In short, as nothing more nearly interests us than our own actions and those of others, the greatest part of our reasonings is employ'd in judgments concerning them.

It is psychologically impossible to exist without reasoning according to the patterns that we use when we have a long chain of testimony, and moreover such patterns are reasonable, and, in particular, testimony can be taken to be more reliable the more there are "concurrent testimonies", that is, the greater the number of independent witnesses. In fact, it can be shown, by the very same reasoning that leads to Bentham's regress in the case of hearsay evidence, that the probability that an
event testified to really obtained increases with the number of independently testifying witnesses. Bentham in fact makes this point, too.

... a . . . distinct and unquestionable source of increase [of probative force], is that which is derived from the number of the witnesses. . . .the increase which the aggregate probative force of the whole mass will receive from the increase of the number will be always determinable with mathematical precision.

With independent witnesses the probabilities are such that the probability of all witnesses being subject to the "infirmities of reason" becomes smaller as the number increases, thus increasing the probability that the event testified to actually occurred. One can therefore render a testimony more probable if one can discover another, independent, testifier to the same fact. Thus, Bentham's strategy concerning chains of hearsay testimony is, by his own account, and quite correctly, not the only strategy to be employed in evaluating the worth of testimony.

We may therefore conclude that, since Bentham's strategy concerning chains of hearsay testimony is precisely that which is employed by the "sceptic with regard to reason", we can expect Hume, given that he has a concern for empirical truth, to reject that sceptical strategy as unreasonable.

(IV) THE RATIONALITY OF REASON

Hume takes up Bentham's strategy leading to diminishing probabilities in the "Conclusion" to Book I of the Treatise. As we pointed out earlier, in this "Conclusion" he gives a specific reference back to his earlier account of "scepticism with regard to reason". When he makes this reference, Hume describes the earlier reasoning thusly:

... the understanding, when it acts alone, and according to its most general principles, entirely subverts itself. . . .

Popkin reads this passage as one in which Hume is accepting as justified the sceptical conclusion of the earlier section. We have argued, however, that Hume has in a still earlier passage warned us that this is not his final evaluation of the sceptic's argument, that he in fact rejects the latter. Moreover, as we just argued, since he rejects similar arguments elsewhere, we should expect him to reject this one also. So the point of the passage, Popkin notwithstanding, must be that Hume is now proceeding to try to answer the question: ought reason to follow this strategy? is it rational for it to do so? and more specifically to try to defend a negative answer to this question. If Hume can argue that it is irrational to follow everywhere the sceptic's strategy, then he has shown why one ought not to be a total or pyrrhonian sceptic. Hume himself already hints at how he will try to answer the question, since a clear contrast is implied when he speaks of "the understanding acting alone". This suggests that the question about the total sceptic's strategy be rephrased as "ought the understanding always act alone?" But for this to be a good question we must first have what it is that could work with the understanding. Clearly, Hume has in mind something to
the effect that the understanding must somehow be guided. Acting alone the understanding cannot determine when it is reasonable to stop. The mind must guide the understanding, set for it some appropriate goal that would enable the understanding to determine when it would be reasonable to stop the rather berserk strategy followed by the total sceptic. There is such a goal, I suggest, the goal Hume in practice pursues in his historical writings, and implicitly adopts in the essay "Of Miracles". More specifically, the end is that of coming to know, so far as is possible, the truth: as he puts it at one point, "Reason [i.e., a reasonable reason] is the discovery of truth or falsehood".118 We have emphasized the element of feedback in Hume’s account of mind.119 Both his justification of the rules of "experimental philosophy" and the reflections of the total sceptic involve feedback. But feedback is always relative to some goal. Feedback involves the mind so adjusting itself on the basis of its self-knowledge that it more efficiently attains its guiding purpose. What I am suggesting is that Hume is arguing that once the guiding purpose of coming to know is admitted, once we recognize that reason can be guided by the motive of curiosity, then we can advance reasons for adopting the rules of "experimental philosophy" rather than those of the total sceptic.120

The philosopher, then, has made some progress in his attack on the sceptical employment of Bentham’s regress of probabilities. However, the difficulties are not yet fully mastered. As it turns out, the first attempt, and, indeed, the second that the philosopher now makes to avoid the sceptical conclusion are not successful.

Hume has pointed out that as a matter of psychological fact we do not stay in a state of total scepticism. The property of the imagination, that it is hard to enter into these remote chains of reasoning, prevents our being total sceptics. This suggests the maxim be adopted that it is irrational to accept all reasonings it is hard to follow to their end: "... no refin’d or elaborate reasoning is ever to be receiv’d".121 The aim is to exclude total scepticism, as a rational position. That is, the cognitive aim or goal or propensity which is to guide the understanding is that of avoiding total scepticism; this aim can be achieved if we adopt the maxim to exclude refined reasonings; conforming to our understanding of this pattern, or strategy of reason, we will achieve the end we have set ourselves. Such, at least, is the proposed case. It derives, of course, from antiquity. Cicero lays it out clearly. According to him, probability is sufficient for action and practice.122 In contrast, absolute certainty is not necessary for action,123 nor is it, nor demonstrative knowledge, necessary for arts and crafts.124 But probability is necessary for action and for arts and crafts: if, in a strict sense, we understand nothing, practical life collapses,125 and, to that extent, we do need knowledge.126 Where there is probability, the wise man will not be at a loss about what to do.127 The dogmatists in their disagreements provide no guidance for life,128 but since it is impossible to dispense with all standards,129 the rule of probability is adopted as the most reasonable, that is, as the best means for getting on with the task of living that would be rendered impossible by a total scepticism.130 The suggestion is that simply because we want to avoid total scepticism, therefore it is reasonable to reject any reasoning that leads to it. This is the theme that Hume takes up. No one is a total sceptic because the refined reasoning leading to that position does not affect us. We will therefore be able to exclude total scepticism as irrational if we exclude all refined reasoning as irrational. Refined reasonings do not affect us,
so no harm results if we say they ought not to affect us, i.e., if we say they are irrational, and some benefit accrues, viz., the characterization of total scepticism as irrational.

But is it really reasonable to adopt this maxim? Hume suggests three reasons why it is not. In the first place, it cuts off all science and philosophy, since the reasoning in these areas is hard to follow to its end. This would include abstaining from all research in the sciences, even in those sciences that satisfy definite pragmatic interests that we have as part of our "common life". Thus, conforming to the maxim will mean we will not be able to satisfy the motive of curiosity that does in fact move us. In the second place, the maxim takes one property of the imagination as the mark of the rational simply because if it is adopted total scepticism does not result; we ought, therefore, "by a parity of reason" take as rational any inference made by the imagination so long as it does not lead to total scepticism, for example, some of the modes of "unphilosophical probability" earlier rejected by Hume. But this is pretty absurd, for such reasonings will conflict with what curiosity leads us to desire, that is, truth. In the third place, the maxim excludes as irrational the very argument used to justify itself: ". . . you expressly contradict yourself; since this maxim must be built on the preceding reasoning, which will be allow'd to be sufficiently refin'd and metaphysical". The goal of avoiding total scepticism may be achieved by adopting the proposed maxim, but conforming the understanding to that maxim, training it to always use that strategy, leads to conflicts with the cognitive goal of curiosity, and, moreover, undermines its own rationale. It seems, then, if we accept the maxim, absurd consequences result, while if we reject it, we are where we started, with the understanding subverting itself. "Very refin'd reflections have little or no influence upon us; and yet we do not, and cannot establish it for a rule, that they ought not to have influence . . . " So, it is not a good rule, a rationally justified norm, that they do not affect us, only a psychological fact. It would seem then that Hume is a pyrrhonian after all: no belief is ever rationally justified; what counts is not reason but mere psychological habit. And moreover, he goes on immediately to argue in a famous passage that a recognition of this fact can put one in despair and depression; for if the point is correct, then I cannot know who I am, nor who are my friends and enemies, and so on: despair surely is at least one reasonable response to a recognition that all our judgments are without foundation, that all are equally good or equally bad.

Thus, the first attempt of the philosopher to reply to the sceptic's conclusion from Bentham's regress of probabilities is unsuccessful; we have found out how not to reply to the sceptic. But all is not lost. Lessons have been learned, and Hume proceeds to apply them. In fact, Hume does not stop at the point of despair, but proceeds to argue that there are reasons for accepting criteria (to wit, the rules by which to judge of causes) for distinguishing sound from unsound judgments.

It is a mistake to stop reading Book I of the Treatise at the point where Hume reaches the depths of a sceptical argument that leads to intellectual and emotional despair. If we do stop there, then we cannot avoid reading him as despairing of rationality. But, to repeat, it is a mistake. Unfortunately, Popkin stops there and so interprets Hume as arriving at a pyrrhonian despair of all rationality. In fact, he cites the passage quoted just above concerning "very refin'd reflections. . ." as
evidencing such a despair. Passmore, too refers to that passage,\textsuperscript{135} and makes the same point:

\begin{quote}
\ldots what is commonly done, we philosophers shall also do, not because we want to, or because we ought to, but just because this is how we are made. The 'answer' to scepticism is not a philosophical argument but a psychological fact.\textsuperscript{136}
\end{quote}

We should not be hasty, however. For the passage cited is by far not the last in its section. And in fact, in the very next sentence, Hume introduces a "But"--a qualification missed by both Popkin and Passmore!\textsuperscript{137}

\begin{quote}
\textbf{But} what have I here said, that reflections very refin'd and metaphysical have little or no influence upon us?\textsuperscript{138}
\end{quote}

Clearly this is a rhetorical question, and it implies that Hume is about to revise the point the question asks about. Once again, then, Hume is telling us that the pyrrhonian conclusion is not his own!

The argument to exclude refined reasoning, reasoning that is hard to follow, turned upon the supposed fact that such a reasoning has no effect upon us. Hume challenges this supposed fact, and points out how wrong it is.\textsuperscript{139} In particular, the refined reasoning that totally subverted reasoning\textsuperscript{does} have an effect upon one who accepts it. Or at least we can say this much, that given what we do know about human nature, if anyone were to accept that reasoning then certain effects would follow. Total scepticism puts one into an emotional condition of helplessness and depression. One who is a total sceptic has no knowledge of causal connections, no knowledge of means and ends. He cannot intelligently interfere in the world in any way. Nor can he anticipate in any way what effects others will have on him. He can in no way cope: "Whose favor shall I court, and whose anger must I dread? What beings surround me? and on whom have I any influence, or who have any influence on me?"\textsuperscript{140} Since one has been led \ldots to reject all belief and reasoning" it follows that "\ldots reason is incapable of dispelling these clouds \ldots" of depression and helplessness, of "melancholy and delirium".\textsuperscript{141} Fortunately, if I go out and mingle with my friends, play back-gammon and make merry, then the depression soon disappears.\textsuperscript{142} Not only does it get rid of the depression but it proves I do have knowledge to get on in the world and live decently and achieve my purposes: \ldots the course of my animal spirits and passions reduce me to this indolent belief in the general maxims of the world \ldots"\textsuperscript{143} Moreover, I am provided with a reason for rejecting the reasons leading to total scepticism. That state of belief generated profound melancholy and depression, and when this is compared with "the pleasures of life" I enjoy elsewhere, my interests give me reason to avoid the causes of the former of these states. So I ought to reject total scepticism. "The current of nature, which leads me to indolence and pleasure",\textsuperscript{144} gives me reason for "submitting to my senses and understanding",\textsuperscript{145} and, while at times it may be I should strive against such currents of nature, I ought to do so only if my interests make it reasonable to do so. "Where I strive against my inclination, I shall have a good reason for my resistance; and will no more be led a wandering into such dreary solitudes, and rough passages, as I have hitherto met with".\textsuperscript{146} The understanding that acts alone ought not to be indulged; indulge only the under-
standing that does not act alone. The latter is one that can be rationalized in terms of human purposes and ends: "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." 147

Hume has already considered one aim or propensity with which to mix the understanding, namely, the aim of doing nothing more than rejecting scepticism. He now proceeds to consider two further—and contrasting ways in which the understanding can be mixed with propensity. The first of these is passivity, merely "submitting to my senses and understanding": here one is guided by "the sentiments of [one's] spleen and indolence".

If we believe, that fire warms, or water refreshes, 'tis only because it costs us too much pains to think otherwise. 148

This, in fact, is precisely the way out of total scepticism, and its accompanying mental anguish, that is proposed by Rousseau, or at least by the Savoyard Vicar. 149 In "The Creed of the Savoyard Vicar", Rousseau describes the argument leading to total scepticism in terms that amount to those Hume uses in his discussion of "scepticism with regard to reason", and also the mental anguish and anxiety that is consequent upon realizing the force of the total sceptic's arguments. He then proceeds to propose the rule that one adopt those principles that one finds easiest to accept.

The Vicar describes his state of doubt: I was in the state of doubt and uncertainty which Descartes considers essential to the search for truth. It is a state which cannot continue, it is disquieting and painful; only vicious tendencies and an idle heart can keep us in that state. 150

Humans have many conflicting opinions, and each can be used to cast doubts on others. 151 The upshot is a distressing emotional state of anxiety and uncertainty. 152 After much worrying, the Vicar adopted two maxims:

The first thing I learned from these considerations was to restrict my inquiries into what directly concerned myself, to rest in profound ignorance of everything else, and not even to trouble myself to doubt anything beyond what I required to know.

I also realised that the philosophers, far from ridding me of my vain doubts, only multiplied the doubts that tormented me and failed to remove any one of them. 153

But these are negative: he still needs a positive rule for deciding which propositions to accept. The rule he adopts is that of the "Inner Light", 154 which he then proceeds to explain. The Vicar first invokes what is in effect Hume's Rule, to exclude the refined reasonings of the philosophers, and proposes as the rule that he ought to adopt, the rule that, among all the theories consistent with the facts, accept that theory that is easiest to accept.

Every system has its insoluble problems, for the finite mind of man is too small to deal with them; these difficulties are
therefore no final arguments, against any system. But what a difference there is between the direct evidence on which these systems are based! Should we not prefer that theory which alone explains all the facts, when it is no more difficult than the rest.\(^{165}\)

He proceeds to elaborate this rule as follows:

Bearing thus within my heart the love of truth as my only philosophy, and as my only method a clear and simple rule which dispensed with the need for vain and subtle arguments, I returned with the help of this rule to the examination of such knowledge as concerned myself; I was resolved to admit as self-evident all that I could not honestly refuse to believe, and to admit as true all that seemed to follow directly from this; all the rest I determined to leave undecided, neither accepting nor rejecting it, nor yet troubling myself to clear up difficulties which did not lead to any practical ends.\(^{151}\)

But is it really reasonable, for one concerned with truth, to adopt this maxim of accepting what comes easily to the mind? In true Enlightenment spirit, Hume rejects this typically Romantic attitude.

The goal of the indolent mind is the second of three aims that can guide the understanding, thereby determining which strategies of reason are the most effective and therefore the most reasonable to adopt and which strategies are unreasonable. The first aim was the simple Ciceronian aim of excluding total scepticism. Hume argued that simply training oneself to so think that one always avoided total scepticism would not only undermine scientific progress, but would lead to all sorts of clearly unreasonable beliefs, and in any case could not avoid total scepticism. The first two points indicate that the strategy the aim justifies does not connect up with the "discovery of truth" that does in fact motivate at least some people. It leads to inferences as divergent from those aimed at by curiosity as does the sceptic's strategy. In that sense, as Hume concluded, it is no better than the sceptic's strategy. Cicero's defence of probabilistic reasoning is thus inadequate; and when Hume moves on to a second and third aim that can guide the understanding he is both going beyond and improving upon Cicero. The second aim that Hume discusses and that we are now considering does connect up with the "discovery of truth". The strategy of asserting what comes easily to mind satisfies the indolent mind. If we adopt this strategy, then experience tells us that we thereby have enough knowledge to get on with the task of living: "indolent belief in the general maxims of the world"\(^{157}\) suffices for ordinary life, for mingling with one's friends, playing backgammon, and making merry. The sceptic's strategy is not efficient in generating such knowledge, and is therefore to be rejected as unreasonable.

However, while "general maxims" do suffice for a decent life, they hardly satisfy the motive of curiosity. The first two points against the strategy of avoiding refined reasoning apply to this strategy also, though in reduced strength. As Hume has earlier emphasized in the Treatise, accepting what comes easily to the mind means accepting "general maxims" or "general rules" in a way characteristic of prejudice and unphilosophical probability.\(^{158}\) It means at times believing what we wish
to be true rather than what is true. Indeed, it means at times accepting the grossest superstition which has its roots in the terrors of the mind. At the same time, the indolence means one is not concerned to use the general rules which are the rules by which to judge of causes and effects to correct the maxims of superstition so long as the latter do not interfere in any serious way with the task of getting on with ordinary life. Nor does it lead one to use those rules to eliminate contrariety in one's ordinary beliefs.

"Twou'd be very happy for men in the conduct of their lives and actions, were the same objects always conjoin'd together, and we had nothing to fear but the mistakes of our own judgement, without having any reason to apprehend the uncertainty of nature. But as 'tis frequently found, that one observation is contrary to another, and that causes and effects follow not in the same order, of which we have had any experience, we are oblig'd to vary our reasoning on account of this uncertainty, and take into consideration the contrariety of events.

What we discover is that A's are sometimes followed by B's and not C's and that A's are sometimes followed by C's and not B's. The vulgar, "who takes things according to their first appearance", attribute the contrariety to chance, which is to say, they simply take it for granted and do not bother to explain it. To not take the matter further does not interfere with the ordinary purposes of life; it is always possible to appropriately adjust our reasoning in respect to contrary events as to enable us to get on with our ordinary purposes. The vulgar are concerned with truth only so far as it is needed for ordinary life, and since ordinary life does not always require the resolution of contrary expectations, the vulgar are not concerned to attempt such a resolution. The philosopher, in contrast, is concerned with truth even when it is not needed for ordinary life, and he proceeds to use the rules by which to judge of causes to find the causes why events A are sometimes B and sometimes C instead. It is, perhaps, the fact that an A is D that causes it to be B, while if it is not D then it is C. In any case, the philosopher assumes that a contrariety of effects implies a contrariety of causes and, not content with the non-explanation of chance, proceeds to attempt to discover these causes. Thus, the maxim of accepting only what comes easily to mind is not a strategy that is as effective as that of the philosopher in satisfying the motive of curiosity.

More strongly, that maxim may lead one to reject the truth when it is presented. The vulgar are "apt to reject as chimerical whatever strikes not in with the common receiv'd notions, and with the easiest and most obvious principles of philosophy". The maxim of accepting what comes easily to the mind functions in a way that can actually frustrate curiosity.

We are not surprised, then, to find that Hume rejects the aim of the indolent mind as a guide to the understanding. What he proceeds to point out is that there is yet another way in which the understanding can be mixed with propensity. Beside the passivity of the indolent mind, a more active attitude is possible. One finds oneself at times "naturally inclin'd to carry [one's] view into all those subjects, about which [one has] met with so many disputes in the course of . . . reading and conversation".
I am concern'd for the condition of the learned world, which lies under such a deplorable ignorance... I feel an ambition to arise in me of contributing to the instruction of mankind, and of acquiring a name by my inventions and discoveries.  

Through the action of whatever causes, one often does come to have the motive of curiosity, which aims simply at coming to know. Here, in curiosity, is a propensity for reason to mix with, and it could lead us not to submit passively to what it is easy to believe in. It is the vulgar, who take things according to their first appearance, who passively submit. Curiosity leads one actively to seek out truth to correct first impressions. But, how ought one to correct first impressions? how ought we to discipline our tendencies of indolence to generalize from first impressions and insufficient evidence? The required correction will be such as provided by science and philosophy, and more importantly, will contain refined reasonings. That seems to mean that we shall have with us once again the strategy of the total sceptic. However, reason is now being mixed with propensity, and in particular curiosity. A strategy will be adopted as reasonable only if there is some prospect that in following the strategy that interest will be satisfied. What we discovered with respect to the strategy of the total sceptic is that we do not "have any tolerable prospect of arriving by its means at truth and certainty". In terms of the motive of curiosity, we have good reason to reject the strategy of the total sceptic as unreasonable: "A true sceptic will be diffident of his philosophical doubts, as well as of his philosophical conviction..."  

Hume contrasts "superstition" and "philosophy":  

... while the latter contents itself with assigning new causes and principles to the phaenomena, which appear in the visible world, the former opens a world of its own, and presents us with scenes, and beings, and objects, which are altogether new.  

Philosophy has its source in reason, the former in the imagination. Hume unhesitatingly recommends philosophy to us. It is the "guide" we "ought to prefer" for "the mind of man": relative to the end of coming to know, it is "safest and most agreeable". With philosophy and the area to which it is restricted (viz., phaenomena, the world of experience) there is a "tolerable prospect" for ending "many disputes" and "deplorable ignorance" that have raised our curiosity:  

For my part [Hume tells us], my only hope is, that I may contribute a little to the advancement of knowledge, by giving in some particulars a different turn to the speculations of philosophers, and pointing out to them more distinctly those subjects where alone they can expect assurance and conviction.  

He is very explicit that the reasoning of superstition, the introduction of transcendent entities, cannot yield a set of hypotheses with respect to which any sort of resolution of conflict is possible, not even a fallible sort sufficient at least for human purposes.
There are in England, in particular, many honest gentlemen, who being always employ'd in their domestic affairs, or amusing themselves in common recreations, have carried their thoughts very little beyond those objects, which are everyday expos'd to their senses. And indeed, of such as these I pretend not to make philosophers, nor do I expect them either to be associates in these researches or auditors of these discoveries. They do well to keep themselves in their present situation; and instead of refining them into philosophers, I wish we cou'd communicate to our founders of systems, a share of this gross earthly 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. 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.

We ought, therefore, to stick to philosophy. Its ingredients may be fallible, but at least progress is possible, as it is not where we transcend the world of experience and introduce various kinds of reason beyond that of men who live and act in the world of experience. Philosophy restricts itself, and we thereby acquire a "tolerable prospect" for success in the search for truth. It restricts itself to "assigning new causes and principles to the phaenomena, which appear in the visible world". Its rules are the rules we noted previously: the "Rules by which to judge of causes and effects". We now have seen the full rationalization of those rules.

Guided by the motive of curiosity, the mind, to achieve the end proposed, ought actively to seek out the best evidence available for the generalities that it law-asserts. This evidence is to be gathered in accordance with the "rules by which to judge causes and effects". The probabilistic reasoning used by the "sceptic with regard to reason" conforms to these rules. But it proceeds by a process of erecting hypotheses. In certain contexts, where such hypotheses for whatever reason cannot be independently verified or falsified, this procedure is the best we can do. Yet curiosity is curiosity with respect to truth: that demands, therefore, that we minimize the use of unconfirmed hypotheses. And this means that, wherever the data permit, one ought to use alternative strategies that do not so rely on hypotheses. Often enough, such alternative strategies for evaluating testimony, including the testimony of one's own reason, are available. As a consequence, the reasoning of the "sceptic with regard to reason" is not always applicable, and is not available to undermine all reasoning. In appropriate contexts it might well lead one to be sceptical of some reasoning. But in other contexts, those where its use is not appropriate, it ought not to be used, and therefore no general scepticism, no pyrrhonism, can be sustained by this sort of reasoning. In short, Hume argues for the unreasonability of any general "scepticism with regard to reason".
If the above interpretation of Hume's position is correct, then a central role is played by the motive of curiosity. Passmore, too, has drawn attention to the motive of curiosity in justifying the activity of philosophizing, i.e., in doing science: "Some people like philosophizing; that, whatever the severer moralists may say, is in itself a justification for philosophizing". Indeed so; in fact, what else could justify philosophizing? But we are suggesting something stronger: the motive of curiosity poses an end which, because it is a desired end, ought to guide the understanding. Relative success in achieving the end, that is, in achieving knowledge, insofar as it can be achieved, is to be the standard by which to evaluate the various strategies the understanding may use to deploy itself.

We can perhaps better see how it is that this standard rules out the sceptic's strategy by considering a criticism of the latter by Reid. Reid makes the point that if one is suspicious of a judgment, instead of just letting those suspicions stand, one should examine the subject of the judgment again in more favorable circumstances. If one was precipitate, one should be deliberate; if one was in passion, then one should be cool; if one had an interest in the decision, that interest should be set aside. The trouble with the sceptic's argument is that the infirmities of reason to which appeal is made at each step are at each step merely hypothesized. Instead of hypotheses, one should rely on direct evidence. Instead of relying upon the supposition that there are infirmities of reason present, one should search for evidence to confirm or disconfirm the supposition. If we have evidence that the supposition does not stand, then the supposition cannot call the judgment into question. "The circumstances that render it [the judgment] suspicious are mere presumptions, which have no force against direct evidence". And if the original judgment is, say, that a theorem in Euclid has been demonstrated, then one of the things one might do is re-check the proof. "The effect of an unfavorable presumption should only be, to make us examine the evidence with greater care". If repeated examination yields the same judgment, then we have as it were independent testimony converging on the same conclusion, which increases the likelihood that the conclusion was correct, and therefore the likelihood that the infirmities of reason were absent when the original judgment occurred. The sceptic's series is only a series of hypotheses; it is an "infinite series of presumptions". The examination of the circumstances in which the first judgment was made may well lead us to conclude the falsity of the supposition that infirmities of reason were present, and therefore strengthen the first judgment; and that could happen at later stages also, whenever one attempted to discover the truth of the suppositions made at each stage of the regress. What concern for truth directs us to do is treat each case on its merits, not to indulge in a series of estimations based on mere hypotheses.

If the man proceed in this [the sceptic's] order, I grant, that his second judgment will, with good reason, bring down the first from supposed infallibility to fallibility; and that his third judgment will, in some degree, either strengthen or weaken the first, as it is corrected by the second.

But every man of understanding proceeds in a contrary order. When about to judge in any particular point, he knows already that he is not infallible. He knows what are the cases in which he is most or least liable to err.
The conviction of these things is always present to his mind, and influences the degree of his assent in his first judgment, as far as to him appears reasonable.

If he should afterwards find reason to suspect his first judgment, and desires to have all the satisfaction his faculties can give, reason will direct him not to form such a series of estimations upon estimations, . . . but to examine the evidence of his first judgment carefully and coolly; and this review may very reasonably, according to its result, either strengthen or weaken, or totally overturn his first judgment.187

This sound practice is, of course, just that used by the author of the History of England and of the essay "Of Miracles". But the point is that it is just such strategies that Hume himself is recommending in the "Conclusion" to Book I of the Treatise. Far from accepting the sceptic's argument, Hume is defending Reid's criticism of it.

Reid is quite correct in construing the sceptic's regress as resting on a series of hypotheses, each of which remains such, neither confirmed nor disconfirmed. This is clear from our reconstruction of the regress in section (II), above, where we insisted that in the regress the phrase 'infirmities of reason' be construed as marking an hypothesis. Reid is also correct in recognizing that a regress of diminishing probabilities can validly be generated. Finally, Reid is correct in recognizing that a concern for the truth directs us to put hypotheses to the test, to seek evidence which will confirm or disconfirm them. A concern for the truth would direct us not to mount hypothesis upon hypothesis but to stop at some point and attempt to confirm or disconfirm such hypotheses through direct evidence. We can see how such reasoning might go. Again, let 'F' represent that s is true, 'H' that s is testified to by a, and 'G' that infirmities of reason are absent from a. The law is

\[(F \land H) \land G\]

We know with respect to, say \(s_1\),

\(s_1 \land H\)

Let a now re-examine the evidence for \(s_1\), and suppose he comes to the same conclusion. This supports the proposition that

\(s_1 \land F\)

But from the law we know that

\[(s_1 \land F \land s_1 \land H) \land a \land G\]

so that we can deduce that

\(a \land G\)

i.e., that the original judgment was made in a context in which the infirmities of reason were absent. This then strengthens the original judgment by disconfirming the hypotheses that such infirmities were present. Reid is correct in all this. Where he goes wrong is not here,
but in his reading of Hume. For, Hume, like Reid, introduces a concern for the truth that requires one to adopt strategies of research that will put such hypotheses to the test of further, independent, evidence.

A second example might also be helpful. Lakatos has told the following tale.

The story is about an imaginary case of planetary misbehavior. A physicist of the pre-Einsteinian era takes Newton's mechanics and his law of gravitation (N), the accepted initial conditions, I, and calculates, with their help, the path of a newly discovered small planet, p. But the planet deviates from the calculated path. Does our Newtonian physicist consider that the deviation was forbidden by Newton's theory and therefore that, once established, it refutes the theory N? No. He suggests that there must be a hitherto unknown planet p' which perturbs the path of p. He calculates the mass, orbit, etc., of this hypothetical planet and then asks an experimental astronomer to test his hypothesis. The planet p' is so small that even the biggest available telescopes cannot possibly observe it: the experimental astronomer applies for a research grant to build yet a bigger one. In three years' time the new telescope is ready. Were the unknown planet p' to be discovered, it would be hailed as a new victory of Newtonian science. But it is not. Does our scientist abandon Newton's theory and his idea of the perturbing planet? No. He suggests that a cloud of cosmic dust hides the planet from us. He calculates the location and properties of this cloud and asks for a research grant to send up a satellite to test his calculations. Were the satellite's instruments (possibly new ones, based on a little-tested theory) to record the existence of the conjectural cloud, the results would be hailed as an outstanding victory for Newtonian science. But the cloud is not found. Does our scientist abandon Newton's theory, together with the idea of the perturbing planet and the idea of the cloud which hides it? No. He suggests that there is some magnetic field in that region of the universe which disturbed the instruments of the satellite. A new satellite is sent up. Were the magnetic field to be found, Newtonians would celebrate a sensational victory. But it is not. Is this regarded as a refutation of Newtonian science? No. Either yet another ingenious auxiliary hypothesis is proposed or ... the whole story is buried in the dusty volumes of periodicals and the story never mentioned again.188

A sequence of theories $T_1, T_2, \ldots$ is said by Lakatos to be "theoretically progressive" provided that each later member makes predictions not made by earlier members.189 The theories in the tale he tells form a theoretically progressive series. But scientists are also concerned with truth. Such a series, to be acceptable to the scientist, must also be "empirically progressive", that is, it must be such that "some of this excess empirical content is also corroborated [confirmed] \ldots by the actual discovery of some new fact".190 The problem with the series of hypotheses in the tale, is that none of them is ever confirmed. The series is therefore not empirically progressive. At a certain point it becomes plainly reasonable that a concern for truth demands that one cease
elaborating mere hypotheses and undertake another line of research.\textsuperscript{191} Of course, given the openness of induction, such decisions are fallible.\textsuperscript{192} Nonetheless, a concern for the truth requires us to make them.

Hume's point—and Reid's—is essentially the same as this of Lakatos. We may take the hypotheses of the sceptic's regress a certain distance. Each step of the regress is theoretically progressive. But the sceptic's regress is never empirically progressive. A concern for the truth directs us to alter our research strategy once it is clear we do not have an empirically progressive series of hypotheses. Thus, after a certain point—however fallibly and ill-defined that point may be—it becomes unreasonable to pursue the sceptic's strategy. In short, the reasoning that purports to lead to the extinction of all belief and evidence is unreasonable.

But how does the understanding get itself into the position of being seduced by the sceptic's regress? An explanation is easily enough forthcoming. As Hume elsewhere suggests, "the imagination, when set into any train of thinking, is apt to continue, even when its object fails it, and like a galley put in motion by the oars, carries on its course without any new impulse".\textsuperscript{193} Originally guided by a concern for the truth, the understanding proceeds to reflect upon its own activities. This reflective process once set in motion by the propensity to truth continues on its own without further impulse, i.e., as no longer guided by a concern for the truth. As Hume puts it at another point, "We find from common experience, in our actions as well as reasonings, that a constant perseverance in any course of life produces a strong inclination and tendency to continue for the future...".\textsuperscript{194} Custom in this way leads us away from what would satisfy the motive that originally moved the understanding: "custom readily carries us beyond the just bounds in our passions, as well as in our reasonings".\textsuperscript{195} Nature inevitably breaks in on such trains of reasonings, but the latter are nonetheless themselves natural. Relative to the goal of discovering truth, however, these reasonings, while natural, are unreasonable. What the mind requires is the active self-discipline that can keep the mind from wandering off, carried by its own momentum, away from the purposes that originally motivated it.

I conclude that a careful reading of the \textit{Treatise}, and in particular of the "Conclusion" to Book I, shows that Hume rejects the argument leading to a "scepticism with regard to reason". To the extent that Popkin's case for Hume's being a pyrrhonist rests on the claim that Hume accepts the sceptic's argument, that case has been shown to be mistaken.

A similar conclusion can be drawn in the case of the other text that Popkin cites in this regard, from the \textit{Dialogues}.\textsuperscript{196} Popkin takes the passage in which Philo (Hume) asserts that reason "furnishes invincible arguments against itself, and that we could never retain any conviction or assurance on any subject...".\textsuperscript{197} Hume presumably has in mind the arguments that lead to "scepticism with regard to reason". However, Philo qualifies his remark: "if reason be considered in an abstract view", he tell us, \textit{then} this may be said of reason. Popkin in fact quotes this context, but fails to note that it is a qualification. If that qualifying condition is unfulfilled, then it \textit{cannot} be concluded that we could never retain conviction, that all belief would be extinguished. Moreover, the qualification implies \textit{contrast}. The contrary of "abstract"
is "concrete". Hence, if reason be considered in a concrete view then that would exclude the condition needed for reason to provide invincible arguments against itself to thereby extinguish all belief. And Hume makes just this point, continuing after his statement that "we could never retain any conviction or assurance", with the qualification "were not the sceptical reasonings so refined and futile, that they are not able to counterpoise the more solid and natural arguments, derived from the senses and experience". For reason to be considered in a concrete view, then, it must be reason aimed at discovering matter-of-fact truth about the sensible world, the world of phenomena. Reason considered in the abstract is what Hume in the Treatise referred to as reason acting alone. And the contrast is the same: reason in the concrete view is reason not acting alone, but rather reason guided by the motive of curiosity concerning the sensible world. Such knowledge is fallible. To a certain extent he cannot, as a matter of psychological necessity, avoid such reasoning. His concern with everyday affairs demands it. That is, his ordinary pragmatic interests demand such an interest. But beyond those, there is also idle curiosity. Reason guided by this interest in matters-of-fact can effectively improve our knowledge, at least so far as we, as fallible beings, can tell. Two paragraphs previously Hume has told us all this:

To whatever length any one may push his speculative [sic!] principles of scepticism, he must act, I own, and live, and converse like other men; and for this conduct he is not obliged to give any other reason than the absolute necessity he lies under of so doing. If he ever carries his speculations farther than this necessity constrains him, and philosophizes, either on natural or moral subjects, he is allured by a certain pleasure and satisfaction, which he finds in employing himself after that manner. He considers besides, that every one, even in common life, is constrained to have more or less of this philosophy; that from our earliest infancy we make continual advances in forming more general principles of conduct and reasoning; that the larger experience we acquire, and the stronger reason we are endowed with, we always render our principles more general and comprehensive; and that what we call philosophy is nothing but a more regular and methodical operation of the same kind [compare the discussion of the artisan and philosopher as opposed to the vulgar in the Treatise]. To philosophize on such subjects is nothing essentially different from reasoning on common life; and we may only expect greater stability, if not greater truth, from our philosophy, on account of its exacter and more scrupulous method of proceeding.

Having said this, Hume introduces a "But": "But when we look beyond human affairs and the properties of the surrounding bodies: When we carry our speculations into the two eternities...", that is, when reason is no longer guided by a concern for matter-of-fact truth, when it becomes speculative or abstract, there we may well wonder whether it has not gone beyond its capacities. Indeed, as he goes on to point out, it is precisely subtle reasons of this sort to which the subtle reasonings of the sceptic may be balanced. At that point, "The one has more weight than the other" and "the mind must remain in suspense between; and it is that very suspense or balance which is the
triumph of scepticism". In this area the pyrrhonist, at least in Bayle's sense of the term, is correct. But, Hume is clearly saying, the pyrrhonist is not correct in the area of matter-of-fact reasoning.

To be sure, Cleanthes immediately makes the point that there is a crude scepticism that would exclude all subtle reasoning. But that would exclude all science, which is absurd. However, Hume (Philo) agrees; as we saw, he argued against just this criterion in the Treatise. The sceptic, it would seem, says Cleanthes, cannot distinguish theology from the natural science of Newton; for the latter is like the former in its abstruse reasoning. But Philo will not give up science, so how can he reject theology? Philo goes on to make the point that religious persons adopt scepticism in one age and dogmatism in another, whichever best serves their purpose of defending religion. Cleanthes agree that this is so: "nothing can afford a stronger presumption, that any set of principles are true, and ought to be embraced, than to observe, that they tend to the confirmation of true religion...". Philo does not reply to this. But he does not need to. Cleanthes here grants that reason may be guided by interest. As soon as he does that, he leaves it open for Philo to introduce the interest of curiosity about matters-of-(empirical-)fact. Once this is introduced, then there is, as Philo earlier insisted, a difference between the abstruse reasonings of science, and those of theology. Specifically, of course, one finds progress from ignorance to knowledge in science, or, at least, from greater ignorance to less, whereas in theology all we find is the alternation of dogmatism and scepticism.

Hume makes the relevant point explicitly in the closing paragraphs of his Natural History of Religion.

The whole is a riddle, an enigma, an inexplicable mystery. Doubt, uncertainty, suspense of judgment appear the only result of our most accurate scrutiny, concerning this subject. But such is the frailty of human reason, and such the irresistible contagion of opinion, that even this deliberate doubt could scarcely be upheld; did we not enlarge our view, and opposing one species of superstition to another, set them a quarrelling; while we ourselves, during their fury and contention, happily make our escape into the calm, though obscure regions of philosophy.

We may conclude, then, that Philo, like the author of the Treatise, is no "sceptic with regard to reason". In both cases, a careful reading of the texts shows that they do not support the claim of Popkin and others that Hume is a sceptic, or, at least, a pyrrhonian. There is, I think, a myth that Hume is a sceptic. It is a myth that has its roots in rationalist prejudices. But it is a myth. It has been the point of this essay to go part way, at least, towards establishing that this really is a myth.

ENDNOTES

1 Cf. T. Beauchamp and T.A. Meppes, "Is Hume Really a Sceptic about Induction?" American Philosophical Quarterly, 12 (1975), 119-132; T.


3 *Treatise*, 263–74.


5 Ibid., 54.


7 *Treatise*, 183.

8 Popkin, "David Hume: His Pyrrhonism and His Critique of Pyrrhonism", 62ff.

9 *Treatise*, 184.

10 *Treatise*, 184–6

11 Popkin, "David Hume: His Pyrrhonism and His Critique of Pyrrhonism", 64.

12 Ibid., 70.

13 Ibid.

14 *Treatise*, 288.


21 *Treatise*, II, III, X; also 270–1.

22 *Treatise*, 273.
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23 Treatise, I, III, XV.


25 Cf. Wilson, "Hume's Theory of Mental Activity".

26 Cf. D.F. Norton, David Hume: Common-Sense Moralist and Sceptical Metaphysician (Princeton: Princeton University Press, 1982), who has strongly emphasized that the mind is not passive but active, and active in controlling and determining its own activities.


28 Treatise, I, III, XII.


30 Treatise, 156.

31 Treatise, 153.

32 Treatise, 90, 139, 172.

33 Treatise, 146ff.

34 Treatise, 409.

35 Treatise, 117.

36 Treatise, 149.

37 Treatise, 175; for details of Hume's argument, see F. Wilson, "Hume's Defence of Causal Inference".

38 This is close to Feigl's notion of "vindication", but also subtly different; cf. Wilson, "Hume's Defence of Causal Inference". Note that one may wonder whether Hume's justification, or, if you wish, "vindication", of the "rules by which to judge of causes and effects" is successful. I mean merely to lay out the structure of Hume's argument, in order to establish eventually that he does propose a reply to the sceptic's argument against reason, showing that it is at least his intention not to accept the sceptic's argument.

39 Treatise, 175.

40 Treatise, 182.

41 Treatise, 180.

42 Treatise, 183.
Hume, *Treatise*, 182, speaks of a "reflex act of the mind": feedback is a more modern term for the same thing.

*Treatise*, 183.

*Treatise*, 183; his italics. Note the 'only'.

*Treatise*, 146.

*Treatise*, 143.

*Treatise*, 144.

Ibid.

*Treatise*, 145.

Ibid.

*Treatise*, 146.

Ibid.

Ibid.

Cf. fn. 52, above.

*Treatise*, 145.


Cf. fn. 50, above.

*Treatise*, 267.

*Treatise*, 182; italics added.


*Enquiries*, 120, 121, 124, 134.

*Enquiries*, 118; *Treatise*, 404.
For even greater detail, see F. Wilson, "Hume's Sceptical Argument Against Reason"; and "Is There a Prussian Hume?" *Hume Studies*, 8(1982), 1-18. These two papers examine the inferences in Hume; for the same patterns elsewhere, see F. Wilson, "Mill on the Operation of Discovering and Proving General Propositions", *Mill News Letter*, 17 (1982), 1-14, and for their role in scientific inference, see F. Wilson, "Kuhn and Goodman: Revolutionary vs. Conservative Science", *Philosophical Studies*, 44 (1983), 369-80.

Treatise, 180; italics added.


*Enquiries*, 112. It has a physiological basis; cf. *Treatise*, 60-1.

*Treatise*, 311-73.

Cf. Wilson, "Is There a Prussian Hume?"

Cf. Wilson, "Goudge's Contribution to Philosophy of Science".

*Treatise*, 180.

*Ibid.*, see fn. 41, above.

*Treatise*, 183.

See fn. 43, above.


*Ibid.*, vol. 7, Bk. VI, Ch. IV, 133.


Cf. Bentham, *The Rationale of Judicial Evidence*, Bk. I, Ch. VI, where Bentham proposes a scale on which witnesses might mark the degree of certainty of their testimony.


*System of Logic*, 354.

*Enquiry Concerning Human Understanding*, See X.


90 Cf. Locke, Essay concerning Human Understanding, Bk. IV, Ch. XV.

91 Cf. Wilson, "The Lockean Revolution in the Theory of Science".

92 See Wilson, "Hume's Sceptical Argument against Reason" and also Wilson, "The Origins of Hume's Sceptical Argument against Reason."


94 Treatise, 458.

95 Treatise, II, III, X.


97 Cf. fn. 52, above.

98 Enquiries, 128.

99 This is Hume's fourth "rule by which to judge of causes"; cf. Treatise, 173.

100 Enquiries, 128.

101 Cf. fn. 52, above.


103 Ibid., 328.


108 Treatise, 83.

109 Treatise, 83.

110 Treatise, 404.

111 Treatise, 404-5; italics added.

112 Treatise, 405; italics added.
See Wilson, "Hume's Sceptical Argument Against Reason".


Cf. fn. 60, above

*Treatise*, 267.

Cf. fn. 12, above.

Cf. fn. 94, above

Cf. Wilson, "Hume's Theory of Mental Activity".

*Treatise*, 268.


*Ibid*.


*Ibid*.

Cf. Wilson, "Hume's Defence of Causal Inference".

*Treatise*, 268.

*Treatise*, 268. Compare the passage cited by fn. 112, above.

*Treatise*, 268.


Cf. fn. 14, above.


B. Berofsky (Review of T. Beauchamp and A. Rosenberg, *Hume and the Problem of Causation*, *Journal of Philosophy* 80 (1983), 481-2) stops even earlier. He quotes: "...by what criterion shall I distinguish her [truth], even if fortune shou'd at last guide me on her footsteps? After
the most accurate and exact of my reasonings, I can give no reason why I shou'd ascent to it; and feel nothing but a strong propensity to consi­der objects strongly in that view, under which they appear to me". This passage, which occurs on Treatise, 265, is cited as evidence of Hume's supposed scepticism that all judgments are unfounded and which is to be cured only by nature, that is, by nature rather than reasons that can show some judgments to be more rationally founded than oth­ers. But this passage does not establish that Hume is a sceptic, only that to this point in his discussion Hume has not succeeded in replying to the sceptic. As Popkin and Passmore correctly note, Hume in fact proceeds to introduce further considerations. Unfortunately, while they read further into Burne's text than does Berofsky, they, too, stop too soon.

138 Treatise, 268; italics added.
139 Treatise, 268f.
140 Treatise, 269; cf. 264. Compare the passage cited by fn. 112, above.
141 Treatise, 269.
142 Treatise, 269.
143 Treatise, 269.
144 Treatise, 269.
145 Treatise, 269.
146 Treatise, 270.
147 Treatise, 270.
148 Treatise, 270.
150 Ibid., 229.
151 Ibid., 229, 230.
152 Ibid., 230.
153 Ibid., 231.
154 Ibid.
155 Ibid.
156 Ibid., 231-2.
157 See fn. 143, above.
158 Treatise, 149.
159 Treatise, 115, 153.
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160 Treatise, 115.
161 Treatise, 149.
162 Treatise, 131.
163 Treatise, 132.
164 Treatise, 132.
165 Treatise, 270-1.
166 Treatise, 132.
167 Treatise, 139.
168 Treatise, 270.
169 Treatise, 271.

170 See also Wilson, "Hume's Theory of Mental Activity"; and "Hume's Defence of Causal Inference".

171 Treatise, 270.
172 Treatise, 273.
173 Treatise, 271.
174 Treatise, 271.
175 Treatise, 271.
176 Treatise, 271.
177 Treatise, 273.
178 Treatise, 272.
179 Passmore, *Hume's Intentions*, 149.
180 Reid, Essay VII, ch. IV, 487.
181 Ibid.
182 Ibid., 488.
183 Ibid., 487.
184 Ibid., 488.
185 Ibid.
186 Ibid.
187 Ibid.

Ibid., 118.

Ibid.

Ibid.

Ibid., 170, 173.

Treatise, 198.

Treatise, 133; italics added.

Treatise, 293, italics added.

Cf. fn. 15, above.

Dialogues, 135.

Ibid.

Cf. fn. 116, above.

Treatise, 132; this is analyzed in detail in Wilson, "Is There a Prussian Hume?"; see also Wilson, "Hume's Sceptical Argument against Reason", "Hume's Defence of Causal Inference", and "Mill on the Operation of Discovering and Proving General Propositions".

Dialogues, 184.

Ibid.

Dialogues, 135-6.

Cf. fn. 6, above.

Dialogues, 136.

Dialogues, 136-7.

See the discussion at the beginning of Part IV, above; and the discussion of Rousseau, above.

Dialogues, 137-8.

Dialogues, 139-40.

Dialogues, 208.

For a discussion by Hume of how other interests can guide thought not only into superstition but also enthusiasm, see Hume's essay "Of Superstition and Enthusiasm", in D. Hume, Of the Standard of Taste and

212 Hume, Natural History of Religion, 76.