

## HUME ON NECESSITY

Readers of Hume appear in most cases to have found two main strands of thought in his philosophical writings, one operating at the level of logic, the other at the level of psychology. This general perspective has allowed his readers to delineate two senses of "necessity" with respect to his important theme on causation: Logical necessity and psychological necessity. Yet one can still discern another important sense of necessity that played a significant role in the philosophy of Hume. This third sense of necessity is strictly an extension of logical necessity. However, unlike Hume's understanding of logical necessity this particular use is manifested in causal inferences. But before elaborating on this third sense of necessity in Hume's philosophy, let us discuss the central themes that are embodied in logical necessity and psychological necessity.

### I

In the *Treatise*<sup>1</sup> as well as the *Inquiry*<sup>2</sup>, Hume provides us with various criteria in support of his logical use of necessity. Some of these criteria are:

(a) Whatever objects are different are distinguishable and that whatever objects are distinguishable are separable by the thought and imagination. And whatever objects are separable are also distinguishable, and that whatever objects are distinguishable are also different (*Treatise*, p. 18).

(b) ..Nor is it possible for the imagination to conceive anything contrary to demonstration (*Treatise*, p. 95).

(c) Were a proposition demonstratively false, it would imply a contradiction, and could never be distinctly conceived by the mind (*Inquiry*, p. 40).

Hume's distinction in the *Treatise* between relations that "depend entirely on the ideas, which we compare together", and "are invariable, as long as our idea remains the same", (p. 69) and those relations which "may be changed without any change in the ideas" (p. 69) coupled with his further distinction in the *Inquiry* between "relations of ideas" and "matters of fact" are

carried out in an explicit way in order to shed light on how we can employ the logical criteria in comprehending the two main areas of reasoning. These two areas of reasoning are : demonstrative reasoning which is conversant with relation of ideas propositions is properly manifested in examples drawn from geometry, algebra, and arithmetic, especially those mathematical propositions<sup>3</sup> which deal with "propositions of quantity or number" (*Treatise*, p.70) for . . . "algebra and arithmetic [are] the only sciences, in which we can carry on a chain of reasoning to any degree of intricacy, and yet preserve a perfect exactness and certainty" (*Treatise*, p. 71 ). Probable reasoning is concerned with matters of fact propositions and is different from demonstrative reasoning in that the method of ascertaining matters of fact propositions is not applicable to those relation of ideas propositions. Whereas propositions expressing relations of ideas are "discoverable by the mere operation of thought, without dependance on what is any where existent in the universe (*Inquiry*, p. 40 ), matters of fact propositions . . . are not ascertained in the same manner; nor is our evidence of their truth, however great of a like nature with the foregoing. The contrary of every matter of fact is still possible; because it can never imply a contradiction." (*Inquiry*, p. 40 ) And given, according to Hume, that reasoning concerning matters of fact is founded on the relation of cause and effect, the conclusions arrived at in causal inferences are not necessary but probable.

Hume's logical characterization of the two realms of reasoning is the equivalent, with some slight modifications, of the following : To label an argument demonstrative means that its premisses logically entail its conclusion, ( It should be kept in mind, however, that Hume's characterization of a demonstrative argument requires the use of only necessary premisses - i.e. propositions dealing with "propositions of quantity or number" ). To label an argument non-demonstrative ( probable ) means that its premisses are all non-necessary ( contingent ).<sup>4</sup>

What comes to the fore, so far, is Hume's contention that the logical use of necessity is confined to the realm of demonstrative propositions, i.e., those propositions that are arranged in such a way that they "cannot be changed without changing their ideas", for any attempt to do so would result in a contradiction or would

be "inconceivable to the imagination". The psychological use of necessity, to Hume, is evident in reasoning concerning matters of fact. As he states it in the *Treatise*,

'Tis evident, that all reasoning from causes or effects terminate in conclusions concerning matters of fact; that is, concerning the existence of subjects or of their qualities (p. 94). And again the *Inquiry* tells us that "all reasoning concerning matter of fact seem to be founded on the relation of cause and effect" (p. 41). In other words causal inferences do not lead us to necessary truths but only to matters of fact. Given that to Hume the paradigm of reasoning concerning matters of fact is from cause or effect and furthermore given that the notion of necessary connexion in causation has no objective validity but rather is based on *habit, custom, instinct, expectation*, one is ineluctably driven to entertain that the use of necessity in matters of fact amounts to asserting that what grounds causal inferences is a feeling of certainty. And such a feeling for Hume is not to be found in sensation. Rather it is an impression of reflection (and such impressions are nothing but feelings, sentiments, passions). This I take it is Hume's psychological use of necessity. His assertion of it is succinctly summed up in the *Treatise* as :

Upon the whole, necessity is something that exists in the mind, not in objects; nor it is possible for us to form the most distant idea of it, considered as a quality in bodies ( pp. 165-66). In the *Inquiry*, he asserts the same point by saying that "When we say, therefore, that one object is connected with another, we mean only that they have acquired a connection in our thought and give rise to this inference by which they become proofs of each other's existence" (p. 86).

## II

This completes, terse as it is, our discussion of Hume's distinction between logical and psychological necessity. The logical use of necessity is *directly* tied up with Hume's explanation of demonstrative reasoning. The psychological use of necessity, however, is *indirectly* tied up with probable reasoning. I say indirectly because probable reasoning, strictly speaking, has nothing to do with psychology, but with the nature of the premisses, which are usually synthetic statements. Only when one wonders how we

arrive at the truth of causal laws which serve as premisses in proofs (as opposed to demonstration) that we invoke the psychological sense of necessity. It is this, so argues Hume, which makes us assimilate proof to demonstration.

To a great extent I think that Hume has not confused the two senses of necessity. However, when one reads "Of Skepticism with Regard to Reason" in his *Treatise*, things seem to be different as the following passages indicates that perhaps there is just one sense of necessity :

In all demonstrative sciences the rules are certain and infallible; but when we apply them, our fallible and uncertain faculties are very apt to depart from them, and fall into error (p. 180).

A few paragraphs later Hume rejects his former claims about the certainty of mathematics by saying :

I had almost said, that this was certain; but I reflect, that it must reduce *itself*, as well as every reasoning, and from knowledge degenerate into probability.

Since therefore all knowledge resolves itself into probability, and becomes at last of the same nature with that evidence, which we employ in life (p. 181).

Indeed, these quoted paragraphs do present us with some stumbling blocks. Is Hume reducing the logical sense of necessity to the psychological one? Or is the argument at the end of Book I of the *Treatise non-sequitur*?<sup>5</sup> I do not subscribe to the view that Hume in this section of the *Treatise* is reducing the logical sense of necessity to the psychological sense; neither, I should add, is the main argument *non-sequitur*. Rather I think that Hume in this particular section of his *Treatise* is providing us with a key distinction between the necessity of a proposition and our ability to know that a proposition is necessary. And the fact that one doubts his ability to know necessary truths does not mean that there are no such truths. At least the text does not support this latter claim. For he tells us that "In all demonstrative sciences the rules are certain and infallible" (*Treatise*, p. 180). As we know by now, Hume considered propositions dealing with "propositions in number or quantity" as necessary ones. However, he contends

that doubt arises with respect to such propositions, and hence errors might arise : “ But when we apply them, our fallible and uncertain faculties are very apt to depart from them and fall into error ” ( *Treatise*, p. 180 ). Thus, the necessity of a proposition and our ability to know that it is necessary are two different things; and in no place that I know of does Hume, notwithstanding his section on “ Skepticism with Regard to Reason ”, intend rejecting the necessity of a certain kind of propositions, i.e. mathematical ones; for they are, to Hume, essential to demonstrative reasoning.

### III

Now, let us consider the third sense of necessity that one encounters in Hume’s philosophy. In order to unravel this sense, let us take a look at the following arguments :

- I. S drank arsenic  
Therefore, S is dead.
- II. Anyone who drinks arsenic will die  
S drank arsenic  
Therefore, S is dead.

According to Hume, neither I nor II is a candidate for demonstrative reasoning, for their premisses are not necessary. Whereas Hume could proffer a psychological explanation for the inference drawn in I, i.e. from the idea “ S drank arsenic ”, we can infer “ S is dead ”, this explanation if extended to argument II will not be adequate. Why ? let us at the outset concede to Hume that we cannot perceive or experience “ causal connexion ”. But does it follow then that necessity in causal inference is to be found only in the “ expectation born out of habit, custom or inclination ” as Hume expressed it ? I am willing to concede that one can psychologically explain the origin of ideas in causal inferences without subscribing to the view that necessity is altogether absent. That is to say, one can get a notion of necessity in causal inferences that is a subspecie of logical necessity. In this case I can then say of argument II that “ S is dead ” follows necessarily from the premisses. Yet the statement “ S is dead ” is not a necessary truth, and is deduced from premisses that are not necessarily true, i.e., do not conform to the ones that were admitted by Hume. And if asked to account for the origin of this idea, i.e., the association

of drinking arsenic with death, I can retort by saying, as Hume did, that it is born out of the habit of expectation. That is to say, this sense of necessity in causal inferences admits of the demonstration of matters of fact by showing that some conclusion of fact is a logically necessary consequence of some factual premiss or premisses.

Hume does indeed have this notion of necessity in his philosophy. Whereas he assimilates it to psychological necessity—and thus concludes there is no logical necessity in causal inference—the claim we are presenting renders it an extension of logical necessity without denying it of causal inference. To render this claim plausible, one would have to appeal to the distinction between *demonstration* (proper realm of knowledge) and *proof*, a distinction that was familiar to Hume as well as to other philosophers in that period. Hume explains the two-fold distinction by claiming the following :

By knowledge, I mean the assurance arising from the comparison of ideas. By proofs, those arguments which are derived from the relation of cause and effect, and which are entirely free from doubt and uncertainty (*Treatise* p. 124).

In this connection it should be kept in mind that Hume upholds the traditional view of knowledge which focused on the distinction between knowledge and belief. Briefly stated, to say “I know X is Y is to say that X is Y is necessarily true”; and to say “I believe X is Y is to say that X is Y is probable” i.e. “X is not Y is compatible with X is Y”. Thus proper knowledge, for Hume, is demonstrative in that it utilizes only necessary premisses, such as those dealing with “proportions in number or quantity”.

Clearly argument II is not what Hume would call a demonstrative argument in that its premisses are not necessarily true. Yet it is the kind of argument that would fit the characterization of Hume’s explication of *proof*. First, it is an argument based on cause and effect statement. Second, it is entirely free from doubt and uncertainty, for by utilizing the canons of logic one can deduce its conclusion from its premisses. Thus, what I am contending is

that given Hume's definition of proof, one then can plausibly entertain the view that arguments based on proofs would lend support to this third sense of necessity.

#### IV

It might be asked at this juncture whether the claims presented in the preceding section are not in contradiction with Hume's central thesis that no conclusion of fact can be demonstrated, for "the contrary of every matter of fact is still possible; because it can never imply a contradiction" (*Inquiry*, p. 40). It would be so only if we are dealing with an argument whose premisses are necessary, such as the ones he cites in the *Inquiry*; "That the square of the hypotenuse is equal to the square of the two sides", and "that three times five is equal to the half of thirty" (p. 40). But argument II does not contain necessary premisses, but it still corresponds to Hume's explanation of human reasoning that is based on proof, i.e. "those arguments which are derived from the relation of cause and effect...". All this entitles us to say, so far, is that there cannot be logically necessary conclusions in arguments based on proofs; and for anyone to claim that there is such a thing, he would be then not properly using the distinction between arguments based on demonstration from those based on proof.

Another point for consideration is whether this third sense of necessity would commit one to the view that there is causal necessity, i.e. events are necessarily connected in nature. Evidence for such a view could be gathered from Hume's writings, for at times he writes as if there is a necessary connexion between objects. In the *Treatise* there is talk of "The uniting principle among our internal perceptions is as unintelligible as that among external objects, and is not known to us any other way than experience" (p. 109). Elsewhere in the *Treatise*, he speaks of "...the power by which an object produces another," (p. 69), and "that energy of which it [ cause ] was secretly possessst" (p. 76). In the *Inquiry* he speaks of the "secret connexion which binds them (events) and renders them inseparable" (p. 77). In the *Dialogues*<sup>6</sup> he also insists that causation is in need of necessity, notwithstanding his insistence that necessity consists simply of constant conjunction

Some of these passages in the *Dialogues* refer to "the spings and principles of the universe" (p. 147), "nature in possession of an infinite number of spings and principles" (p. 206). In addition to these references, there is a long passage in the *Dialogues* that brings out Hume's commitment to causal necessity in nature :

How could things have been as they are, were there not an original, inherent principle of order somewhere, in thought or in matter. And it is very indifferent to which of these we give the preference. Chance has no place in any hypothesis, sceptical or religious. Everything is surely governed by steady, inviolable laws. And were the inmost essence of things laid open to us, we should then discover a scene, of which at present, we can have no idea (pp. 174-75).

The above discussion does indeed lend support to the view that events are necessarily connected, a view that is at variance with the one that Hume vied for in his works. I must admit that I do find such an interpretation feasible, and deem it appropriate to invoke the notion of causal necessity as a unifying principle for "the unity of successive events that would keep them from forming chaotic or non-lawful series".<sup>7</sup> I think my discussion of the third sense of necessity does give support to the causal necessity thesis, provided the "necessity" that qualifies the inference in arguments based on proofs is extended to apply to the non-linguistic part of our world. By this reasoning I can say then that two objects are necessarily connected through a "secret principle", or if you like, an "inherent principle" operating in the universe. But the claim that was presented does not assert that there is a necessary connection between events, but rather it asserts that a particular matter of fact statement follows logically from a set of non-necessary premisses. This corresponds indeed to Hume's claim that causal inferences do not yield necessary truths but only matters of fact. However, it deviates from Hume's position in acknowledging the formal demonstration of matters of fact by showing how evidence and conclusion can be related, thus avoiding Hume's requirement that their connection is a by-product of one's imagination, or "is something that exists in the mind" (Psychological necessity is obviously invoked by Hume). It is, as said earlier, only when one



wonders how we arrive at the truth of causal laws which serve as premisses in proof ( as opposed to demonstration ) that we invoke the psychological sense of necessity.

The third sense of necessity is then an extension of logical necessity, and we argued that one can plausibly provide a formal demonstration of matters of fact statements from factual premisses at least this is forced on us by Hume's explanation of human reasoning based on proof. There is no need to justify matters of fact by an appeal to our subjective make-up. Thus, one can legitimately argue that causal inference is logical and not psychological. To do otherwise would involve one in confusing the *validity* of arguments with accounting for the *origin* of our ideas.

Florida State University,  
Tallahassee, Florida 32306.

R. E. A. Shanab

#### NOTES

1. David Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge ( Oxford : The Clarendon Press, 1960 ).

2. David Hume, *An Inquiry Concerning Human Understanding*, ed. Charles W. Hendel ( New York : The Liberal Arts Press, Inc., 1955 ).

3. In the *Treatise* Hume considers only arithmetic and algebra as the sole province of demonstration, contending that geometry is empirical ( See *Treatise*, pp. 71-72 ). In his *Inquiry*, he distinguishes pure from applied geometry, and contends that the former lends itself to demonstration ( See *Inquiry*, pp. 45-6 ). For an elaboration of these views, Cf. A. Flew, *Hume's Philosophy of Belief* ( New York : The Humanities Press, 1961, pp. 61-3 ); also Cf. J. Bennett, *Locke, Berkeley, Hume* ( Oxford : Clarendon Press, 1971, pp. 238-44 ).

4. For an elaboration of these points, see D. Stove, "Hume, Probability, and Induction", *The Philosophical Review*, Vol. LXXIV ( 1965 ), and reprinted in Hume, ed. V. C. Chappell ( New York : Doubleday & Co., Inc., 1966 ) pp. 187-212.

5. For a discussion of this, see N. K. Smith, *The Philosophy of David Hume* (London : MacMillan and Co. Ltd., 1941 ), pp. 349-63; J. A. Passmore *Hume's Intentions* (Cambridge University Press, 1952), Ch. 7; R. Zabeeh, *Hume : Precursor of Modern Empiricism* (the Hague : Martinus Nijhoff, 1960 ), Ch. 5.

6. David Hume, *Dialogues Concerning Natural Religion*, ed. N. K. Smith (New York : The Library of Liberal Arts, 1947).

7. Everett J. Nelson, "Causal Necessity and Induction", *Meeting of the Aristotelian Society* (1964), p. 299. For a discussion of some of these problems, see W. A. Suchting, "Hume and Necessary Truth", *Dialogue*, Vol. V (1866), pp 47-60.