

Hume's Considered View on Causality

Before attending to the influential elements of Hume's theory, it is worthwhile to indicate several reasons for the often disparate interpretations of causation drawn from *A Treatise of Human Nature* (1739), *An Abstract of a Treatise of Human Nature* (1740), and *An Enquiry Concerning the Human Understanding* (1758). The purpose of this section is to indicate that much of the psychological support for the causal argumentation in the *Treatise* is irrelevant to the influence of Hume's doctrines; in this manner, Hume's theory of causality can be extricated to some extent from his detailed psychological arguments without creating major misunderstandings. Hume completely disavowed the *Treatise* and wrote in an advertisement to the *Enquiry* that the argument in the *Treatise* needed clarification and better expression. He admits to "some negligences" in reasoning, and he requests that the work not be regarded further. In addition, the *Abstract*, published anonymously, is far too sketchy by itself to provide a focus for causal doctrines. It is, for the most part, a summary of the arguments given in the *Treatise* and was disowned also. Thus, if we were to take Hume at his word, only the *Enquiry* should be studied for his full causal doctrines; however, this is not usually done for the following reasons.

Hume's youthful enthusiasm and to some degree his perspicacity in the *Treatise* are attenuated in two significant ways in the *Enquiry*. First, causal doctrines are reformulated with an eye toward simplicity and clarity; second, some difficult and controversial subjects of the *Treatise* are dropped from the *Enquiry*. Naturally, this situation opens fertile territory for scholars. For example, are there insurmountable differences between the works? More specifically, is Hume's retraction in the *Enquiry* to be taken seriously?, argues that Hume simply wanted to dissociate himself from a badly received work. Some writers have taken Hume at his word and only considered the *Enquiry*; see, for example, Anthony Flew, *Hume's Philosophy of Belief* (New York: Humanities Press, 1961), pp. 1-17. Are the accounts of causation in both works consistent with one another? Is there a predominant doctrine of causality in the two works? There have been several different plausible responses to these questions, and because of this, Hume's influence is manifold.

More important for the present discussion, several critical problems arise from the omission of vital topics in the *Enquiry*—topics necessary for the completion of the causal argument. The ideas of existence, external existence, and substance, as well as the distinction between causation as a philosophical and a natural relation are omitted. Furthermore, the consideration of space and time is almost totally excluded from the *Enquiry*.⁸ Selby-Bigge points out that "the account of causation which Hume gives afterwards in the *Enquiry* is left hanging in the air when the support of the theory of succession has been withdrawn". Moreover, other crucial issues are somewhat neglected in the *Enquiry*: the distinction between accidental and lawlike generalizations, the universality of causality, and the question of lawlike behavior. Consequently, the causal argument in the *Enquiry* is, at best, incomplete. For these reasons, recent commentators have attempted to weave various doctrines from the *Treatise* into those from the *Enquiry*—usually with primary emphasis on the *Treatise*.

The point in considering the question of philosophical differences between the two works is to suggest why certain features for the *support* for Hume's causal doctrine in the *Treatise* have not been influential. Undeniably, Hume's work as a whole has had an important formative influence on contemporary empiricism, but it will briefly argued here that the metaphysical and psychological aspects of his *Treatise* have not exercised a significant contemporary influence. Although Book I of the *Treatise* is currently the more highly regarded of Hume's epistemological works, it has not had the influence in the late nineteenth and early twentieth century that the *Enquiry* has had. For instance, W. B. Elkin points out in 1894 that Hume's advertisement to the *Enquiry* was taken seriously by commentators; the advertisement refers to the *Treatise* as "that juvenile work, which the author never acknowledged". Some time before the advertisement was published, Hume advised Gilbert Elliot against reading the *Treatise*: "[The *Enquiry*] contains everything of consequence relating to the understanding, which you would meet within the *Treatise*, and I give you my advice against reading the latter. By shortening and simplifying the questions, I really render them much more complete, *Addo dum mino*. The philosophical principles are the same in both ..."

Although the philosophical principles are alike in both works, there are more than rhetorical differences present. Elkin marks the difference by asserting that causation as a subject is discussed explicitly in the *Treatise*; whereas, it is only implicitly discussed in the *Enquiry*. The critic's task has been made difficult because of the slightly differing perspectives of the two works. The *Treatise* is bolstered by an elaborate psychological epistemology: Hume is not concerned with causality *per se* but with evidence for causal beliefs. The central question of Book I, Part III of the *Treatise* is the origin of the *idea* of causation. initially, at least, Hume is willing to assert the only relation at the foundation of science "that can be traced beyond our senses, and informs us of existences and objects, which we do not see or feel is *causation*". Nevertheless, at the end of Hume's investigation of the source of our causal inferences, just before the two summarizing definitions of cause, he concludes, "Now the nature and effects of experience have already been sufficiently examined and explained. it never gives us any insight into the internal structure of operating principles of objects, but only accustoms the mind to pass from one to another".

As is well known, Hume does not directly concern himself with the ontological problem of causality in either the *Treatise* or the *Enquiry*; he, in effect, attempts to avoid what he elsewhere terms "metaphysics" by recasting the questions in psychological form. That is, rather than asking "What is the nature of causal connection?" he asks, "What is the origin of the idea of causation?" In the *Enquiry* the question becomes "how we arrive at the knowledge of cause and effect" (. To some degree, the ontological and epistemological questions are inextricable, and the exact nature of their relation is a problem of major philosophical importance.

However, even though there is a similarity of perspective in the two works, the argumentative sequences on the subject of causation are quite different in the *Treatise* and the *Enquiry*. In the *Treatise* causal inferences are based upon the resemblance and contiguity between an impression

and an idea. The evidential support for the causal inference is custom or habit. On the other hand, in the *Enquiry* the role of contiguity for causal inference is altered. Here, causal inferences are based on resemblances or uniformities within nature. The evidential support for the uniformity of nature is custom, and the relation of contiguity is brought up in order to clarify the nature of custom. The two definitions of cause given in the *Enquiry* omit contiguity altogether. One reason, then for taking due account of the *Enquiry* in the reconstruction of Hume's doctrine of causation is to avoid the ontological problem of explicating the contiguity of an impression and an idea. Kemp Smith, among others, notes that a substantial reason for writing the *Enquiry* was that Hume was disturbed about his former account of impressions and ideas in the *Treatise*.

Another contrast between the two works is that the boundaries of what can be known are somewhat extended in the *Enquiry*: "All reasoning concerning matter of fact seem to be founded on the relation of *cause and effect*. By means of that relation alone we can *go beyond* the evidence of our memory and senses". Hume states in the "Introduction" to the *Enquiry* that the handling of psychological questions are *nearly* sufficient in themselves to account for all of science: "It becomes, therefore, no inconsiderable part of science barely to know the different operations of mind, to separate them from each other, to class them under their proper heads ..." and so on. On the same page Hume refers to this enquiry as "mental geography, of the delineation of the distinct parts and powers of the mind". Then, using Newton's natural philosophy as a methodological paradigm, he asks, "But may we not hope, that philosophy ... may carry its researches still farther, and discover, at least in some degree, the secret spring and principles, but which the human mind is actuated in its operations?"

Since Newton had determined the laws and forces of the solar system, "there is no reason to despair of equal success in our enquiries concerning the mental powers and economy, if prosecuted with equal capacity and caution" In short, the *Treatise's* construction of the science of man on narrowly circumscribed empirical foundations is broadened in the *Enquiry*: "To throw up at once all pretensions of this kind [i.e., going beyond the evidence of our senses to the establishment of general principles] may justly be deemed rash, precipitate, and dogmatical, than even the boldest and most affirmative philosophy, that has ever attempted to impose its crude dictates and principles on mankind". This contrast between the *Treatise* and *Enquiry* should not be pushed *too* far however, since Hume often maintained that the principles in both works are the same.

In addition, it is arguable that Hume might have been disturbed about an implication of the *Treatise* that all sciences are to be based on psychological objects (impressions and ideas)—that "secret" causes and objects mentioned in the *Treatise* not only have no basis but are, in a straightforward sense, unknowable thing-in-themselves. In the *Treatise* Hume is constructing the science of man, not just according to "mental geography," but according to the derivation of ideas and principles from impressions. The *Enquiry*, then, does not substantially alter Hume's project of the science of man: the work is concerned with inference and belief as a basis for

humanistic and physical sciences. Consequently, it, unlike the *Treatise*, does not base natural science on psychological entities.

J. O. Nelson has plausibly argued that Hume's repudiation of the *Treatise* was not unlike that of Wittgenstein's rejection of the *Tractatus*. The major thrust of the *Enquiry*, according to Nelson is to criticize the flights of philosophical reasoning— in particular, the theorizing from the nature of impression and ideas. He argues that in the *Enquiry* “that part of the science of man, which in the *Treatise* demanded that the subject matter of the nonhumanistic sciences be shown to consist of psychological objects, is eliminated. This operation removes the metaphysical and therefore corrupt parts of the science of man but not the science of man.”

The import of Nelson's thesis for Hume's doctrines of causality is adopted here without further argument as a convenient framework in which to study Hume's contemporary influence. Therefore, Hume's theory of causal inference in the *Treatise* and *Enquiry* is analyzed without an attempt to deal with the psychological basis for that kind of inference. These considerations provide some justification for ignoring much of the psychological and metaphysical bases for Hume's conclusions about causal inferences. It is suggested that Hume may have rejected the *Treatise* for the following reasons. Hume was probably dissatisfied with psychological and metaphysical arguments concerning impression and ideas; he thought that he could establish his views on causation without supporting them by reference to psychological objects.

Furthermore, he believed the *Enquiry* was a clearer statement of his philosophical principles. Certainly, the metaphysical support for Hume's particular psychological doctrines in the *Treatise* have not been significant in many of the current interpretations of his causal doctrines. Speaking broadly, then, commentators are left with a retracted, complex, and somewhat inconsistent *Treatise*, a sketchier, less rigorous, but clearer *Enquiry*. For these reasons, it is not surprising Hume's causal doctrines have been interpreted in different ways. The problems of collation are too many and too complex to be handled here, and if the rationale given for Hume's rejection of the obscure psychological arguments of the *Treatise* are of any weight, it would be a mistake to count those arguments as essential to this theory of causality. Our interest is focused on Hume's influential tenets of causality rather than a detailed analysis of the psychological support for those tenets. In this manner, those doctrines underlying what may be termed “the contemporary regularity theory” of causation are accented.

Much of the controversy surrounding Hume's analysis of causality stems from what his intentions are taken to be. Sterling Lamprecht points out that the supposition that knowledge of the world begins from the knowledge of the structure and function of the mind is an element in common among eighteenth century philosophical works. “It is this approach which created the epistemological problem with which modern philosophy has been so conspicuously concerned.”

By means of a judicious selection of slightly guarded passages from the *Treatise* and *Enquiry*, different commentators have supposed the chief value of Hume's method is predominately

skeptical, logical, linguistic, empirical, or psychological. While it is true it is unwise to strike off the results of Hume's causal analysis from the methods of enquiry, it is equally unwise to select certain kinds of arguments from Hume's causal analysis to fit one's preconceptions of the kind of philosophy he was doing. One way to minimize the dangers of extracting Hume's definitions of cause from the science of human nature is to organize the argumentation according to an ontological structure initially allowed but not finally endorsed by Hume: (1) external bodies, (2) perceptions, and (3) mind . By the organization of the examination of Hume's two definitions in this way, the arrangement of this section will indirectly reflect Hume's broader concerns of the science of man without attending explicitly to the Humean psychology and metaphysics.

First, a preanalytic Human contrast between perceptions or thought and external objects of nature is drawn. The contrast suggests two perspectives on the Humean definitions of cause: the ontological and epistemological perspectives. Second, the two definitions of cause are analyzed. A close examination of the definitions reveals issues which become prominent in the contemporary philosophical problem of causation. Third, the major interpretations of Hume's writing are shown to be a result of how commentators handle the ontological and epistemological perspectives of Hume's definitions of cause. In the next section the major points of Hume's causal commitments are summarized, and several difficulties with his theory are discussed.

Hume makes a loose and preliminary distinction between a succession of external objects and a succession of ideas. Experience shows that there is no necessary connection between what is perceived or thought and the nature of external bodies. yet, if an order of ideas did not correspond in some way to the external world, human life would be imperiled. This is not merely a question of making slips between cup and lip, but a question of the possibility of man's existence. Although a connection between mental and physical phenomena is obscure and perhaps ultimately unknowable when stated in such a manner, Hume assumes that there is "a kind of pre-established harmony between the course of nature and the succession of our ideas". He does not maintain, however, that mistakes and other unhappy features of human action do not occur, for "Nature will always maintain her rights, and prevail in the end over any abstract reasoning whatever."

The two kinds of phenomena are asymmetrically related: thought alone is insufficient to establish the external existence of objects, even though the origin of many thoughts are traceable to external perceptions or impressions. Nevertheless, according to Hume, commonly thoughts are often assumed to be projected to the objects. for example, a sentiment or feeling that events are necessarily connected arises during the observation of a succession of events—a feeling which is transferred to the events themselves. The sentiment is reified as power or energy. "[T]hough the powers and forces, by which [the course of nature] is governed, be wholly unknown to us; yet our thoughts and conceptions have still, we find, gone on in the same train with the other works of nature".

What is characterized here as an ontological approach to causation is the view that relations between external objects may be determined by the experimental methods of science. The object of knowledge, then, is claimed to be the world itself. Causal arguments, on this approach, are not claimed to have mathematical certainty or demonstrability: "Now what ever is intelligible, and can be distinctly conceived, implies no contradiction, and can never be proved false by any demonstrative or abstract reasoning *a priori*". Hume writes, "By proofs, [I mean]those arguments, which are derived from the relations of cause and effect, and which are entirely free from doubt and uncertainty". Since only observation could be a means of knowledge of the external world, the relations between physical objects are known through experience.

The psychological approach to causation in Hume's work historically derives from John Locke's statement: "the different clearness of our knowledge seems ...to lie in the different ways of perception the mind has of the agreement or disagreementof any of its ideas." Thus, the objects of knowledge are perceptions and the relations between perceptions, rather than physical objects and relations between physical objects. John Herman Randall, Jr., expresses the contrasting approaches this way: "For observationalism, 'experience' is taken as a *method* of knowing; for subjectivism, it is taken as the *subject-matter* of knowledge. For the first, experience is *how* we know; for the second, it is *what* we know."For consistency of terminology, "Ontologically" may be substituted for "For observationalism" in the above quotation and "psychologically" or "epistemologically"for "for subjectivism," depending on the proper sense of "experience" for Hume.(Many times Hume writes as though perceptions alone are experienced.) From the psychological point of view Hume writes, "By knowledge, I mean the assurance arising from the comparison of ideas" . It is important to point out that in both the *Treatise* and *Enquiry* Hume ultimately rejects the dualism between perceptions or thoughts and an extra mental physical world.

By attacking the problem of causality in this manner, Hume makes the subject extraordinarily complex. Not only does he investigate what can be known about the connections between physical phenomena, but also what can be known about the connections between ideas, and indeed, what can be known about the relation between physical phenomena and ideas. In other words, in order to enquire into the nature of causality, Hume is at the same time examining the operations of bodies (the ontological aspect), the operations between mind and bodies (the epistemological aspect), and the operations of mind (the psychological aspect). Hume only later concludes that the integrity of these perspectives cannot justifiably be maintained.

The ontological and the epistemological approaches are reflected in Hume's two definitions of cause in the *Treatise*:

T-1: We may define a *cause* to be "An object precedent and contiguous to another, and where all the objects resembling the former are placed in like relations of precedency and contiguity to those objects, that resemble the latter".

T-2: A cause is an object precedent and contiguous to another, and is so united with it, that the idea of the one determines the mind to form the idea of the other, and the impressions of the one to form a more lively idea of the other.

Obviously, the two definitions are quite different: indeed, the restated definitions in the *Enquiry* are different not only from each other but also from those given in the *Treatise*. The definitions from the *Enquiry* are set out for comparison:

E-1: ... we may define cause to be "An object, followed by another, and where all objects similar to the first are followed by objects similar to the second" or in other words "where, if the first object had not been, the second never had existed".

E-2: The appearance of a cause always conveys the mind by a customary transition, to the idea of the effect. Of this we have experience. We may, therefore suitable to this experience, form another definition of cause and call it "An object followed by another, and whose appearance always conveys the thought of the other".

Although these definitions, together with the relevant textual support, are usually regarded as an expression of a regularity theory of causation, in fact several interpretations emerge from a consideration of Hume's definitions. These interpretations are sometimes characterized as (1) the regularity theory, (2) the necessary connections theory, and (3) skepticism. Very little will be said concerning the latter two interpretations, and as will be argued later, they probably result from a confusion about Hume's intentions.

The first definitions, T-1 and E-1, hereafter termed "the first textual definitions," may be considered definitions from an ontological perspective. Neither the objects of the causal relation nor the causal relation itself are defined in terms of having been perceived.²⁷ Also it seems apparent that no one could observe all instances of a given causal relation in the manner prescribed. In any case, even assuming that the requisite experiences *could* be had, definitions T-1 and E-1 do not require that instances must be observed in order for the causal relation to hold.

Consequently, the first textual definitions are offered independently of causal beliefs or inferences, although part of the definitions could be used in the analysis of causal beliefs or inferences.

Apart from the epistemological question of how causal relations are known, the problem of the intelligibility of the first textual definitions in the *Treatise* and *Enquiry* remains to be considered. The first textual definitions are similar, but they are not, as some commentators have suggested, "unchanged." In the *Enquiry*, the addition of "if the first object had not been, the second had never existed" suggests a counterfactual analysis. Even though the proper interpretation of counterfactual conditionals is troublesome, the two parts of the first textual definitions in the *Enquiry* clearly are not equivalent. The counterfactual, "If the first had not been, the second would not exist" does not follow from "The first is precedent and contiguous to the second, and

all instances resembling the first are accompanied in this manner to instances resembling the second.” Normally, a counterfactual conditional does not imply that its antecedent is instantiated.

Another difference between the first textual definitions of cause in the *Treatise* and *Enquiry* is that the use of “contiguity” and “precedence” in the first part of T-1 is expressed by the use of “following” in E-1. A succession of instances would have to be analyzable into contiguity and precedence of the first instance to the second for T-1 and E-1 to be equivalent. Tom L. Beauchamp gives such an argument and concludes that “succession” means for Hume “non-contemporaneous but intervalless contiguity.” However, there is no need to insist on Beauchamp’s argument since Hume makes it fairly clear in the latter parts of the *Treatise* and in the *Enquiry* that spatial contiguity is not necessary for causality. For example, at one point Hume writes:

This maxim is that an object may exist, and yet be nowhere; and I assert, that this is not only possible, but that the greatest part of beings do and must exist after this manner. an object may be said to be nowhere, when its parts are not so situated with respect to each other, as to form any figure or quantity; nor the whole with respect to each other, as to form any figure or quantity; not the whole with respect to other bodies so as to answer to our notions of contiguity or distance. Now this is evidently the case with all our perceptions and objects, except those of sight and feeling .

Of course, on Hume’s view “our perceptions and objects” are causally related instances. Except in reference to the association of ideas, spatial contiguity is not mentioned in the *Enquiry*, although Hume undoubtedly thought spatial contiguity important for a denial of gravity acting at a distance. Since “All causes are of the same kind” (T, 171), namely efficient causes, if the spatial contiguity of objects is not a necessary condition for some objects being causally related, then it is not a necessary condition of causation.

In Hume’s writings, objects subject to the causal relation include impressions, ideas, states of affairs, occurrences, events, and physical objects. Fundamentally, he presupposes that all these “objects” are traceable to simple impressions. The philosophical problems of resemblance and simplicity of the qualities of perceptions, together with the problem of individuation of simple impressions are formidable. In order to avoid plunging into the underlying metaphysical and psychological support for Hume’s doctrine of relations, the relatively neutral term “instance” is suggested as an adequate paraphrase of “object” in the definitions of cause. On the assumption that T-1 and E-1 are equivalent, then three conditions for individual instances c and e must be jointly satisfied for the causal relation to obtain.

Df. 1: c causes e if and only if:

- (a) c is precedent to e on a specific occasion.
- (b) c is temporally contiguous to e on a specific occasion.

(c) Instances resembling c are always precedent and temporally contiguous to instances resembling e .

(Normally, conditions (a) and (b) are captured by (c), except in cases where it is doubtful whether instances c and e exist.) Succession, temporal contiguity, and constant conjunctions of c to e are three conditions claimed to be individually necessary and jointly sufficient for c to cause e on Hume's account. Since the second textual definitions of each work utilize the first textual definitions, in order to show how causes come to be known, the second textual definitions may be considered definitions from an epistemological perspective. The point of these definitions is not to justify causal inferences but to analyze and describe how causal inferences are made. Both T-2 and E-2 require a mental determination of the relation of two instances, c and e . Hume introduces the definitions given in the *Treatise* by noting that the first textual definition is a philosophical relation, and the second textual definition is a natural relation. As mentioned in the first part of this paper, the distinction between philosophical relations and natural relations is dropped from the *Enquiry*. Selby-Bigge confesses the distinction to be "most bewildering," but the distinction is initially suggestive for understanding the perspectives of the two definitions given in the *Treatise*. Causation as a philosophical relation is established by reflectively comparing one object with another in an arbitrary manner. Consequently, a philosophical relation may be called a kind of logical association. No mental determination by means of the association of ideas need be present. On the other hand, causation as a natural relation is an association of ideas, a psychological principle "by which one idea naturally introduces another".

As long as Hume clings to the distinction between philosophical and natural relations, the two textual definitions given in both works admit, in Selby-Bigge's words, "an invidious contrast between the subjectivity of the one and the objectivity of the other." Nevertheless, this contrast, invidious or not, is difficult to avoid unless the apparent opposition between the two kinds of definitions could be dissolved. On the assumption that the second textual definitions, and therefore T-2 and E-2, are equivalent, then four conditions seem to be necessary for the second definition of causation:

Df. 2: c causes e if and only if:

- (a) c is precedent to e on a specific occasion.
- (b) c is temporally contiguous to e on a specific occasion.
- (c) The idea of c determines the mind to form the idea of e .
- (d) The impression of c determines the mind to form an idea of e .

The first two conditions of Df. 2 are the same as the first two conditions of Df. 1:

$$Df.1(a)and(b) \equiv Df.2(a)and(b). (1)$$

The second two conditions, (c) and (d), of the second definition Df. 2, might be said from a psychological perspective to parallel condition (c) of the first definition Df. 1, which states “Instances resembling *c* are always precedent and temporally contiguous to instances resembling *e*” That is, “idea of *c*” and “idea of *e*” could be plugged into Df. 1 (c) resulting in something akin to Df. 2 (c). Also, “impression of *c*” and “idea of *e*” could be plugged into Df. 1 (c) resulting in something akin to Df. 2 (d).

Hume concludes his two definitions in the *Enquiry* with these words: “We may consider the relation of cause and effect in either of these two lights: but beyond these, we have no idea of it”. Hume’s “two lights” in the *Enquiry* correspond to the philosophical and natural relations of the *Treatise*. Consequently, Hume admits in both works that the textual definitions are intensionally distinct. Since the first textual definitions do not rule out “concealed” and “secret” causes, whereas the second textual definitions do rule them out, the two kinds of definitions are extensionally distinct also.

Conditions (c) and (d) of Df. 2 are statements concerning one kind of association of ideas; they are meant to describe not only the causal relation between perceptions but also how our thoughts “go on in the same train” with nature. In accordance with Hume’s purpose in the construction of the science of man, the second textual definitions are intended to account for the association of the idea of *c* with the idea of *e* according to past observations of *c* being constantly conjoined with *e*. On this view, the regularity interpretation, the second textual definitions are not an analysis of cause nor a justification of causal inference, but a description of how ideas are causally associated.

On the regularity interpretation the first textual definitions are Hume’s analysis of causation; the second textual definitions are part of Hume’s psychological theory which presuppose the first textual definitions and are an assumed support for causal belief. The second textual definitions are intended to account for how the causal relation comes to be known without observation of, or an attendant psychological feeling of necessarily related instances. J. A. Robinson clarifies this point:

Realizing, therefore, that [the first textual definitions], omitting the element of inevitability or necessity, will shock those who believe, mistakenly, that it should be included therein, Hume offers in [the second textual definitions] a “compromise” characterization of the cause-effect relation ...

Thus, the second textual definitions are an attempt to show how the first textual definitions may be applied to Hume’s more general interest of the science of man. Most writers since the time of J. A. Robinson’s article have recognized that the two kind of definitions are not equivalent. A typical account is given by Karl Ashenbrenner. He argues that in the first textual definitions Hume is giving a logical analysis for the purposes of science, and in the second textual definitions Hume is giving a psychological description of the process of causal inference.³⁹

Of course, while Hume is aware that these two definitions are not identical, the regularity theorist is aware that to suggest that Hume was clear about the contemporary distinction between psychology and philosophy is an anachronism. At the point in the *Treatise* where Hume takes up the two summarizing definitions, the text presupposes such a division of interest; however, later in the *Treatise* and in the *Enquiry*, the distinction between the two perspectives collapses. Hume writes in the “Appendix” to the *Treatise*: “If we carry our enquiry beyond the appearances of objects to the senses, I am afraid, that most of our conclusions will be full of scepticism and uncertainty”.

Hume assumes that external physical objects, causes, and inductive inference cannot be practically doubted. For instance, he writes that “the utmost effort of human reason is to reduce the principles, productive natural phenomena, to a greater simplicity, and to resolve the many particular effects into a few general causes, by means of reasoning from analogy, experience, and observation”. Nevertheless, the application of Hume’s radical empiricism⁴¹ shows that it is pointless to attempt to reason about the structure of the world apart from what can be known in human experience. Most of what Hume wrote on the subject of causation concerns the rejection of the theories which postulate hidden causes, necessary connections, and secret forces in nature. As is well known, Hume argues not only that necessary connection cannot be observed, as in the case of the collision of two billiard balls, but also that the supposition of power or energy is unwarranted. We cannot “penetrate into the reason of the conjunction” between cause and effect.

It is uncontroversial that Hume denies that there are necessary connection in objects independent of experience, but does he totally deny the idea of necessity from his account of causal inferences? There is not clear-cut answer to this question.

The following quotation from the *Enquiry* states Hume’s position: “And as we can have no idea of anything which never appeared to our outward sense or inward sentiment, the necessary conclusion *seems* to be that we have no idea of connection or power at all, and that these words are absolutely without meaning, when employed either in philosophical reasoning or common life’. However,

Hume goes on to say, “But there still remains one method of avoiding this conclusion ...”, and he proceeds to the two definitions of cause. Some passages from the *Treatise* suggest that “necessity” is part of the meaning of “cause.” Kemp Smith argues, “Two distinct factors are involved in the idea of necessary connexion, one as *conditioning* it, and one as *constituting* it. Constancy of conjunction is requisite as that through which alone a *custom* or *habit* can be acquired.” It is undeniable that if Hume is attempting to justify causal inferences, then some kind of necessary connection must correspond to the mind’s determination in passing from one idea to another. However, as suggested earlier, this kind of interpretation is probably a misreading of Hume’s intentions.

Many commentators have assumed that Hume regarded the two textual definitions in each work equivalent. Even if the first two conditions of both definitions, Df. 1 and Df. 2, are equivalent, it does not follow that the third condition of Df. 1 is equivalent to the third and fourth conditions of Df. 2; that is,

$$Df.1(c) \neq Df.2(c) \text{ and } (d). \quad (2)$$

However, if Df. 1 and Df. 2 were equivalent, the third and fourth conditions of Df. 2 suggest that Hume's reasoning is a *petitio principii*. In the jargon adopted, on this view ontological causation is said to depend on the association of ideas; yet, at the same time, this view points out that according to Hume the association of ideas is only one kind of causation in general. When the circularity of the two textual definitions under this interpretation is considered with Hume's destructive arguments against the ideas of necessary connection and power, Hume's causal analysis is said to result in skepticism.

However, probably the critical mistake of the skeptical interpretation of Hume's definitions of cause is the assumption that the two definitions are equivalent. Others have pointed out Hume admits that one causal instance may be just as good as a thousand instances in the determination of causal relations. Hume indicates as much in the following: "we may obtain the knowledge of a particular cause merely by one experiment, provided it be made with judgment, and after a careful removal of all foreign and superfluous circumstances". Given the regularity interpretation, such a belief would be under very special circumstances, for example, a "crucial" experiment. Wade L. Robison, among others concludes Hume's admission is withdrawn in the *Enquiry*. Robison cites this text: "there appears not, throughout all nature, any one instance of connection which is conceivable by us". A careful reading of the *Enquiry* indicates that in the context of the cited passage Hume is speaking about *necessary* connection. In general Hume held that sufficient past experiences of a relevant sort enable one to confirm a causal connection by one experiment, and repetitions of the experiment under similar condition will corroborate the causal judgment.

He asserts in the *Enquiry*:

It is only after a long course of uniform experiments in any kind, that we attain a firm reliance and security with regard to a particular event. Now where is that process of reasoning which, from one instance, draws a conclusion, so different from that which it infers from a hundred instances that are nowise different from that single one? This question I propose as much for the sake of information, as with an intention of raising difficulties. I cannot find, I cannot imagine any such reasoning.

Whether a causal connection can be *known* from only one observation and no prior observations of the relevant kind is quite doubtful on Hume's theory. If there were only one possible instance of a causal connection, however, then by the first definition it would seem that *c* causes *e*. This causal relation could only be *known* by attending to "circumstances foreign to the cause". The

Enquiry makes it quite clear that the basis on which “we form an inference from one [instance] to another,” is the assumption that nature is uniform:

We have said that all arguments concerning existence are founded on the relation of cause and effect: that our knowledge of that relation is derived entirely from experience; and that all our experimental conclusions proceed upon the supposition that the future will be conformable to the past.

How is this supposition to be supported? A central difficulty with Hume’s theory is the justification for such judgments concerning matters of fact, and it is precisely this problem which prompted Kant’s answer to Hume.