

Normativity in Hume's Two Definitions of Cause

DASHA WISE

Of all of Hume's views, those on causation and induction have left arguably the largest impact on scholars, yet they have continued to be the subject of much philosophical dispute. In this essay, I will examine Hume's two definitions of cause in terms of both the approach that one should take in interpreting them and also the role that they play through their presentation to Hume's readers. I will begin by introducing Hume's investigation of cause and explain the two definitions that he provides. Next, I will address some major criticisms regarding these definitions and argue for the need to examine them from both a theoretical (objective) and subjective perspective. Finally, I will examine the dichotomy between theoretical causal determinations and everyday causal discourse, which is subject to human fallibility, and argue that Hume's writings on cause have a normative component that aims to render human causal judgments more reliable.

Hume's Two Definitions of Cause

In *A Treatise of Human Nature*, Hume explains that all perceptions fall into two categories—they are either impressions or ideas. Impressions are derived either from sensory observation or feeling, which Hume refers to as reflection. Ideas are less vivid than impressions, but are derived from them. This notion leads Hume to posit a *copy principle*, which states that all ideas, whether simple or complex, are ultimately derived from

Dasha Wise is a junior majoring in philosophy and economics at Columbia University. Her philosophical interests and areas of study include metaphysics, empiricism, and ethics in the modern period, with a particular focus on the philosophy of David Hume, Immanuel Kant, and Friedrich Nietzsche.

corresponding impressions.¹ Hence, in investigating the *idea* of causation, Hume begins by looking for its corresponding impression. He notes that philosophers and scientists tend to speak of cause as some power or quality within an object *X* which enables it to cause an event *Y*. Hume argues, however, that there is no such observable quality in objects (try as we might to discover it) and that the idea of cause must instead arise from some sort of *relation* between the objects of one type (*X*) to those of another (*Y*). The precise relations that determine the notion of causality is what Hume ultimately posits in his two definitions of cause in book I of the *Treatise* (170).

First, Hume defines cause in the following terms (hereafter *C1*): “We may define a CAUSE to be an object precedent and contiguous to another, and where all the objects resembling the former are plac’d in like relations of precedency and contiguity to those objects, that resemble the latter” (170). Thus, for *X* to be said to cause *Y*, the pair must fulfill two immediately perceivable relations. The first is spatial contiguity: the objects must have spatial proximity to one another. The second is temporal contiguity: the two objects must follow one another in close succession in time (the cause preceding the effect). Resemblance also plays a role in determining causal judgments, but chiefly as it allows for recognizing a third essential relation in *C1*—that of constant conjunction. Constant conjunction occurs when “all the objects resembling the former are plac’d in like relations” to those resembling the latter. Thus, particular *X*s, those which sufficiently resemble other already observed *X*s, will be determined by the mind to be of type *X* (and the same goes for *Y*s), and constant, repeated observations of spatial and temporal contiguity between *X*s and *Y*s enables the imposition (by definition) of a causal relation on these pairs of objects. Thus, according to *C1*, the phenomenon of constant conjunction of (*X*,*Y*) pairs in the proper spatial and temporal relations to one another (which are classified as (*X*,*Y*) pairs by the resemblance between individual *X*s and *Y*s) determines that the former causes the latter.²

¹ Please refer to Don Garret’s discussion of what he refers to as the copy principle in Hume’s philosophy in chapter 2 of *Cognition and Commitment in Hume’s Philosophy* for a more thorough explanation.

² Some Hume scholars have argued that constant conjunction is not necessary in our determination of causality—that we can observe one new instance of a pair of objects (*A*,*B*) without having observed any prior constant conjunction of *A*s and *B*s and naturally understand that *A* caused *B* based on the two relations of spatial and temporal contiguity alone. Hume, however, argues against any kind of natural understanding—that the two immediate perceptions can never lead to a determination of cause and effect: “I immediately perceive, that [*A* and *B*] are *contiguous* in time and place, and that the object we call cause *precedes* the other we call effect. In no one instance can I go any farther, nor is it possible for me to discover any third relation betwixt these objects” (155). Since our ideas are derived from impressions, we cannot derive an idea of causation merely from the directly observable relations of spatial and temporal contiguity, for there is here no such

Hume's second definition (hereafter C2) is distinct from the first because it introduces a psychological element into the determination of causality. This natural relation (i.e., that which involves human experience in its determination)³ is expressed by Hume through C2 as follows: "A CAUSE is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other" (170). C2, then, defines causality to be the positing of a necessary connection between two objects by a human observer in response to a set of particular relations that he repeatedly witnessed between them.⁴

correspondent impression above and beyond the other two. Thus, there must be a third relation, namely constant conjunction, between all As and Bs that is able to add something to the immediately perceivable relations and contribute to the determination of a causal relation.

We might be tempted to agree with the view that some new instances of paired objects lead us to posit that one caused the other without having had experience of constant conjunction of those particular types of objects. However, Hume can explain this phenomenon by invoking the power of the resemblance relation. Although the resemblance between an object of type A and type X is not as strong as between two objects of type X, it may very well be strong enough for the mind to form the idea of a causal relation between them. One posits a causal relation between A and B by virtue of the (A,B) pair's similarity to objects of type X and Y, of which one *has* had prior experience of constant conjunction. The reason that we might at first seem to agree with the aforementioned view, without considering the underlying role played by resemblance and constant conjunction, is precisely due to the nature of the determination of the mind in forming causal judgments—the fact that it is habit or custom rather than a form of deductive reasoning. Hence, in our everyday judgments, we do not pause to think *why* we consider an X as causing a Y; we do this through a spontaneous and natural intuition. This is exactly why it might seem as though no prior constant conjunction of causes and effects play a role (our own instinct leads us to make a causal judgment without reflecting on the mechanism underlying that judgment, and we thus assume that no prior experience played a role), while in reality, constant conjunction does and must play a vital role in such judgments, even when the prior experience is not that of objects of the exact same type as those that we are currently experiencing.

³ This is contrasted with the philosophical (objective) definition expressed in C1.

⁴ Certain Hume scholars that are displeased with the subjective nature of C2 would propose stopping at C1—that with the relation of constant conjunction in addition to the immediate relations of spatial and temporal contiguity we have everything we need to define cause. One such scholar is J.A. Robinson, who posits that Hume's second definition of cause (C2) should not have been utilized as a definition at all. He argues that C2 is merely a statement of the fact that the philosophical relation in C1 is also a natural relation—an induced association between one object and another within the observer's mind. Robinson argues that the strictly philosophical relation (expressed by C1) without reference to an observer of the constant conjunction of objects that are spatio-temporally contiguous is both necessary and sufficient for one object to be considered the cause of the other. In supporting his argument, Robinson cites a passage from the *Treatise* which explains constant conjunction as a "new relation betwixt cause and effect" above and beyond mere contiguity and succession (Hume 87). He believes that this relation is the "sought-for missing condition . . . for x to cause y" (Robinson 169).

However, the problem is that Robinson misunderstands what for Hume is another necessary element to understanding causation (namely, constant conjunction) to be the final piece of the

The Importance of Necessary Connection and C2

The element of necessary connection (expressed through C2, but not through C1, as the mind's psychological imposition of necessity upon the observed constant conjunction of objects) is indispensable to Hume's definition of cause. He argues that "*there is nothing in any object, consider'd in itself, which can afford us a reason for drawing a conclusion beyond it; and, That even after the observation of the frequent or constant conjunction of objects, we have no reason to draw any inference concerning any object beyond those of which we have had experience*" (139). A memory of multiple instances of like relations between objects of a given type will not contribute any new idea or new relation and will be no different in effect than if one had the memory of only one instance of the perceived relations (88). Barry Stroud clarifies further:

Mere repetition obviously cannot reveal something in the instances that was not there to begin with, nor can it produce anything new in the objects or events in question. Each instance is independent of all the others, and would be what it is even though none of the others existed. (79)

This is precisely where the idea of necessary connection plays a pivotal role in determining causality above mere repetition or constant conjunction. Since every idea must have an impression from which it is derived, the idea of necessity arises from an impression or feeling of determination within the mind to pass from one object (the cause) to another (the effect) due to constant observed conjunction of objects of each type. It is precisely this determination (an impression of reflection which naturally arises from the experience of constant conjunctions)⁵ that causes the mind to have an idea of power, efficacy, or essentially, of a necessary connection, between cause and effect. Necessity does not exist as a quality in the objects themselves, nor is it a directly perceivable relation; rather, it is an idea caused by a determination in the mind to associate objects that stand in a particular relation

puzzle. In fact, the very passage that Robinson cites concludes with Hume's proposal to quit "the direct survey of [the] relation [of constant conjunction], in order to discover the nature of that necessary connexion, which makes so essential a part of it" (Hume 87). Thus, for Hume, the relation of constant conjunction is helpful in our determination of causation only insofar as it is related to the necessity that ultimately underlies causal judgments.

⁵ Hume defines an impression of reflection as a sub-category of impressions (the other sub-category being sensory impressions). Impressions of reflection include internal states such as emotions that are experienced directly but are nevertheless distinct from sensory impressions such as seeing a particular color or shape.

to one another. This is the last piece of the puzzle in forming a complete definition of causation, a piece whose importance some Hume scholars drastically underestimate.⁶

It may at first seem intuitive to believe that all that is needed to define cause is constant conjunction. Yet, this only seems intuitive to us *because* we form causal judgments out of a natural, automatic habit, rather than thorough reasoning. As readers of Hume we are attempting to understand the underlying mechanisms of causal judgments; however, as human beings, we are compelled by nature to form associations automatically upon observing constant conjunction. Thus, even as we try to perform a thought experiment with respect to two objects that are constantly conjoined (but not associated in an observer's mind), we cannot do so because our own mind naturally makes that association and we cannot help but consider the objects as cause and effect. Hence, the very intuition behind the argument for the sufficiency of *C1* alone is consistent with the opposite claim—that the idea of necessary connection (the association that occurs within the mind) is vital to the determination of causality.

The mere fact of constant conjunction, without a perceiving mind, is nothing more than a repetition of similar occurrences. This, and nothing more than this, characterizes the relation of constant conjunction. What then, if not the mind's idea of necessary connection, renders this a relation of cause and effect, rather than that of mere constant conjunction? Why create a new term to explain something that can be explained through an existing term successfully and comprehensively? We could, for that matter, label the relation of constant conjunction "apple" rather than "cause" and be no worse off than those that believe Hume does not need *C2* to define cause.

C2 and Hume's Consistency with Empiricism

The ultimate reason that Hume cannot rely solely on *C1* is that he is an empiricist and as such bases his definition of cause on induction. Through his observation of human discourse he has determined that the term "cause" entails some connotation of power or necessity, and hence these notions must somehow be incorporated into its definition. Most people would not be satisfied with defining cause as a mere repetition of similar events.

In order not to contradict his own causal theories, Hume must derive his theories from observation (since he posits induction as the most reliable source of beliefs). Thus, he cannot posit an a priori definition of cause

⁶ For example, see Robinson's article "Hume's Two Definitions of 'Cause'".

by taking some relation (or set of relations), such as the constant conjunction of objects related by contiguity and succession, and calling it causal. Rather, Hume has begun by observing that humans have long engaged in causal discourse and have formed ideas of a necessary causal power, and it is precisely this necessary causal connection and its origin that he intends to investigate and define. He observes that the idea of necessary cause is derived from an inexplicable natural human tendency to associate constant conjunctions of objects in the manner explained above. This origin of causal discourse is essential to the definition of cause precisely because cause, as Hume has already pointed out, is not a quality inherent in any object or pair of objects, and hence cannot be observed without reference to a mind. Stroud, too, points to the importance of the agent of mental association in Hume's definition of cause:

Hume thinks he has shown that it is only because things fulfill the conditions of the second "definition" that any things in the world are thought to be related *causally* or *necessarily* at all. We get the idea of necessary connection only because of the passage of the mind from the thought of something to the thought of its "usual attendant" . . . It is only because causality is in fact a "natural" relation that we ever manage to get the idea of it at all. (90)

It is impossible that Hume should have conceived a theoretical definition of cause prior to his observations of what humans, in everyday discourse, tended to label as "causes." Rather, his definition of cause was itself induced by his own experience of constant conjunction, namely that of people experiencing objects constantly conjoined and using the word "cause" to describe those objects that precede the effect. From such observations, Hume was able to generalize that cause, in the theoretical sense (the distinction between practical and theoretical will be clarified later in the essay) referred to an object as explained by *C1*, namely one for which the three key relations obtained. Yet, the last key element, even with a theoretical reading, still must be the human mind, for causal discourse (and the idea of necessary connection) could not arise without it.⁷

The Criticism that the Two Definitions are Not Co-extensive

Some scholars have argued that the very fact that *C2* requires a subjective human observer as part of the definition of cause is problematic

⁷ This is precisely why *C2* (which takes the element of human psychological association of constantly conjoined objects into account) is needed for a complete definition of causality.

because it renders the two definitions not co-extensive and therefore incoherent. J.A. Robinson argues that *C1* “determines a class of ordered pairs (x,y) . . . , each pair having the completely objective property of being an instance of a general uniformity,” while *C2* “determines a class of ordered pairs. . . by means of a property which is defined quite essentially in terms of certain mental phenomena” (163). From this Robinson infers that *C2* requires a human observer to be present to witness the constant conjunction explained by *C1* in order for the two definitions to be co-extensive. Yet he points out that there are countless instances in which human experience is limited or otherwise biased, such that the requisite association in the mind does not occur when in fact it should. Thus, because the objective truth of constant conjunction of objects and the “man-in-the-street’s notion of ‘some sort of a connection’” often do not correspond to one another, Robinson concludes that *C1* and *C2* cannot be co-extensive (166).

Don Garret’s Defense: The Theoretical (Objective) Reading

Don Garret defends *C1* and *C2* by proposing that the two definitions should both be interpreted objectively, rather than objectively with regard to *C1* but subjectively with regard to *C2*, as Robinson does. The diction of *C1* implies that it is intended to be interpreted in a theoretical (objective) sense; Hume posits in *C1* that “all the objects” of a certain type are placed in a causal relation to one another. The “all” here is not qualified by the adjectives “observed” or “experienced,” and hence refer to the entire set of pairs (X,Y) for which the relations obtain, not only to those that have been witnessed in the past. Yet, Garret argues, “there is no reason why the ‘mind’. . . of *C2* cannot instead be construed to be an idealized mind or spectator—for example, one who accurately views all and only representative samples, has a well-developed human inferential mechanism, and suffers from no interfering biases” (108–9). Under this interpretation *C2*, like *C1*, refers to the entire set of pairs of objects for which the necessary relations described by *C1* obtain; with a theoretical reading of the two definitions one can be assured of their co-extension. Garret, then, believes that Hume would ultimately prefer the absolute, or objective, reading of both of his definitions of cause.

Hume certainly cannot allow for any subjective reading of *C1*, *C2*, or both, for this would imply the contradiction that something could be both cause and not cause at the same time. Under a subjective reading of either definition, each individual’s experience determines what cause is, and since experiences vary widely there is no doubt that often one person would form a mental association (through her experience of constant

conjunction) where another would not, resulting in contradictory causal judgments. Thus, to posit a coherent definition of cause Hume needs to frame the definition in a theoretical sense. Given the theoretical interpretation, readers can understand cause to obtain when a particular resemblance class of objects is constantly conjoined with another class of objects, and a hypothetical human observer that is able to witness every instance of the conjunction of the two types would determine that the connection between the two classes is necessary.

Of course, Hume understands that a human being is limited by a short life span and that one can never observe all conjunctions. Nevertheless, for the purpose of understanding what cause means in the theoretical and objective sense rather than how it is used in everyday human discourse, Hume must present his two definitions from the perspective of an ideal observer. Although a law of nature as expressed by fallible human beings might eventually be revised due to the discovery of erroneous inferences based on biased experience, a law of nature in itself cannot change. The theoretical law is unchanging and constant, but what humans believe to be a law of nature may change over time. Hence, something that we had believed to be a law (or a cause) may turn out not to be one, so in the objective sense it was never a law to begin with, but merely labeled as such. Hume needs the objective definition to explain cause theoretically because language and labels can be arbitrary and erroneous. In order for his reader to grasp the concept of causation in the first place, Hume must be able to refer to something more general, beyond the mere collection of specific labels or particular uses of the term “cause” that exist in contemporary discourse.

The Importance of the Subjective Reading and its Explanatory Power

The emphasis on the theoretical (objective) interpretation does not, however, reduce the importance of the subjective reading. In fact, by downplaying the subjective aspect of Hume’s two definitions, Garret vastly understates its informative value in helping us to understand Hume’s views on causality. I would argue that Hume’s philosophy of causation requires both readings; the objective reading enables the reader to obtain a fundamental understanding of the term “cause,” while the subjective reading of the definitions allows the reader to understand the mechanism that humans use to ascribe causation in everyday discourse.

It is the subjective interpretation that allows us to understand Robinson’s objection and incorporate its implications into Hume’s theory. As explained earlier, for Hume, the idea of cause (like that of a natural law)

implies complete certainty. If it did not, it would be considered mere probability. In the theoretical sense, we cannot say that a natural law is something that we have experienced only, for this leads to contradictory natural laws or natural laws that change or are disproved, which is, of course, absurd. This is why Hume must be drawing a distinction (however subtle) between the theoretical view of his accounts of cause and their application in practice or everyday human discourse. Hume cannot define cause to be something that does not always precede its effect, even if it has been observed by one individual to be constantly conjoined with the appearance of the effect (although this discrepancy is consistent with a purely subjective definition), for this would be an absurdity, as it violates the necessary element of constant conjunction. Yet he can employ the notion of human fallibility to explain the discrepancy between labeled causes and actual causes as an error on the part of the subject given her limited experience. Therefore, it is not that the theoretical idea behind what *is* a cause has been revised, but that the particular individual has used the term mistakenly without being aware of this fact.

The Probabilistic Nature of Belief and the Reliability of Inductive Inferences

All human belief is essentially probabilistic, as our finite capacities render complete certainty unattainable. Real world beliefs of causal necessity are neither completely certain nor refer to an actual quality within objects—instead, they refer to the natural and inexplicable human habit of association. This implication of Hume's philosophy regarding causal beliefs might appear to cast Hume's reader into the depths of skeptical despair; however, Hume affirms that the beliefs that we form based on our inductive (cause and effect) inferences are accurate and reliable in the sense that the actions that they inspire tend to allow us to lead stable and productive lives. It makes no difference in a practical sense whether we can obtain truths about objects as they really are, because human beings ultimately act on the basis of their prior experience. This habit of association of objects and experiences is very useful, as it enables us to act on generally reliable beliefs. There is no better alternative to this mechanism with which nature has endowed us, certainly not the alternative of skeptical despair and complete inaction, for this would result in instability and dissatisfaction. It is because our causal beliefs (that future instances of conjunction will be like those of the past) are usually justified that we form a meta-belief about induction as a whole—namely, we believe that because the past has constantly been a good guide to the future *in the past*, it will continue to be a good

guide to the future *in the future*. Hence, we are impelled by the very same natural tendency to place our faith in the inductive process in general, and this, according to Hume, is exactly as things should be.

Still, the usefulness and reliability of the natural mechanism that leads us to form causal beliefs cannot be the end of the story, for then Hume would have no need in the first place to present his reader with a long-winded discussion of the mechanisms underlying causal discourse, provide rules for the appropriate judgment of causes, and bring forth various instances in which human judgments or beliefs are rash or otherwise imperfect. Thus, there must be another motive behind Hume's particular treatment of the issue of causal judgments, a motive that I will argue involves something of a normative element.

Obstacles to Proper Induction

Although a theoretical reading with an ideal observer implies proper causal judgments, human judgments in practice are limited and far from infallible. To demonstrate this, Hume introduces various instances in which beliefs have been formed erroneously, either through inappropriate formation of causal inferences themselves or formation of beliefs that are similar to those concerning cause and effect (and thus invoke similar natural, habitual responses of association) but are actually of an entirely different and unreliable sort.

The first set of problematic applications of the association mechanism involves instances of weak resemblance—e.g., cases of new events or pairs of objects. In the case of a entirely new pairing of two types of objects, causal judgments based on a weak resemblance of those types to other types that *have* been experienced in constant conjunction are what I would call *indirect* causal judgments (differing from direct causal judgments because they are much weaker and less reliable due to the weakness of the resemblance relation). This is particularly important in terms of belief in human testimony, of which Hume is quite wary.

Yet, even beliefs in the testimony of individuals that we know quite well (of whose behavior we have extensive experience) can lack proper grounding, although they might *appear* to be direct causal inferences.⁸ First, it is true that belief in human testimony stems from the same mechanism as those concerning natural laws. For example, we are more likely to believe our friend if he has always been found to tell the truth in our past dealings

⁸ Causal beliefs concerning laws of nature that are based on prior experience of constant conjunction are, in Hume's view, the most reliable beliefs that we can have.

with him. When this friend says something contrary to an established law of nature, however, it is dangerous to believe him without first examining the evidence for the law of nature which his words contradict. If other human beings have had extensive and unfaltering experience that supports the given law of nature, then we should err on the side of disbelief in our friend's testimony. We should above all consider the fact that our friend is not himself the cause of truth or false statements, but rather some mental state or disposition within him, which might easily change in the future, even if it has not in the past. In making proper causal judgments against testimony, we should take into account the possibility of opposing causes working against those causes which ordinarily lead an individual to tell the truth. In many cases it is more likely that a deeper causal investigation into an individual's testimony is needed than that the law of nature is inaccurate. All that one needs to do is to examine and weigh the likelihood of one's own error in making the one causal belief versus the other.⁹

We encounter an even more dangerous situation involving human testimony when we form beliefs concerning the testimony of a complete stranger. Belief in her testimony arises from our readiness to apply causal beliefs about the honesty of individuals we know to this stranger based on the weak resemblance that she has to them. Such a belief is dangerous because it arises from a very weak resemblance that we are nevertheless willing to apply to form what we mistakenly believe to be causal judgments. Hume explains,

No weakness of human nature is more universal and conspicuous than what we commonly call CREDULITY, or a too easy faith in the testimony of others . . . our faith arises from the very same origin as our inferences from causes to effects . . . But tho' experience be the true standard of this, as well as of all other judgments, we seldom regulate ourselves entirely by it; but have a remarkable propensity to believe whatever is reported. (112–13)

Hence, imprudent applications of association in instances of weak resemblance in the cases of human testimony lead to hasty indirect inferences in which our judgments are no longer guided strictly by our constant experiences.

This artificial enlivening of ideas, and hence, rash belief formation, also occurs when our passions come into play. A speaker's rhetoric may

⁹ One must, therefore, take into account the finite experience and fallibility of the human mind and the natural tendency to make causal judgments about things of which we may not have had enough prior experience or in which we have not discovered the deeper underlying causes, but rather have always worked with superficial surface causes (e.g., that our friend in general, rather than his particular disposition at a particular time, is the cause of his truth-telling).

be eloquent or powerful enough to enliven our ideas to the point that we hold false beliefs about the truth of the speaker's testimony. A certain emotional predisposition or state of character may also dispose an individual to form particular beliefs much more readily. For example, someone who is a coward that hears a testimony that someone wishes to kill him, will more readily believe this testimony (no matter how unlikely it is) than someone who is not a coward. The idea of being killed arouses his passions and causes him to experience an impression of fear, which in turn adds further vivacity to the idea that he will be killed and causes him to believe this more strongly. Once again, such cases are examples of human imprudence in forming beliefs because the beliefs are no longer based strictly on prior experience of constant conjunction but are easily influenced by the passions and other irrelevant factors.

Another area of belief-formation that is superficially similar to induction but is in fact very unreliable is that of education. Hume explains that "the frequent repetition of any idea infixes it in the imagination . . . [and] custom may lead us into some false comparison of ideas" (116). The imagination can have ideas drilled into it by mere repetition with as much if not greater force than an actual sensory experience of the corresponding impression and its cause, and "this habit not only approaches in its influence, but even on many occasions prevails over that which arises from the constant and inseparable union of causes and effects" (116). Beliefs formed due to rote memorization and repetition only resemble constant conjunction, and hence they induce the habit of mental association but are rash, unwarranted, and misleading.¹⁰ Hume laments that "tho' education be disclaim'd by philosophy, as a fallacious ground of assent to any opinion, it prevails nevertheless in the world, and is the cause why all systems are apt to be rejected at first as new and unusual" (118). He concludes that this may very well "be the fate of what [he has] here advanc'd concerning *belief*, and tho' the proofs [he has] produc'd appear to [him] perfectly conclusive, [he expects] not to make many proselytes to [his] opinion" (118).

Hume's Consistency in Avoiding Obstacles to Proper Induction in his Philosophy

One might object that Hume's *Treatise* is itself a form of repetition of human testimony, and hence a form of education. However, Hume has

¹⁰ That they are misleading is particularly important to Hume because he believes that firmly rooted educational beliefs prevent many people from believing his own philosophical principles, even though the latter are based on solid empirical facts, while the former are sometimes based on mere repetition of particular human testimony.

here argued that his causal philosophy is crucially distinct—namely, that his principles, although presented to the reader through written words rather than direct experience, are nevertheless based in experience and well-supported by empirical facts. Although Hume does not present all instances of his experience which have led him to form the beliefs that he presents in the *Treatise* (and for good reason, for this would make for an impossibly long text), he does present helpful examples, calls upon the readers to explore their own prior experiences for further examples, and challenges the skeptics to produce counterexamples to his empirical observations (which he firmly believes cannot be supplied).

Even Hume's presentation of the rules for judging causes is intended as inductive inference rather than a priori normative reasoning. This is perhaps the most common and potent criticism of the rules and it is not entirely unfounded. Hume does not clearly indicate how he derived the rules for proper induction, and if they are not themselves derived from induction and are instead conceived a priori, then belief in them can be neither reliable nor stable according to Hume's own theory of knowledge. Unless the reader extrapolates and applies Hume's own philosophical principles to the rules' derivation, he cannot comfortably conclude that Hume is basing the rules upon induction. On the other hand, if one keeps in mind the manner in which Hume had derived the two definitions of cause (namely, through inductive inferences based on extensive experience of human behavior), it is not difficult to see that he must have expected the rules to have the very same status and foundation.

Although it is certainly an oversight not to have explained this thoroughly in section XV of the *Treatise*, the rules¹¹ (those especially amenable to criticism being rules 4, 5 and 6) are based upon Hume's observation of how human beings actually employ causal discourse. All three rules here are premised on the idea that there is a one-to-one correspondence between particular causes and effects, namely that one cause is linked to one effect and vice versa, and having derived the theoretical definitions of cause (which were presented earlier in this essay) through experience, Hume is now able to derive the rules for proper causal judgment based on what he empirically observed to be the *cause* (i.e., the method) of attaining more precise and reliable causal beliefs (i.e., the effect).

Hume gives only a very short explanation to justify his rules through inductive inference. He explains that upon the formation of a given belief about a causal link, an individual immediately applies this belief to all resembling instances without any further experience or additional ideas

¹¹ Hume's complete formulation of the "rules by which to judge of causes and effects" can be found on pages 173–75 of the *Treatise*.

being necessary for the cause-effect pairing to take place. *If*, he argues, we were to observe instead that individuals make causal beliefs upon multiple combined experiences of the idea of a given necessary cause-effect pair, then only this would allow for the possibility of attributing multiple causes to a given effect, or vice versa. Yet what we do observe indicates that this is not the case, and that we need only one formation of the idea of necessary connection to form a complete causal inference.¹²

Perhaps a stronger explanation for the rules (which attribute a one-to-one relationship between causes and their effects) lies in their ability to enhance the reliability of beliefs.¹³ What Hume would have observed, then, is that whenever individuals were careless in attributing multiple causes to a given effect, or vice versa, they were unable to properly identify causes and formed unstable and unreliable beliefs. This is a likely explanation of the rules' origin and their inclusion in the *Treatise* and further explains their empirical basis. Without exception, all of Hume's conclusions must be supported by strong and well-founded induction in order to be deemed reliable. The rules for judging causes, like the two part definition of cause, are derived by observing the mechanism leading to proper causal determinations. Here, again, Hume allows for and even underscores the existence of human fallibility and error and presents his rules to the reader as a means to minimize such error.¹⁴

The Normative Component of Hume's Causal Philosophy

Hume expects his reader—if she is able to overcome fallacious and rash beliefs—to come to the same conclusions that he does, especially given that Hume's evidence is based strictly in experience and his beliefs stem from proper induction. Naturally, Hume cannot claim that his views are true in the absolute sense, for no human beliefs can be known to be true due to the limitations of human experience. However, because they are

¹² See pages 174–75 of the *Treatise* for Hume's formulation of the above-mentioned argument.

¹³ An investigation of this origin for the rules would entail examining how the method of using the rules compares with the method of not using the rules in terms of the consequences each has for the precision of causal judgments.

¹⁴ Concerning the definitions of cause, there is a dichotomy between the ideal, theoretical mechanism of determining what a cause is and what the typical person would determine (given her inclination toward imprudent judgments and her limited or biased experience). Here too Hume finds that *theoretically*, when the rules are applied to experience in the manner that he has presented in section XV they lead to precise causal beliefs. Yet in practice, imperfect human beings have a tendency to apply them improperly.

based on the most reliable mechanism that we have for forming beliefs and acting upon them, namely induction, they are as stable and reliable as any other established scientific facts about the laws of nature. The normative element in his philosophy comes into play here, for in presenting his reader with several examples of unreliable belief-formation, and by explaining to her the proper mechanism underlying causal judgments, Hume persuades the reader to be more prudent in the future, to rely only on careful inductive inferences and to be wary of succumbing to the influence of the passions or education. In other words, Hume's readers should spend less time believing incredible testimony and more time on proper induction and thoroughgoing scientific investigation.

In order to extend our experience of constant conjunction and to penetrate into the deeper causes,¹⁵ Hume needs to first present his reader with a comprehensive account of causation, and especially proper causal judgment. Certainly causal judgments will always depend on induction by habit (a natural inclination to associate objects that have been constantly conjoined) rather than deductive reasoning. Still, understanding that the applications of this natural tendency must be carefully monitored to produce only reliable causal judgments, and that causal judgments themselves vary in degree of reliability due to the limitations of human experience, is the first step in ensuring that our everyday causal discourse is as close as possible to the absolute accuracy that the aforementioned ideal observer would reach.

Although humans will never reach absolute certainty, for we can never experience *every* instance of constant conjunction of two types of objects, we can ensure that we approach this absolute accuracy and reliability of our beliefs asymptotically. For Hume, such an approach would entail more thorough and repeated investigation and experimentation, for the more instances of constant conjunction that we observe, the more assured we can be that our beliefs are reliable. Since, in practice, all beliefs are ultimately probabilistic, more extensive experience ensures that probability approaches the level of causal proof, because "the habit, which produces the association, arises from the frequent conjunction of objects, [so] it must arrive at its perfection by degrees, and must acquire new force from each instance, that falls under our observation" (130).

Moreover, with more thorough experimentation, we can begin to discover the underlying causes, or more precise pairings of objects or properties. This goal is particularly evident in Hume's presentation of rules 4–6 because therein he explains that causes must ultimately be traced down to

¹⁵ The deeper causes refer to more precise, specific, constant, and ultimately more reliable repeated conjunctions between objects (or, more likely, between specific properties of those objects).

the minimal and complete properties that compose them. There are single causes paired with single effects and these are ultimately smaller, more discrete characteristics that all causes of type *X* have in common. Hume believes that the contrariety of our experience (which leads to merely probabilistic beliefs based on the mental weighing of positive instances against negative instances) is ultimately due to the existence of more subtle opposing causes and “as like causes always produce like effects, when in any instance we find our expectation to be disappointed, we must conclude that this irregularity proceeds from some difference in the causes” (174). Thus, when we experience, for example, that sometimes an ornament falls from the Christmas tree and sometimes it does not, we can investigate further and find that perhaps the friction between the tree branch and ornament clip is strong enough to support it in most situations, yet when someone hits the tree, the force of the impact causes the ornament to slip. Instead of assuming that the tree itself is the cause of the ornament’s position, investigating into the deeper and more precise causes allows us to pinpoint the instances of truly (or at least more) *constant* conjunctions, where all objects or properties of type *X* stand in the causal relation to all objects of type *Y*. Thus, we can continue our investigations until we discover ever more precise objects or properties which we label causes and effects and which are more and more constant and unfaltering in their pairings with one another. We can continue to do this, minimizing contrariety, until we (theoretically, though perhaps not in practice) eliminate it altogether and discover all precise underlying causes and effects.

The Consistency of Hume’s Normative Suggestions with the Mechanism of Induction

At the conclusion of this investigation into Hume’s definitions of cause and the role that they play for Hume, it is worthwhile to consider the exact normative nature of Hume’s presentation and how it can remain consistent with Hume’s inductive mechanism for proper human judgment. First, it is interesting to consider that the mechanism of association that is so vital to induction is a natural and instinctual mechanism. Thus, there can be no normative ought statement regarding whether or not one should engage in such mental associations—for Hume, choice here is not an option and we will continue to use this mechanism to make causal inferences independent of normative philosophy. However, as we have seen, there are also natural and instinctual human tendencies that Hume has observed which are not as reliable as those that are based on proper induction (constant conjunction of causes and effects). These tendencies toward association

of objects with weak resemblance or toward beliefs that have been instilled through mere educational repetition or eloquent speech must, for Hume, all be examples of a natural human instinct as well, but one that clearly detracts from the useful mechanism of inductive association.¹⁶ But, such imprudent associations, though they are just as natural as the prudent ones, are unreliable, for they lead to erroneous and mistaken beliefs.

I have argued that this habit of imprudence is what Hume, with his numerous empirical examples and explanations, attempts to present to his reader. He brings the reader's attention to the many instances in which imprudent association has caused people to form irrational and unstable beliefs. Although Hume cannot physically demonstrate these instances, he can use words to illustrate his examples, with the intention that his audience will form more lively ideas of the cause-effect link between improper judgment mechanisms and their effects of obtaining erroneous beliefs. This is why we often find Hume inviting his readers to search their own experience for other examples that would support Hume's conclusions. Upon careful consideration of both Hume's empirical examples and his own experiences, the reader will have a more complete repertoire of constant conjunctions and her belief in Hume's propositions will be fortified. If, however, she can find a counterexample (an experience that defies what Hume has proposed), she will of course remain unconvinced. For Hume, such a result is highly unlikely, as he deems his observations to be so well supported by real-world experience as not to admit of simple and effective counterexamples.

Hence, by presenting the definitions of cause, the associated rules for judging causes, and various empirical instances of imprudent judgments causing false beliefs, Hume is able to put forth something of a normative message for his readers—they become better equipped to overcome their tendency toward rash associations through proper associations and induction. By presenting empirical instances of the improper conjunction of Xs and Ys to explain the origin of false beliefs, Hume enlivens the association between this cause-effect pair in the reader's mind. The reader can then make the fairly simple causal association between false beliefs and negative consequences.¹⁷ Take for example a belief that I will not drown because

¹⁶ Again here, there is a sort of contrariety of causes, all of which added together produce some net effect which leads to a given action. Hume's goal in the *Treatise* seems to be to increase the force of those causes that work toward the end of achieving proper causal judgments only, and to minimize as much as possible those causes which lead to improper belief formation.

¹⁷ This judgment can also be a weaker form of probabilistic belief based on a mere majority of instances—it will still be nearly as effective in terms of the actions that it induces individuals to take, for the very fact that imprudent judgment leads to adverse consequences even seventy percent

God will protect me. If false, this belief leads to the negative consequence of actually drowning upon submersion in water. According to Hume, then, one would form a very lively idea of those negative consequences that have now been associated with imprudent association and formation of false beliefs. Since one has examined, by the end of the *Treatise*, multiple empirical instances of the pairings of imprudent association and false beliefs (perhaps enough for constant conjunction) one will form a belief that they cause negative consequences. Like any other belief, this will have a subsequent influence on that individual's actions and decisions. For example, the next time his readers listen to a passionate speech, they will be able to overcome the temptation to blindly believe exactly what is being said because they have already formed strong beliefs concerning the danger of succumbing to such imprudent instincts by reading Hume's causal philosophy.

The normative element of Hume's philosophy, then, is rather different from other instances of normative ethics. What it has in common with ethics is that the causal philosophy aims to change human behavior so as to achieve more reliable belief formation, but Hume's approach is different because he does not present a priori principles to be understood through reason and applied in practice. He first examines human practice, and from his observation he develops a theoretical explanation of causal judgments based on an ideal spectator's approach to belief formation. This ideal approach is itself derived from natural human habits like association but is more prudent and refined. Hume presents his readers with various instances of natural instincts gone awry to induce them to resist such imprudent mechanisms in the future by forming lively causal beliefs concerning the dangerous effects of imprudent mental associations.

Conclusion

For Hume, only natural instincts of a certain positive and useful kind (proper inductive associations as presented in his definitions of cause and rules for judging causes) can overcome the imprudent and dangerous instincts. This is what I have called the normative element of Hume's empirically-grounded causal philosophy. Through a comprehensive understanding of the dual definition of cause (including both its theoretical (objective) and subjective components) coupled with the awareness of unreliable instances

of the time (even if we cannot pin down a direct causal relation) induces us to rethink our actions due to the likelihood of adverse consequences if we do not. By the same process, this result is also true of the complementary belief that the reader will form that proper associative mechanisms will cause reliable beliefs, and by the same logic, this positive belief will induce actions that reinforce the usage of prudent induction.

of belief-formation, Hume's reader is equipped with both the means—and perhaps also the desire—to undertake more careful, extensive, and precise experimentation and induction in the future, resulting in more stable and reliable beliefs to guide her actions. It is in achieving this important end that Hume's extended explication of the definition of cause in the *Treatise* plays a pivotal role.

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