

57. See William James's chapter on "The Self" in his *Psychology* (Greenwich, Conn.: Fawcett, 1963), 184, a passage I owe to Schechtman, who quotes it at *The Constitution of Selves*, 138: "There would be a hundred-and-first feeling there, if, when a group or series of such feelings were set up, a consciousness *belonging to the group as such* would emerge, and this one hundred and first feeling would be a totally new fact."

58. I am doubtful that Humean philosophers are committed to their own simplicity, but they may well feel a "propensity" (T 255) toward the commitment, and toward the conception of themselves as a "center" of their "different parts and qualities" (T 263). It can perhaps be argued that such a conception is at work in the passage I go on to quote from T 270–271, but in this paragraph I confine my attention to the Humean philosopher's commitment to his or her identity over time—time during which the principles inventoried at T 270–271 express themselves. I hope that in later work I will be able to describe more fully the Humean philosopher's commitment to, or propensity towards, the simplicity and identity of the self. What needs unpacking, I think, is Hume's conception of the self's "center" (T 263). Unlike, for example, a drama, which also unfolds over time, the self is somehow wholly present at every moment of its life. This presence may be the presence of its "center," which is supposed, even by the Humean philosopher, to remain strictly identical over time, despite a constant revolution in the "parts and qualities" surrounding it. *Treatise* I iv 5 may be helpful in understanding the challenges presented by such a supposition. Also relevant is a neglected observation at T 252: "When my perceptions are remov'd for any time, as by sound sleep; so long am I insensible of *myself*, and may truly be said not to exist." Here Hume embraces the Lockean view that sound sleep is perception-free (see also T 35). It follows (for Hume, though not for Locke) that the person who awakens in the morning is not the same as the person who falls asleep in the evening. I suspect that even the Humean philosopher thinks otherwise, at least on most days. This testifies to the tenacity of the fictions or tendencies that are at odds with Hume's metaphysics of the self.

59. A. H. Basson, *David Hume* (Harmondsworth: Penguin, 1958), 132–133, and S. C. Patten, "Hume's Bundles, Self-Consciousness, and Kant," *Hume Studies* 2 (1976): 59–64. For Garrett's assessment of this interpretation see *Cognition and Commitment*, 172–173.

60. Stroud, *Hume*, 134; see also 127.

61. For a wise and pithy summing-up of the interpretive challenge of the Appendix, see Robert J. Fogelin, *Hume's Skepticism in the Treatise of Human Nature* (London: Routledge, 1985), 108.

## Hume, the New Hume, and Causal Connections

KEN LEVY

I

A recent debate concerns Hume's stance on the existence of causal connections in "the objects".<sup>1</sup> The position that he believes they do not exist in the objects has been dubbed the "standard" or "traditional" or "orthodox" or "Positivist" or "Humean" view.<sup>2</sup> The position that he believes they do or must exist in the objects has been dubbed "Skeptical Realism" or the "New Hume."<sup>3</sup>

Given all of Hume's talk about the inconceivability of causal connections, it would be rather strange, unphilosophical, and therefore "un-Hume-like" if Hume simply assumed—without argument—that causal connections do or must exist in the objects. For why believe these inconceivable "somethings" exist if we can't even imagine what they are (or what their intrinsic nature is)? This demands an explanation.<sup>4</sup>

So either Hume assumes causal connections do or must exist in the objects, or he doesn't. If he doesn't, then the New Hume is false. If he does, then it is only reasonable to expect him to do one of two things:

- (1) provide explicit and unambiguous statements to the effect that he still believes that causal connections do or must exist in the objects despite his belief that we can't even conceive of them

and/or

(2) provide textual evidence that he subscribes to a *reason* for believing that causal connections do or must exist in the objects despite his belief that we can't even conceive of them.

Regarding (1), I hold that no passages in the *Treatise of Human Nature* or in the *Enquiry concerning Human Understanding* warrant the New Hume. Nowhere does Hume unambiguously state that he believes causal connections do or must exist in the objects. I do think that there are several things Hume says that lend themselves to this interpretation—e.g., his various references to our “ignorance” of “secret,” “unknown,” “hidden” powers; and his point that his definitions of cause are “imperfect” and “drawn from circumstances foreign to the cause.” But these and like passages do not amount to explicit and unambiguous statements that causal connections do or must exist in the objects.<sup>5</sup> For they are still compatible with alternative interpretations, interpretations other than the New Hume.<sup>6</sup>

So we are left with (2). Does Hume give evidence that he subscribes to a reason for believing that causal connections do or must exist in the objects? I shall argue that we have good reason to think that he does not. My argument for this conclusion will proceed as follows. First, I shall explicate what I take to be the strongest, and possibly the only, plausible basis on which to infer from the constant conjunctions we observe that there are causal connections. Second, I shall argue that Hume provides no evidence that he subscribes to this basis.<sup>7</sup>

The reader should be aware that my ultimate conclusion is not that Hume is an “anti-realist” about causal connections in the objects. My paper should not necessarily be construed as an argument for the Humean interpretation of Hume (although Humeans may certainly use it to their advantage). I don't actually show or purport to show this. Nor do I think it necessarily follows from my overall argument against the New Hume. For, first, the Humean interpretation and the New Hume are not exhaustive (see note 6). So even if I did disprove the New Hume (which I don't; see below), this doesn't necessarily mean we would have to accept the Humean interpretation by default.

Second, the fact that we have good reason not to subscribe to a certain position doesn't necessarily mean it is false. Indeed, in section IX, I shall argue that the New Hume is still a viable possibility if we attribute a certain other position to Hume—what I shall call “Newtonian Empiricism.” But I shall also argue that this rather plausible interpretation of Hume is equally consistent with Hume's being an agnostic and Hume's being a Humean. Therefore it shows at best that the New Hume cannot be conclusively ruled out, not that we have good reason to believe that it (rather than Hume's being an agnostic or a Humean) is actually true. So, once again, my ultimate conclusion is limited to nothing more than the rather modest—though, given the current state of the literature, necessary—claim that we have good reason not to subscribe to the New Hume.

## II

Since billiard balls constitute Hume's favorite example of a causal interaction, I shall use this example throughout my paper as well. For the purpose of convenience, I shall henceforth refer to the event in which the cue ball rolls into the 8-ball at time *t* as “the cause” or just “*C*,” and the event in which the 8-ball rolls away from the cue ball in the same general direction at a comparable speed right at or after *t* as “the effect” or just “*E*.”

As I shall discuss further below, Hume's problem of causation is largely designed to show that we have no intelligible idea of *C*'s “producing” or “bringing about” *E* (e.g., see T 77, 157–159). And to say that Hume doesn't think we have an intelligible idea of producing is just to say that Hume doesn't think we have an intelligible idea of the causal connection between *C* and *E*. Instead, we have only an intelligible idea of *E*'s following or being “conjoined” with *C*.

What, then, is the causal connection? To answer this question, it would help to start with Hume's claim that we (laypersons and some philosophers) tend to think that nothing other than an *E* could follow a *C*; that upon our first observation of a *C*, we could have anticipated or known that an *E* would follow. Hume argues that those who think this way are confusing the familiar with the self-evident. “[A]ssociation by resemblance [gives] a delusive appearance of rational self-evidence.”<sup>8</sup> We are so familiar with this kind of causal interaction that we think it is simply self-evident that an *E* follow a *C* (T 650; EHU 27, 29–30, 31, 42, 69, 73–74).

In fact, Hume argues, there is a logical or conceptual “gap” between *C* and *E*. Nothing about *C* logically implies that *E* will result rather than another kind of effect. It logically underdetermines *E*. Given even a complete description of the cue ball and its velocity and direction, we still cannot in principle deduce what the 8-ball will do upon impact. In addition to the actual effect (*E*), a number of different conceivable effects are also perfectly logically consistent with the cause (*C*). The 8-ball, for example, could remain where it is, allow the cue ball to pass through it, explode, shatter, disappear, wait five seconds and then roll away, and so on (T 69–70; EHU 27ff, 42, 63). I shall henceforth refer to these and all other conceivable but nonactual effects simply as “*E*\*.”

*C* and *E*, then, seem to be just arbitrarily “slapped” together. There appears to be a “gap of contingency” between them. But it isn't clear whether or not the appearance is the same as the reality. That is, it isn't clear whether the gap really exists between *C* and *E* or whether there is in fact something that we just don't see or know that fills the gap.

So there are really two possible views a philosopher may take of this gap. First, a philosopher may take the view that the reality is just the same as the appearance. The gap of contingency we observe between *C* and *E* really does exist. There is nothing more between them. *C* is merely followed by or conjoined with *E* and that is all. I shall refer to the view that *C* and *E* are merely

conjoined as the "mere-conjunction view" and to the view that most or all C-E conjunctions are mere conjunctions as the "constant-conjunction view."

Second, a philosopher may take the view that there is something more than a mere conjunction of C and E, that there is something "in between" C and E that helps to rule out at least one conceivable effect other than E. If this is the case, we say that C and E are not merely "conjoined" but "connected" as well. The C-E conjunction, in other words, is not a mere conjunction. Rather, there is something more, a causal connection, between them. And the strength of this causal connection is determined by the number of kinds of possible effects it rules out. A causal connection that rules out only one kind of possible effect is the weakest (call this the "first-degree causal connection"); a causal connection that rules out only two kinds of possible effects is only one degree stronger (call this the "second-degree causal connection"); a causal connection that rules out only three kinds of possible effects is two degrees stronger (call this the "third-degree causal connection"); and so on all the way up to a causal connection that rules out *all* other possible effects (i.e., E\*). So we might say that there is a continuum ranging from a mere conjunction of C and E all the way up to a "gap-closing" connection—i.e., a causal connection that rules out all other possible effects and thereby completely seals up the gap of contingency between C and E. If it makes sense to speak of a "logical" or "conceptual" connection between physical events or phenomena, the gap-closing connection amounts to a logical or conceptual connection between C and E. This is really the so-called "rationalist" view of the causal connection.<sup>9</sup>

Since the central question I shall be addressing in this paper is whether or not Hume is a realist about causal connections, I need to use a different terminology from that offered by Michael J. Costa. Costa defines "power realism" as the position that causal powers exist; "causal objectivism" as the position that causal powers are mind-independent; and "causal realism" as a combination of power realism and causal objectivism.<sup>10</sup> But since my main focus (and the main focus of the Humean-New Hume debate) is Hume's position on causal connections rather than on causal powers, I shall adopt the following terminology instead.<sup>11</sup> "CC-realism" is the position that causal connections of one degree of strength or another exist. "CC-anti-realism" is the position that not even first-degree causal connections exist, that mere/constant conjunctions are all there is.

### III

Hume attributes two properties to the causal connection, both of which suggest that he simply assumes it is a gap-closing connection. First, the causal connection must rule out all other seemingly conceivable or logically possible effects except the actual effect. It must, as he says, render all other effects

absolutely "impossible" and thereby render the actual effect "inseparable," "infallible," "inviolable." Call this the "ruling-out-E\* property."<sup>12</sup> Hume's assumption that the causal connection bears the ruling-out-E\* property explains why he always refers to it as a "necessary" connection rather than merely a "causal" connection.

The second property Hume attributes to the causal connection follows from the ruling-out-E\* property. The ruling-out-E\* property implies that the causal connection, if we could somehow see or have knowledge of it, would enable us to see why no effect other than an E could have occurred and therefore why E *must* result from C. It follows from this that if we could somehow perceive or have knowledge of the causal connection, then knowledge of causal sequences would not require induction. We would not have to observe several such C-E conjunctions before we could know that the next C will be followed by an E as well. Instead, we could see this in a "single instance." We could know "without experience" or noninductively what effect will and must arise from C. This counterfactual knowledge-giving power, then, is the second property that Hume attributes to the causal connection. Call this the "knowledge-enabling property."<sup>13</sup>

Since both the ruling-out-E\* property and the knowledge-enabling property may be attributed only to the gap-closing connection, one might conclude from all of this that Hume is not merely a realist about causal connections but a realist about gap-closing connections. But this would be a hasty inference. The fact that Hume characterizes the causal connection as a gap-closing connection doesn't necessarily mean he believes gap-closing connections (no less causal connections) exist. He is not necessarily saying that there actually exist entities that bear these properties. Instead, he may just be saying that *if* there were entities that qualify as causal connections, these would be the properties they would have. In other words, his property-attributions may be merely hypothetical rather than categorical. Without this possible interpretation, we would have to conclude that, contrary to Hume's reputation as an empiricist, Hume is really a diehard rationalist. For, as we have just seen, he offers a quintessentially rationalist characterization of the causal connection between C and E.

### IV

Hume's conception of the causal connection explains why he thinks we don't observe causal connections. Because a causal connection is whatever it is that bears the ruling-out-E\* property (not to mention the knowledge-enabling property), to say that we actually observe causal connections is to say that we actually see causes ruling out—rendering impossible—other kinds of possible effects. But one of Hume's principal claims in both the *Enquiry* and the *Treatise*

is that this is just false. When we see the cue ball hit the 8-ball, we see nothing that rules out the possibility of the 8-ball's, say, disappearing or shattering. We don't see that it *can't* disappear or shatter. We see only that it *doesn't* disappear or shatter. In order to see the ruling out of these other possible effects, we would have to see something—an "obstacle"—that *blocks access* from the actual world (in which C just occurred) to many or all of the possible worlds in which these other effects follow C. But we simply do not see any such obstacle. Instead, all we observe is mere/constant conjunction:

Suppose two objects to be presented to us, of which the one is the cause and the other the effect; 'tis plain that from the simple consideration of one, or both these objects we never shall perceive the tie, by which they are united, or be able certainly to pronounce, that there is a connexion betwixt them. . . . Did we never see any but particular conjunctions of objects, entirely different from each other, we shou'd never be able to form any such ideas. (T 162; see also T 77, 158–161)

[E]ven in the most familiar events, the energy of the cause is as unintelligible as in the most unusual, and that we only learn by experience the frequent conjunction of objects, without being ever able to comprehend anything like connexion between them. (EHU 70)

All events seem entirely loose and separate. One event follows another; but we never can observe any tie between them. They seem conjoined, but never connected. (EHU 74)

All of this clearly suggests that we don't observe causal connections. Our observations of the external world are perfectly consistent with there being nothing more than constant conjunction.<sup>14</sup>

This conclusion explains why Hume deliberately leaves any mention of a causal connection out of his definitions of "cause." Instead, his first definition of "cause" relies entirely on the concept of constant conjunction:

an object followed by another, and where all the objects similar to the first are followed by objects similar to the second. (EHU 76)

And Hume's second definition relies entirely on the concepts of both (constant) conjunction and psychological association:

an object followed by another, and whose appearance always conveys the thought to that other. (EHU 77)

## V

In this section, I want to eliminate one possible reason for thinking that Hume is a CC-realist and one possible reason for thinking that he is a CC-anti-realist.

First, one might argue that Hume is a CC-realist for the following reason. By Hume's first definition of cause, C is connected to E just in virtue of the fact that Cs are regularly followed by Es. In other words, the constant conjunction of Cs and Es itself constitutes the connection between each particular C and E.

But this argument is problematic. As we saw above, a causal connection as Hume characterizes it is something between C and E that rules out other possible effects. So in order for this argument to be correct, there would have to be evidence that Hume thinks that the constant conjunction of which each particular C-E conjunction is an instance itself helps to rule out other possible effects. But, first of all, he never suggests any such thing. Even in his discussion of the "doctrine of necessity" (EHU 81–82), Hume suggests only that our observations of constant conjunctions give rise to our idea of causal necessity and our belief that causes necessitate their effects. He does not suggest that there is actual necessitation going on or that constant conjunctions themselves help particular causes to necessitate their effects. Second, he rejects the notion that constant conjunction is itself causally efficacious when he argues that there is no causal connection between past conjunctions of Cs and Es and present conjunctions of Cs and Es (T 164). So even if Hume thinks that the constant conjunction (and strong association) of Cs and Es constitutes some sort of a connection between each particular C and E, this doesn't make Hume a CC-realist. For this seems to involve a different sense of "connection" than that which CC-realists have in mind.

Second, one might defend the proposition that Hume is a CC-anti-realist in the following way. Basically, Hume *does* explicitly state that he is a CC-anti-realist. In the *Treatise*, Hume clearly concludes that it cannot be true to say that causal connections—or "necessity"—exists in the objects. His reasoning goes like this:

- (1) The felt determination of the mind is the origin of our idea of necessity.<sup>15</sup>
- (2) Therefore all our idea of necessity represents (or refers to or consists in) is the felt-determination of the mind.<sup>16</sup>
- (3) Therefore to say that there is necessity in the objects is just to say that there is a felt-determination of the mind in the objects.
- (4) The felt determination of the mind is a feeling, and feelings can inhere only in minds, not in objects.
- (5) Therefore there can't be a felt determination of the mind in the objects.

(6) Therefore it can't be true to say that there is necessity in the objects.<sup>17</sup>

Now, (6) is ambiguous between:

(6a) It makes no sense to say that there is necessity in the objects. This proposition is simply meaningless. Therefore the statement that there is necessity in the objects is neither true nor false. It simply has no truth value.

and

(6b) While it is perfectly meaningful to speak of necessity in the objects, this simply can't be true. The statement that there is necessity in the objects must be false.

Call (6a) the "Semantic Version" of (6)<sup>18</sup> and (6b) the "Ontological Version" of (6). Either way, whichever version we accept, the same conclusion—(6)—falls out. And (6) is clearly inconsistent with CC-realism and therefore with the New Hume. So, the argument concludes, it is quite easy to refute the New Hume. One needs merely to point to these passages in the *Treatise*.

The problem with this argument against the New Hume (and for the Humean interpretation of Hume) is that while it may work with respect to the *Treatise*, it doesn't work with respect to the *Enquiry*. For Hume makes no comparable statements or arguments here. And since the *Enquiry* comes after the *Treatise*, we have good reason to believe that this is Hume's final word on the matter.<sup>19</sup>

Hume seems to recognize in the *Enquiry* that he made an invalid inference in the *Treatise*. He seems to realize that even if we are led to believe both that necessity exists in the objects and that we therefore have an intelligible idea of necessity in the objects by a fallacious thought process, this does not necessarily mean (as he thought in the *Treatise*) that necessity doesn't or can't exist in the objects.

So in the *Enquiry*, Hume is careful never to state that it can't be true that necessity exists in the objects. Instead, he states merely:

This connexion, therefore, which we feel in the mind, this customary transition of the imagination from one object to its usual attendant, is the sentiment or impression from which we form the idea of power or necessary connexion. Nothing farther is in the case. . . . When we say, therefore, that one object is connected with another, we mean only that they have acquired a connexion in our thought. (EHU 75)

Hume, then, still endorses (1) and possibly (2) above. But he simply leaves out (3) through (6).

Some New Humeans have taken this omission to mean that Hume is now leaving open the possibility that necessity can and does exist in the objects.

They argue that Hume's skepticism, in the *Enquiry* at least, is not semantic or ontological but rather epistemological. Hume now thinks that while there can be and actually is necessity in the objects and therefore that it is meaningful to speak of necessity in the objects, we cannot have any knowledge of its nature.<sup>20</sup>

The initial difficulty with this interpretation of Hume would seem to be that it commits Hume to the nonsensical proposition that a felt determination of the mind can be and actually is in the objects. But New Humeans respond that this incorrectly assumes that Hume thinks our idea of necessity consists *entirely* in the felt determination of the mind.<sup>21</sup> Instead, Hume's idea of necessity splits into both a "positive" or "intelligible" or "impression-derived" idea and a "relative" or "unintelligible" or "non-impression-derived" idea.<sup>22</sup> The positive idea, once again, is the felt determination of the mind. The relative idea, however, is whatever it is in the objects to which the felt determination of the mind in some way "corresponds" or which in some way is "represented" by the felt determination of the mind. It is that in the objects which "causes" the relevant constant conjunction and thereby indirectly causes our felt determination.

So, according to New Humeans, when Hume suggests that we have no idea of necessity other than the felt determination of the mind, what he really means is that we have no other *positive* idea of necessity. But he is still leaving room for us to have a relative idea of necessity in the objects. And this relative idea in turn leaves room for us to speak meaningfully of necessity in the objects. So Hume's skeptical conclusion is skeptical not about the existence of necessity in the objects or the meaningfulness of statements attributing necessity to the objects, but rather about our ability to have an intelligible idea, and therefore knowledge, of necessity in the objects.

As long as this remains a possible interpretation of Hume, philosophers cannot simply assume that Hume's very Humean statements in the *Treatise* are sufficient to refute the New Hume. And I have seen no good evidence to suggest that this is *not* a possible interpretation of Hume. On the contrary, I reject the objection made by several philosophers that Hume offers little or no evidence that he thinks we can have a relative idea of causal connections.<sup>23</sup> For, as we have already seen, Hume attributes two different properties—the ruling-out-E\* property and the knowledge-enabling property—to the causal connection. And both Humeans and New Humeans agree that he doesn't think that this constitutes a positive or intelligible idea of the causal connection. So it must count as a relative or unintelligible idea.

## VI

So is there a good reason to think that Hume is a CC-realist? Certainly, explicit and uncontroversial statements that causal connections exist would be the

best evidence. Unfortunately, Hume never provides them (see n. 5). So, short of this, what else might do the job? I think that the New Humean must show that Hume thought that, since we do not observe causal connections, we are able to *infer* their existence from what we do observe.

John Locke can be interpreted as holding this position. He argues not that we observe causal connections themselves, but rather that we observe *that* there are causal connections. We acquire the ideas of cause and effect from observing causal processes like fire burning wood.<sup>24</sup> In such cases, we see the actual changing of the wood's form and the cause of this change (the fire). From this, we derive the ideas of cause (the changer) and effect (the object's undergoing of this change). So we do perceive the causing or producing or process of change, the "operation" of the cause on the object. What we do not see is the causal connection itself, what Locke refers to as the "manner of that operation" (II xxvi 2).

But if we don't directly observe causal connections, how do we still observe—or know—that they exist? Although Locke doesn't explicitly say this, this knowledge (if it is that) must involve an *inference* from what we do observe. So a more accurate formulation of Locke's position would be: our observations of causal processes give us good reason to infer that there are causal connections involved in these processes.

Is it possible that Hume shares Locke's position here? One might argue that it isn't, that Hume cannot possibly hold that we have good reason to infer from what we observe that there are causal connections. For Hume rejects an analogous move Locke makes with respect to powers. Hume rejects Locke's claim that we derive the idea of power from our observations of change because this would involve what he takes to be impossible—namely, reason's inventing a "new, simple, original idea" (EHU 64n; see also T 157, 157n).

The only problem with this argument, however, is that the inference from what we observe to the existence of causal connections is not entirely analogous to the move that Locke makes and Hume rejects—namely, that we can derive the *idea* of power (not necessarily *infer* the *existence* of power) from our observations of change.

Of course, one might respond that the inference to the existence of causal connections itself rests on the assumption that we have some idea of causal connections. But Hume rejects this. Therefore he would still reject the notion that we can infer the existence of causal connections from our observations of change as well.

But it is not clear that Hume really does reject the notion that we have some idea of causal connections. Again, he has given us *some* idea—a relative idea (see section V)—of causal connections. They are whatever bear the ruling-out-E\* and the knowledge-enabling properties. Moreover, he suggests that we do have a "positive" idea of causal connections as well—namely, the "felt determination of the mind" (see section V). (Still, the latter consideration is

weaker than the former consideration because the felt determination of the mind constitutes a different conception of the causal connection than whatever it is that bears the ruling-out-E\* and the knowledge-enabling properties. I make a similar point above in section V.)

So it is still possible that Hume shares Locke's position that our observations of causal processes give us good reason to infer that there are causal connections involved in these processes. Let us assume for the moment that he does. Given this, what might a "good reason" be for Hume? On what basis might Hume infer from the causal processes we observe that there are or must be causal connections? In short, what might he think is the ground of this inference?

I can think of only one possible plausible answer to this question.<sup>25</sup> Hume might draw the inference that there are or must be causal connections from what we observe because he holds that there must be an answer to at least one of the following two explanatory questions:

- (1) How does this (type of) cause bring about this (type of) effect?
- (2) Why does this particular (type of) effect rather than another possible (type of) effect follow this (type of) cause?

I shall spend the remainder of this section spelling out the implications of these questions. In the next section, I shall determine whether or not such questions—and therefore such a basis for the inference to causal connections—can be found in Hume.

If we apply billiard balls to the first question, we arrive at Locke's problem of the "communication of motion by impulse": how does one billiard ball "communicate" or transfer motion to another billiard ball? Unfortunately, Locke never really explains why he finds this to be mysterious.<sup>26</sup>

If we apply billiard balls to the second question above, we get: why does an E rather than another type of event follow a C?<sup>27</sup> In other words, what about the actual effect (E) leads it, in the end, to get "selected" above any others? Why should the 8-ball do *this* rather than another logically possible alternative we can imagine instead?

CC-realists who believe that there must be an answer to the first "how-possible" question and/or to the second "why-this-rather-than-that" question are assuming two things. First, they are assuming that the apparent gap of contingency between the cause and the effect amounts to an "explanatory gap."<sup>28</sup> I shall therefore continue to refer to these questions as the "Explanatory Gap Questions" (or "EGQs"), and to CC-realists who believe that causal connections do or must exist for explanatory reasons as "CC-EGQ-realists." Second, they are assuming that there must be something that fills (at least to some extent) this explanatory gap, something in virtue of which E follows and must

(to some extent) follow C. Again, this "something" would be a causal connection.

Why do CC-EGQ-realists believe that there must be something that answers at least one of the EGQs above? There seem to be two possible reasons. One possibility is that CC-EGQ-realists subscribe to two different versions of the Principle of Sufficient Reason (PSR), what I shall refer to as "Ontological PSR" and "Explanatory PSR." Ontological PSR says:

Every contingent fact must be in principle intelligible.

And Explanatory PSR says:

In order for a contingent fact to be in principle intelligible, it must be possible in principle to understand why it obtains rather than not.

Because (as we have already seen) the fact that E follows C appears to be contingent, Ontological PSR and Explanatory PSR together imply that there must be a causal connection between C and E, something more than a mere conjunction of C and E, something that explains why E rather than E\* or some subset of E\* follows C. Call this the "PSR Argument."

How strong this causal connection must be depends on a particular CC-EGQ-realist's explanatory standards—i.e., on how strong a notion of intelligibility a particular CC-EGQ-realist has in mind. If she has the strongest possible notion of intelligibility in mind, she will hold that Explanatory PSR is not satisfied unless E\* is ruled out. And this is the case only if there is a gap-closing connection between C and E. As we have seen above, rationalists typically adopt this position. Their strongest possible standard of intelligibility correlates with the strongest possible degree of necessity. If, on the other hand, a CC-EGQ-realist has a weaker notion of intelligibility, if she believes that Explanatory PSR is satisfied as long as the causal connection rules out only some (though not all) other possible effects, then she will be a realist about lower-degree causal connections (i.e., causal connections that are weaker than gap-closing connections). Such a CC-EGQ-realist's standard of intelligibility correlates with a weaker degree of necessity.

It is relevant to note the two possible positions that a CC-anti-realist might take in this context. The CC-anti-realist will argue that because causal connections do not exist, there is no "missing" explanans and therefore no "missing" explanation of why E rather than E\* follows C. From this, the CC-anti-realist may conclude one of two things. She may conclude that the C-E relation is either maximally intelligible or maximally unintelligible. If she subscribes to Explanatory PSR, she will conclude that it is maximally unintelligible. For given that there is no explanation of why E rather than E\* follows C, it is impossible in principle to understand why E rather than E\* follows C. If

she rejects Explanatory PSR, she will conclude that the C-E relation is maximally intelligible. For we know everything there is to know about the C-E relation—namely, C and E and the regularity of which the C-E conjunction is an instance. If one asks why E rather than E\* follows C, the answer is not that we don't understand the explanation, but rather that there is no explanation to understand.

The second possible reason CC-EGQ-realists may believe that there must be an answer to at least one of the EGQs is that CC-EGQ-realists hold that without such a reason or explanation, it would be a huge "cosmic coincidence" that Cs are always or usually followed by Es. If there were no causal connection between Cs and Es, then the fact that all Cs are followed by Es would be comparable to flipping heads with a coin millions or billions of times in a row. Because the latter is so improbable, if it really occurred, the only reasonable hypothesis would be that there was something "special" about the coin—e.g., it had two heads. Likewise, then, with the former. There must be something "special" about Cs that leads them always or usually to be conjoined with Es. This "something special", once again, is the causal connection. Call this the "Cosmic Coincidence Argument."<sup>29</sup>

## VII

Some philosophers simply assume that Hume is at least implicitly asking the EGQs; that Hume takes the gap of contingency between C and E to be an explanatory gap; that Hume sees the causal connection as playing an explanatory role. Therefore Hume's skeptical conclusion that we have no intelligible idea of causal connections really amounts to a skeptical answer to the EGQs. In other words, when Hume says that we have no intelligible idea of causal connections, what he is really getting at is that we can't understand either how C produces E, or why C produces E rather than E\*, or both.<sup>30</sup>

Hume certainly does argue that our ideas must ultimately arise from impressions; that we cannot have an impression of the connection between cause and effect; and that we therefore cannot have an idea of the connection between cause and effect. But it doesn't necessarily follow from this that Hume thinks we cannot *understand* causal relations. Indeed, Hume never implicitly or explicitly draws this conclusion. Instead, Hume draws a different conclusion. Rather than offering a skeptical conclusion regarding the limits on explanation or understanding of causal relations, Hume offers a skeptical conclusion about the meaningfulness of such terms as "necessary connection" (and "force," "power," and "energy").

Of course, Hume's skeptical conclusion is not his final word. Instead, just as he offers a "skeptical solution" to his problem of induction (EHU 40ff.), he offers a "solution" to his problem of causation. Hume's solution really

amounts to an explanation of why we think that we have an intelligible idea of necessity in the objects—and therefore why we think that such terms as “force”, “power”, and “energy” are meaningful—when we really don’t.

His explanation goes something like this. Our observations of the constant conjunction of Cs and Es condition us to expect an E upon the next observation of a C. We just can’t help feeling that the next C will be followed by an E. Hume refers to this feeling as an “impression” of “felt determination” or a “felt transition” of the mind from the observation of a C to the expectation of an E (T 165; EHU 75–76, 78). But because this impression of felt determination is caused by our observations of external objects, we have a tendency to mistake it for a property of the objects rather than recognizing it for what it is, a feeling. That is, we “project” or “spread” our felt determination on to the objects themselves.<sup>31</sup> We think we are giving a report about the external world (“An E must follow this C”) when we are really giving a psychological report (“I can’t help feeling that an E will follow this C”).<sup>32</sup> This explains why we think we have an intelligible idea of necessity in the objects when we really don’t. We mistake this projected idea of felt determination for an intelligible idea of necessity in the objects.<sup>33</sup> Instead, all we really have intelligible ideas of are the impressions of felt determination and the impressions of constant conjunction that gave rise to this projected idea of felt determination.

So part of Hume’s solution to his problem of causation is that we really don’t have an intelligible idea of causal connections in the objects. This supports my point that the problem with which Hume is concerned may not be identified with the EGQs. As the very word “solution” suggests, Hume thinks his solution does indeed solve his problem of causation. And, as we have seen, he also thinks that we cannot have an intelligible idea of causal connections in the objects. But because an intelligible idea of causal connections is necessary to answer the EGQs, the problem he thinks he has solved—the problem of causation—can’t possibly be either of the EGQs. So he must take himself to be solving some other question entirely. And this, once again, is the question of whether or not we have an intelligible idea of causal connections and therefore whether or not such terms as “necessary connection,” “force,” “power,” and “energy” are meaningful.

I draw two conclusions from all of this. The first conclusion is that Hume shows absolutely no evidence of subscribing to CC-EGQ-realism. Hume never even shows any signs of being interested in the EGQs in his problem of causation. He never explicitly characterizes his problem of causation as an explanatory problem. He never explicitly formulates his problem of causation in explanatory terms.<sup>34</sup> He never describes the causal connection as whatever it is that would “explain” or help us to “understand” either how Cs produce Es or why Cs produce Es rather than E\*. Instead, he simply asks a non-EGQs-related “whether-question”: whether or not we have an intelligible idea of causal connections in the objects. His “skeptical conclusion” is that we do not.

The second conclusion picks up from the first. Since (1) Hume shows no evidence of subscribing to CC-EGQ-realism; (2) CC-EGQ-realism is the strongest, and possibly the only, plausible basis for subscribing to CC-realism; and (3) Hume never explicitly says that he believes that causal connections exist, it follows that Hume gives no evidence of subscribing to CC-realism. Therefore we have good reason not to subscribe to the New Hume.

## VIII

I shall now consider several objections to the argument I have offered above against the New Hume.

**Objection 1:** Why does Hume think the connection between C and E must be *necessary* or *gap-closing* rather than merely *causal*—i.e., something that rules out some or many other possible effects but not necessarily *all* other possible effects? Inference to the best explanation suggests that Hume sees the connection between cause and effect as playing an explanatory role. That is, the best explanation of why Hume attributes the ruling-out-E\* property (and therefore the knowledge-enabling property) to the causal connection is that Hume both adopts Ontological PSR and Explanatory PSR *and* has the highest standard of intelligibility in mind. So the connection between C and E must be gap-closing for Hume because he believes that there must be something that rules out all other possible effects and thereby renders the fact that Es follow Cs (completely) intelligible.

**Reply:** Hume never explicitly states or even implies that the causal connection must bear the ruling-out-E\* property or the knowledge-enabling property *in order to* answer either EGQ. He never suggests or implies that the causal connection plays any kind of explanatory role. Instead, he simply *assumes* that it must have these two properties without explicitly explaining *why* he thinks it must have them.

So in order for Objection 1 to work, it must be the case that the explanatory motive is the only plausible explanation of why Hume would make these attributions. But this is not the case. I argue that there are at least two other equally plausible explanations of why Hume characterizes the causal connection as a gap-closing connection which do not imply that Hume sees it as playing an explanatory role.

First, Hume may attribute the ruling-out-E\* property to the causal connection, not because he thinks this is necessary to fill the explanatory gap, but rather because he thinks this is necessary to fill the gap of contingency between C and E. And there are at least two reasons other than the explanatory motive why he might want to fill the gap of contingency. First, he may take this to be a necessary condition of there being a solution to the problem of



induction. He may hold, that is, that if the problem of induction is in principle solvable, then there must be something that bears the knowledge-enabling property—i.e., something that can in principle be seen or known that would enable us to have non-inductive knowledge of nature, to know that the future will be like the past. And the only something that bears the knowledge-enabling property is the causal (in this case, gap-closing) connection.

A second possibility is that he (mistakenly) takes filling the gap of contingency to be the only alternative to the constant conjunction view.<sup>35</sup> The constant conjunction view, once again, holds that there really is (not just appears to be) a gap of contingency between C and E. So the only alternative to this view is that there is a gap-closing connection and therefore no gap of contingency. He may want to offer an alternative to the constant conjunction view not for explanatory reasons but simply because he wants to suggest that there are different theories of causation and no empirical way to decide between them. Again, if either of these is Hume's reason for characterizing the causal connection as gap-closing, then the causal connection doesn't necessarily play any explanatory role for Hume.

A second possible explanation (in addition to wanting to fill the gap of contingency) of Hume's characterizing the connection between cause and effect as gap-closing is not that he himself thinks this—and therefore not that he has either EGQ in mind—but simply because this is how we (laypeople) think of it<sup>36</sup> and/or how other philosophers (namely, Locke<sup>37</sup> and rationalists like Descartes<sup>38</sup> and Malebranche<sup>39</sup>) characterize it.<sup>40</sup> He is merely reporting our and/or their view; merely articulating our and/or the other philosophers' position, not necessarily his own. So it is really not Hume but rather we and/or these other philosophers who have the EGQs in mind.<sup>41</sup>

**Objection 2:** Hume *does* ask either of the EGQs with respect to certain phenomena. Consider, for example, the following passage:

Present two smooth pieces of marble to a man who has no tincture of natural philosophy; he will never discover that they will adhere together in such a manner as to require great force to separate them in a direct line, while they make so small a resistance to lateral pressure . . . nor does any man imagine that the explosion of gunpowder, or the attraction of a loadstone, could ever be discovered by arguments a priori . . . Who will assert that he can give the ultimate reason, why milk or bread is proper nourishment for a man, not for a lion or a tiger? (EHU 28)

Hume, then, is clearly asking why it is difficult to separate two slabs of marble by lifting but not by pushing; why gunpowder explodes; why loadstone attracts (certain kinds of objects); why milk and bread nourish man but not lions or tigers. So he is interested in the EGQs after all.

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**Reply:** At first blush, it may seem that Hume is asking in each case at least one of the EGQs. But he really isn't. He isn't really asking anything at all. He is merely making the point that I attributed to him above—namely, that there is an apparent gap of contingency, a conceptual gap, between causes and their effects. And in this particular context (his discussion of the problem of induction), the overall point he is making with this is that, as a result, we cannot know a priori what kind of effect will result from a given cause. Instead, we must learn this from experience. Of course, this may presuppose that we don't understand how the cause produces its effect or why the cause produces this effect rather than another. But this is not what Hume is driving at.

**Objection 3:** Hume does, however, explicitly ask the how-possible EGQ with respect to the relation between will (or soul) and body:

[I]s there any principle in all nature more mysterious than the union of soul with body; by which a supposed spiritual substance acquires such an influence over a material one, that the most refined thought is able to actuate the grossest matter? Were we empowered, by a secret wish, to remove mountains, or control the planets in their orbit; this extensive authority would not be more extraordinary, nor more beyond our comprehension. (EHU 65)

Hume is clearly suggesting that we simply can't understand *how* we (or our wills) move our bodies. Hume also makes a similar claim regarding the relation between will and mind:

But do we pretend to be acquainted with the nature of the human soul and the nature of an idea, or the aptitude of the one to produce the other? This is a real creation; a production of something out of nothing: Which implies a power so great, that it may seem, at first sight, beyond the reach of any being, less than infinite. At least it must be owned, that such a power is not felt, nor known, nor even conceivable by the mind. We only feel the event, namely, the existence of an idea, consequent to a command of the will: But the manner, in which this operation is performed, the power by which it is produced, is entirely beyond our comprehension. (EHU 68; see also T 656)

Again, Hume is suggesting that we simply can't understand how we (or our souls) think—i.e., both create thoughts and sustain trains of thought.

**Reply:** Hume is clearly asking some how-possible EGQs here. But this fails to refute my point that Hume doesn't provide any evidence that he believes there

must be an answer to these EGQs. First, the fact that Hume asks these how-possible EGQs does not necessarily mean he believes there must be an answer to them. Everything he says (or asks) is perfectly consistent with the belief that there are or may be no answers to these questions.

Second, Hume's main point is not that we can't understand how we control either body or mind. Rather, his main point is that we cannot derive an idea of power from the phenomenology of willing. His argument is this. If we did derive an idea of power from the phenomenology of willing, we would understand *how* we will. But we don't understand how we will; we just do. Therefore we do not derive any idea of power from the phenomenology of willing. So Hume is ultimately making a point about a specific idea (the idea of power), not a point about the existence of causal connections or our understanding of causal connections (if they do indeed exist).

Third, these are the only places in which he clearly asks any EGQs. He asks nothing comparable with respect to external objects. And this supports my main point that he is simply not concerned with whether or not there are causal connections *in the objects*.

**Objection 4:** Strawson argues as follows.<sup>42</sup> It is obvious that causal connections exist. Any reasonable person can see this. And Hume is clearly a reasonable person. That's why it never even occurs to him to doubt CC-realism and entertain CC-anti-realism.

**Reply:** Why would Hume be unreasonable ("absurd") to entertain, no less accept, CC-anti-realism? The only argument Strawson gives for thinking that CC-anti-realism is unreasonable is the Cosmic Coincidence Argument.<sup>43</sup> This implies, then, not only that it is unreasonable (absurd) for anybody not to subscribe to the Cosmic Coincidence Argument (!) but also that Hume accepts the Cosmic Coincidence Argument. Yet Strawson provides no evidence—nor could he, since there is none—that Hume is even aware of the Cosmic Coincidence Argument. So this hardly provides us with good reason to believe that Hume is a CC-realist. Instead, the most this shows is that we have good reason to think that *Strawson* is a CC-realist.<sup>44</sup>

**Objection 5:** The reason Hume fails to present his problem of causation as an explanatory problem is simply because he doesn't realize that this is what he is driving at. So his failure to mention the EGQs is simply inadvertent. Therefore it tells us nothing about his stance on the existence of causal connections.

**Reply:** Consideration of Hume's discussion of causation against the background of Locke's discussion of causation helps to refute Objection 5. Hume is clearly quite familiar with Locke. Indeed, he appropriates much of what Locke

says in his own discussion of causation. So if Locke *hadn't* discussed causation in explanatory terms, Hume's omissions on this score wouldn't be nearly as telling. But the fact is that Locke does discuss it in these terms.<sup>45</sup> Hume could hardly have overlooked this when he was trying to formulate the problem of causation in his own terms. This suggests that Hume's failure to frame the problem of causation in explanatory terms is deliberate. For some reason, he does not *want* his problem of causation to be read as an explanatory problem. In the next section, I shall offer some possible explanations of why he may have felt this way.

## IX

Why doesn't Hume want his problem of causation to be read as an explanatory problem? Why might Hume diverge from Locke in this respect? I shall argue that all but one of the possible answers to these questions are incompatible with the New Hume. And the only one that is compatible with the New Hume still fails to give us good reason to subscribe to the New Hume.

(A) The first possible answer to these questions is this. If we take this omission at face value, Hume doesn't present his problem of causation as an explanatory problem simply because he doesn't see it as an explanatory problem. In other words, he doesn't think the gap of contingency between C and E amounts to an explanatory gap.<sup>46</sup> The most likely reason Hume would think this is because he simply holds that causal connections do not exist. If there are no causal connections to begin with, then there is nothing about causal relations we can't in principle understand. They are perfectly intelligible to us. We can in principle understand everything there is to know about them. Therefore there simply is no explanatory gap between C and E. (See section VI; again, notice that this view involves an implicit rejection of Explanatory PSR.) If Hume accepts this, then he is clearly not a CC-realist but a CC-anti-realist, in which case the New Hume is false.

(B) The second possible answer to these questions is that Hume may think the gap of contingency amounts to an explanatory gap, but he doesn't want to frame his problem of causation in explanatory terms because he is anxious that this would at least appear to commit him to a position he does not wish to accept. The only positions I can think of to which he would think this (appears to) commit him are (B1) CC-realism and/or (B2) the position that knowledge of causal connections is necessary to understand causal relations.

(B1) The first possibility under (B) is that Hume thinks that the conceptual gap between C and E amounts to an explanatory gap but that framing the problem of causation in explanatory terms appears to commit him to CC-realism.

Hume is reluctant to accept this. Why might Hume think this appears to commit him to CC-realism? Hume may think that to ask the EGQs is to give the impression that he believes that there must be an answer to these questions; that to suggest that the gap of contingency amounts to an explanatory gap is to give the impression that he believes that there must be an explanation (a causal connection) that fills the gap. For, one might reason, if there were no such answer, then there wouldn't be an *explanatory* gap between C and E in the first place. There would be only a gap of contingency, a conceptual gap, and nothing more (position (A) above).

Why, then, might Hume be reluctant to appear to commit himself to this view that there is something that fills the explanatory gap? It seems that there are two possibilities.

(B1a) First, Hume may believe that there is *nothing* that fills the explanatory gap. In other words, he may be a CC-anti-realist. This position is clearly incompatible with the New Hume.

(B1b) The second possibility is that Hume is "agnostic" about whether or not causal connections exist. He believes that we simply cannot in principle know whether or not causal connections exist. So he refrains from characterizing the gap of contingency between C and E as an explanatory gap and thereby giving the impression he is a CC-realist because he is really a "CC-agnostic"—i.e., one who suspends belief between CC-realism and CC-anti-realism. This interpretation, then, is incompatible with the New Hume as well. For if Hume subscribes to CC-agnosticism, then he does not subscribe to CC-realism. I shall return to this point below.

(B2) The second possibility under (B) is that Hume thinks that the conceptual gap between C and E amounts to an explanatory gap but that framing the problem of causation in explanatory terms appears to commit him to the position that knowledge of causal connections is necessary to understand causal relations and therefore that our inability to have an idea of causal connections implies that there is a limit on our possible understanding of the world. Again, Hume might be reluctant to accept this.

Why might Hume be reluctant to accept this? Hume realizes, on the one hand, that we simply cannot have knowledge of causal connections. Yet Hume may very well also want to avoid the unpopular and seemingly false conclusion that we have *no* scientific understanding, *no* knowledge of "how things work." So Hume may attempt to draw a "compromise" between these two beliefs by adopting the position that scientific understanding does not require knowledge of causal connections.

Hume clearly thinks that whether or not causal connections exist, we cannot perceive them. They lie beyond all possible perception. Therefore we

cannot in principle acquire any intelligible idea of them. This would explain why he refrains from asking the EGQs altogether. He realizes that our inability to acquire an intelligible idea of causal connections renders it impossible for us to have an intelligible answer to the EGQs. So there is no point in pursuing them to begin with. It is simply a waste of our time and effort. In this way, Hume may think that his skeptical conclusion and skeptical solution don't solve but rather *dissolve* the EGQs. That's why he doesn't mention them.

The corollary of this is that if we are to use our time and effort wisely, we should occupy ourselves only with questions whose answers *do* lie within possible perception—i.e., "scientific" questions. For these are the only questions we can in principle answer and therefore the only questions worth pursuing. And Hume clearly does think it worthwhile to pursue scientific questions. Hume suggests at several different points that scientists like Newton have very much helped to increase our knowledge of the universe.<sup>47</sup>

So Hume's compromise may just be to draw an implicit distinction between scientific understanding and non-scientific or "intuitive" understanding. On this view, we can have the former even if we can't have the latter. An intuitive understanding of the causal relation would require us to have knowledge of causal connections. But a scientific understanding does not.<sup>48</sup> For this reason, Hume may think that the kind of knowledge we should seek—scientific knowledge—includes nothing more than constant conjunctions; that it does not include causal connections. Even if causal connections exist, science can still get along perfectly well without knowledge of them. Since I take this compromise to be Newton's view of science, call it "Newtonian Empiricism."<sup>49</sup>

If Hume does indeed subscribe to Newtonian Empiricism, he may still very well be a CC-realist. For the belief that knowledge of causal connections isn't necessary for scientific knowledge is still perfectly compatible with the belief that causal connections exist.<sup>50</sup> In this way, attributing Newtonian Empiricism to Hume is the New Humeans' last, best hope. For this is really the only interpretation that reconciles *both* the New Hume *and* Hume's failure to ask the EGQs or to suggest that they do or must have an answer. All of the others (above) render the two incompatible.

New Humeans, however, still cannot argue that this interpretation of Hume as Newtonian Empiricist gives us good reason to subscribe to the New Hume. It is not sufficient for New Humeans to argue that Hume is a Newtonian Empiricist. For, at best, this helps to show that the New Hume can't be ruled out or disproven, that it is still possible that Hume is a CC-realist. But New Humeans need to show more than this. They need to show not merely that it is possible that Hume is a CC-realist but rather that we have good reason to believe that Hume actually *is* a CC-realist. They need to show us not merely that the New Hume can't be disproven but that we have good reason to believe that it is correct. And this simply isn't the case. On the contrary, the

interpretation of Hume as Newtonian Empiricist tends to lean not in the direction of Hume's being a CC-realist but rather in the direction of Hume's being a CC-agnostic. In the end, then, New Humeans must establish that Hume is *not* a CC-agnostic.<sup>31</sup> But I have argued in this paper that the evidence just isn't there.

X

In this last section, I would like to address two final issues. First, one might very well concede that I have successfully proven that Hume shows no evidence that he subscribes to CC-EGQ-realism and still argue that I have failed to do much damage to the New Hume. For there are yet other possible reasons on the basis of which Hume may subscribe to CC-realism.

To be sure, I have not ruled out this possibility. Nor can I. I cannot *prove* a negative. I cannot prove that there are no other such reasons. But my "test" for determining whether or not Hume gives us good reason to believe that he is a CC-realist is still quite strong. For I take CC-EGQ-realism to be at least the most powerful, and possibly the only good, reason for subscribing to CC-realism (other than, perhaps, Kant's; see note 25). It is therefore the kind of textual evidence one should generally look for when trying to determine whether or not Hume is a CC-realist.

Moreover, the burden is not on me but rather on New Humeans to show that there is another basis for subscribing to CC-realism and that Hume does indeed accept this basis. So my challenge to New Humeans is to find this basis—first in logical space, then in Hume. But it is my studied judgment that they will inevitably fail on both counts. For even if there were another basis for subscribing to CC-realism—and I am quite skeptical about this—I find no evidence of it in Hume.

The second point I would like to make is that while my arguments in this paper are against (holding) the New Hume, this is not to suggest that I sympathize with the Humean interpretation of Hume. For I think the Humean interpretation finds equally little support in the text. Indeed, Hume never explicitly says causal connections *don't* exist either. And if New Humeans have shown anything, it is that Hume says too much that can be reasonably interpreted (sometimes with a bit of ingenuity) as lending itself against the Humean interpretation.

Moreover, the Humean interpretation and the New Hume are not exhaustive. We have already come across two other possible interpretations of Hume's position with regard to the existence of causal connections. First, again, Hume may be a CC-agnostic. Second, Hume may subscribe solely to the Semantic Version of (6) in section V. In other words, Hume may think the proposition that causal connections exist in the objects is simply meaningless and therefore neither true nor false.

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I am really not sure which of these alternative interpretations is correct. But my intuitions incline me toward the interpretation of Hume as CC-agnostic. I think the most reasonable interpretation of Hume on the existence of causal connections is that Hume believes the following: we can know that we can't know anything about causation beyond constant conjunction and the felt determination it engenders in the mind. This means that we can know both (1) that we can't know if there is anything beyond constant conjunction (i.e., causal connections) and therefore (2) that if there are causal connections, we can't have an intelligible idea of them.<sup>32</sup>

## NOTES

I presented an earlier draft of this paper at the 25th International Hume Society Conference, Stirling, Scotland, July 1998. I wish to thank Martha Bolton, Michael Costa, Joe Campbell, David Gruender, Ken Richman, Barry Ward, Kenneth Winkler, Roger Woolhouse, John Wright, an anonymous referee of *Hume Studies*, and various participants at the Hume Conference for their helpful input.

1. I say "causal" rather than "necessary" for reasons that will become clear below in sections II and III. "[I]n the objects" is Hume's expression. I shall mean by it what I assume he means by it—namely, between objects or events we observe in the external world. Of course, what the external world constitutes for Hume is a difficult question. But it is not one I need to address here.

My impression is that the debate concerns Hume's views on causal connections in the objects to a much greater extent than it concerns Hume's views on causal connections in the mind or soul. I shall therefore give more attention to the former than to the latter.

In this paper, references to Hume's *Treatise of Human Nature*, ed. L. A. Selby-Bigge, 2nd ed. revised by P. H. Nidditch (Oxford: Clarendon Press, 1978) will be indicated by "T" followed by the page number. References to Hume's first *Enquiry* are to *Enquiries concerning Human Understanding and concerning the Principles of Morals*, ed. L. A. Selby-Bigge, 3rd ed. revised by P. H. Nidditch (Oxford: Clarendon Press, 1975), indicated by "EHU" followed by the page number. References to both Nicolas Malebranche's *The Search After Truth*, tr. Thomas M. Lennon and Paul J. Olscamp (Columbus: Ohio State University Press, 1980), and John Locke's *Essay Concerning Human Understanding*, ed. P. H. Nidditch (Oxford: Clarendon Press, 1975), will be to book, chapter, and section. References to Immanuel Kant's *Critique of Pure Reason*, 2nd ed., tr. Norman Kemp Smith (New York: St. Martin's Press, 1929), will be indicated by "A" for the first edition and "B" for the second edition, followed by section number. Finally, references to Descartes are to *The Philosophical Writings of Descartes*, vol. 1, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), abbreviated "CSM" followed by page number.

2. Humeans (i.e., advocates of the Humean interpretation of Hume) include: Justin Brookes, "Did Hume Hold a Regularity Theory of Causation?" *British Journal for the History of Philosophy* 1 (1993): 99–114; Robert J. Fogelin, *Hume's Skepticism in the*

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*Treatise of Human Nature* (London: Routledge & Kegan Paul, 1985); Alan Hausman, "It Ain't Necessity, So . . ." (With Apologies to George Gershwin), *Hume Studies* 8 (1982): 87–101; John Passmore, *Hume's Intentions* (New York: Basic Books, 1952); Barry Stroud, *Hume* (London: Routledge & Kegan Paul, 1977); G. J. Warnock, "Hume on Causation," in *David Hume: A Symposium*, ed. D. F. Pears (New York: St. Martin's Press, 1966), 55–66.

3. New Humeans (i.e., advocates of the New Humean interpretation of Hume) include: Michael Ayers, "Nature and Laws from Descartes to Hume," in G. A. J. Rogers and S. Tomasselli, eds., *The Philosophical Canon in the 17th and 18th Centuries: Essays in Honour of John W. Yolton* (Rochester, N.Y.: University of Rochester Press), 83–108; Janet Broughton, "Hume's Ideas about Necessary Connection," *Hume Studies* 13 (1987): 217–244; Michael J. Costa, "Hume and Causal Realism," *Australasian Journal of Philosophy* 67 (1989), 172–190; Edward J. Craig, *The Mind of God and the Works of Man* (Oxford: Clarendon Press, 1987); Norman Kemp Smith, *The Philosophy of David Hume* (New York: St. Martin's Press, 1966); Donald W. Livingston, "Hume on Ultimate Causation," *American Philosophical Quarterly* 8 (1971): 63–70, and *Hume's Philosophy of Common Life* (Chicago: University of Chicago Press, 1984); Galen Strawson, *The Secret Connexion* (Oxford: Clarendon Press, 1989); John P. Wright, *The Sceptical Realism of David Hume* (Minneapolis: University of Minnesota Press). Simon Blackburn ("Hume and Thick Connexions," *Journal of Philosophy and Phenomenological Research* supp. 50 (1990): 237–250), rejects the Humean view but regards the New Humean view as an "error of taste." As I shall explain in note 52, Kenneth P. Winkler ("The New Hume," *Philosophical Review* 100 (1991): 541–579) also rejects both the Humean interpretation and the New Hume and regards Hume instead as an agnostic about causal connections.

4. I understand that this statement is rather controversial. One might argue that, for Hume, believing in something without good reason does *not* demand explanation (where "explanation" refers not to causal history but to rational justification). For Hume typically suggests that both laypersons and philosophers hold on to irrational beliefs—often even *after* discovering that these beliefs are irrational. See, for example, T 222–223. Since Hume regards himself as both a layperson and a philosopher, it is reasonable to think that he takes himself to be guilty of the same kind of failing. He may very well continue to believe that causal connections exist even though he realizes that there is no good reason to maintain this belief.

Still, I shall overlook this tendency in Hume's philosophy for the remainder of this paper. I shall not be concerned with whether or not Hume actually resists his "natural" tendency—if he does indeed (take himself to) have one—to believe that there are causal connections. I shall not be concerned with Hume *qua* man or layperson. Instead, I shall be concerned only with Hume *qua* reflective philosopher—the "skeptical Hume" who, at least in his more philosophical moments, rises above his natural beliefs and maintains only those beliefs that he finds to have a rational basis.

5. In my investigation of this question, I have found that for every argument that there is a passage in which Hume explicitly affirms or denies that causal connections exist, there is an equal and opposite interpretation of the same passage.

For example, Livingston ("Hume on Ultimate Causation") claims Hume does explicitly state that he thinks causal connections must exist when he says, "We must certainly allow, that the cohesion of the parts of matter arises from natural and necessary principles, whatever difficulty we may find in explaining them"

(T 401). But by "natural and necessary," Hume could simply mean more basic constant conjunctions from which the constant conjunctions we do observe derive. They do not have to be "self-intelligible," as Livingston argues.

Moreover, Hume is not necessarily suggesting in the passage above that such principles actually exist. Rather, he may be suggesting that this is what scientists must assume in order to make scientific progress. That is, if scientists are to gain an increasing understanding of the world, they must assume that the world can always be made more and more intelligible. Self-intelligibility is simply the outer limit of scientific knowledge. So Hume is offering what he takes to be not a metaphysical assumption but rather a necessary methodological assumption.

On the other hand, Adrian Heathcote (review of Galen Strawson, *The Secret Connexion*, *Australasian Journal of Philosophy* 71 (1993): 229) points to a passage in the *Treatise* that he thinks rules out the possibility that Hume is a causal realist: "The efficacy or energy of causes is neither placed in the causes themselves, nor in the deity, nor in the concurrence of these two principles; but belongs entirely to the soul. . . . 'Tis here that the real power of causes is plac'd along with their connexion and necessity." About this and like statements, Heathcote says, "I do not see how anyone can read these remarks and think that Hume is a believer in real causes and natural necessities." I shall argue in section V, however, that statements like this in the *Treatise* fail to establish the Humean interpretation or to refute the New Hume.

6. Three other interpretations of Hume which I take to be at least as plausible as the Humean and New Humean interpretations are: (1) that Hume is an "agnostic" about the existence of causal connections; (2) that Hume is a "semantic skeptic"—i.e., regards the statement that causal connections exist in the objects as simply meaningless and therefore neither true nor false; and (3) that Hume is a "Projectivist"—i.e., treats regularities not as evidence of "deeper" causal connections (as Skeptical Realists do) nor as constituting the causal relation itself (as Regularity Theorists do) but as the condition under which it is correct to assert that C causes E. Blackburn ("Hume and Thick Connexions," 247), who endorses the Projectivist interpretation of Hume, uses slightly different language. He argues that Hume is neither "a Positivist nor a Sceptical Realist, but rather a not-so-sceptical anti-realist." Craig has also recently argued for this position in an unpublished paper entitled "Hume on Causation: Realist and Projectivist?" For reasons of space, I shall not further discuss the Projectivist view of Hume, but I do think that this is an interesting and potentially promising approach.

7. Winkler ("The New Hume," 541) asks, "How do we determine whether Hume is a causal realist?" and offers three possible answers. We have good reason to believe Hume is a realist about causal connections if (1) he takes causal realism to be a justified belief (Winkler realizes that this has particular problems when applied to Hume); (2) his theory of human nature implies that we are all realists about causal connections and therefore that Hume himself is a realist about causal connections; or (3) he explicitly says that he is a realist about causal connections. But what Winkler fails to address is (1) *why* Hume (or any other philosopher) would take causal realism to be a justified belief; (2) *why* Hume (or any other philosopher) would think that human nature leads to a belief in causal realism; and/or (3) *why* Hume (or any other philosopher) would explicitly affirm causal realism. So I go one step deeper than Winkler in this paper. I attempt to lay out a possible answer to these kinds of questions. In so doing, I hope to see not just whether there is evidence that (1), (2), or (3) may be correctly applied to Hume (as Winkler does) but

whether there is any evidence that Hume subscribes to a reason which would underlie (1), (2), or (3)'s being correctly applied to Hume. Indeed, it might be argued that evidence that Hume subscribes to such a reason is even more important to the case for the New Hume than explicit but unexplained statements that causal connections do actually exist. For Hume wouldn't have made these statements unless he subscribed to such a reason in the first place.

8. John Laird, *Hume's Philosophy of Human Nature* (London: Methuen, 1932), 100.  
9. See, for example, G. F. Stout, "Mechanical and Teleological Causation: Paper II," *Proceedings of the Aristotelian Society* supp. 14 (1935): 46; and A. C. Ewing, "Mechanical and Teleological Causation: Paper III," *Proceedings of the Aristotelian Society* supp. 14 (1935): 66.

10. Costa, "Hume and Causal Realism," 173–174.

11. I am assuming, then, that there is a distinction between causal powers and causal connections. The distinction between these two concepts is typically overlooked in the literature. The most likely reason for this is that Hume himself makes no explicit distinction between them (not to mention "force" and "energy" as well). On the contrary, he generally lumps all of these terms together (See T 157, 656, 657; EHU 62, 74, 77n). And Hume scholars simply tend to follow his lead (at least when discussing Hume). But I argue that Hume does make at least an implicit distinction between causal connection and causal power in the *Enquiry*. This distinction seems to play an important role, for example, in Hume's discussion of the problem of induction (EHU 25ff.). For Hume uses the term "power" here much more frequently than he uses the term "necessary connection."

Hume offers two different conceptions of causal powers. There is the "pre-philosophical conception" (powers considered in the "loose and popular sense") and Hume's own "post-philosophical conception." A causal power in the pre-philosophical sense is a (sensible or insensible) property of the object which, under certain circumstances, consistently or constantly produces or brings about a certain kind of effect. A causal power in the post-philosophical (i.e., post-problem-of-causation) sense is a particular instantiation of a certain kind of property that, under certain kinds of circumstances, is constantly conjoined with or followed by a certain kind of effect.

Several New Humeans (e.g., Broughton, "Hume's Ideas about Necessary Connection," 226–228, 235; Livingston, *Hume's Philosophy of Common Life*, 156; Strawson, *The Secret Connexion*, v, 14, 279; and Wright, *The Sceptical Realism of David Hume*, 129) argue that Hume's many references to causal powers suggest he is a realist about these powers. This may be true. But it fails to show that Hume is a realist about causal powers in the pre-philosophical sense, which is what New Humeans intend. For Hume may very well have the post-philosophical conception of causal powers in mind when he makes these references. (Brookes, "Did Hume Hold a Regularity Theory of Causation?" 100, 102 and Winkler, "The New Hume," 544–548 make a similar point.)

In my eyes, there is no question that Hume thinks causal powers in the post-philosophical sense exist. For the post-philosophical sense does not involve any ideas toward which Hume's skepticism is directed—namely, ideas for which we cannot find any original impression. But my position that we have no good reason to believe that Hume is a realist about causal connections arguably entails that we have no good reason to believe that Hume is a realist about causal powers in the pre-philosophical sense either. For if he provides no evidence of belief that there are

causal connections, then he also provides no evidence of belief that there is any producing or bringing about going on. Instead, he provides evidence only that he believes that there is mere constant conjunction. And, as we have seen, the notion of producing or bringing about is an essential part of the pre-philosophical conception of causal powers.

12. He variously describes the causal connection, for example, as "the supposed tie or connexion between the cause and effect, which binds them together, and renders it impossible, that any other effect could result from the operation of that cause" (EHU 29); "the inseparable and inviolable connexion" (EHU 31); "the very force or energy of the cause, by which it is connected with its effect, and is for ever infallible in its operation" (EHU 69); "some power in the one, by which it infallibly produces the other and operates with the greatest certainty and strongest necessity" (EHU 75). See also T 87, 111, 161–162; EHU 63, 65, 66, 82.

Hume's conclusion that we can't perceive causal connections follows from his ascription of the ruling-out-E\* property to the causal connection in conjunction with his notion that every perception is "separable" from every other perception (T 79, 80, 86, 139, 634; EHU 30). For a perception of the causal connection would render a perception of C inseparable from a perception of E.

13. "[T]he human mind cannot form such an idea of two objects, as to conceive any connexion betwixt them. . . . Such a connexion would amount to a demonstration, and wou'd imply the absolute impossibility for the one object not to follow, or to be conceiv'd not to follow upon the other" (T 161–162). See also T 87; EHU 63.

Many philosophers overlook the fact that Hume attributes these two properties to the causal connection when they characterize Hume's necessary connection simply as something (1) more than or (2) underlying mere constant conjunction. These philosophers include Blackburn, "Hume and Thick Connexions," 237, 239; Broughton, "Hume's Ideas about Necessary Connection," 218; and Winkler, "The New Hume," 542–543. Wright (*The Sceptical Realism of David Hume*, 155 ff.) actually makes an elaborate argument for the conclusion that Hume thinks there is ultimately no distinction between the cause and its effect without ever even mentioning Hume's attribution of these properties to the causal connection. This would clearly have strengthened his case. But because I don't think Hume holds this view, I can't say that they would have succeeded in establishing it.

Jonathan Bennett (*Locke, Berkeley, Hume* [Oxford: Clarendon Press, 1971], 259); Passmore, *Hume's Intentions*, 50; and Strawson, *The Secret Connexion*, 110–111 are among the few to take note of these properties. Strawson refers to the knowledge-enabling property as the "a-priori-inference-licensing-property" or "AP property" for short. So he at least recognizes that Hume attributes this property to the causal connection. But he overlooks the fact that this property presupposes the ruling-out-E\* property when he says that the AP property "is defined in purely epistemological terms." Strawson, however, may think that the knowledge-enabling property doesn't require the ruling-out-E\* property. In this case, the AP property would be defined in purely epistemological terms.

14. A few twentieth-century philosophers have seemed to suggest that we can perceive causal connections. C. J. Ducasse ("Causation: Perceivable? Or Only Inferred?" *Philosophy and Phenomenological Research* 26 [1965–66]: 173–179 and "How Literally Causation is Perceivable," *Philosophy and Phenomenological Research* 28 [1967–68]: 271–273) claims that we do actually perceive "instances of causa-

tion." In the context of Ducasse's discussion, this seems to mean that we perceive not just the cause and the effect themselves but also the causal connection between them. Sterling P. Lamproch (*The Metaphysics of Naturalism* [New York: Meredith, 1967], 133–134) says that we infer causal connections from what we observe in some cases and directly perceive them in other cases. See also R. Harré and E. H. Madden, *Causal Powers: A Theory of Natural Necessity* (Totowa, N.J.: Rowman and Littlefield, 1975), 49–51. These philosophers, however, may all have a conception of causal connection in mind that is different from Hume's.

15. "Tis this impression, then, or determination, which affords me the idea of necessity" (T 156).

16. "This multiplicity of resembling instances, therefore, constitutes the very essence of power or connexion, and is the source, from which the idea of it arises" (T 163); "Necessity, then, is the effect of this observation, and is nothing but an internal impression of the mind, or a determination to carry our thoughts from one object to another" (T 165); "The necessary connexion betwixt causes and effects is the foundation of our inference from one to the other. The foundation of our inference is the transition arising from the accustomed union. These are, therefore, the same" (T 165); "this determination of the mind forms the necessary connexion of these objects" (T 169).

This inference from (1) to (2) itself assumes that the origin of an idea constitutes its content. So the origin of my idea of red—namely, my impression(s) of red—just is what my idea of red consists in.

17. "These ideas [of necessity, of power, and of efficacy], therefore, represent not any thing, that does or can belong to the objects, which are constantly conjoin'd" (T 164); "This [internal impression] therefore is the essence of necessity. Upon the whole, necessity is something, that exists in the mind, not in objects; nor is it possible for us ever to form the most distant idea of it, consider'd as a quality in bodies" (T 165); "the necessity or power, which unites causes and effects, lies in the determination of the mind to pass from the one to the other. The efficacy or energy of causes is neither plac'd in the causes themselves . . . but belongs entirely to the soul. . . . 'Tis here that the real power of causes is plac'd, along with their connexion and necessity" (T 166); "this customary transition is, therefore the same with the power and necessity; which are consequently qualities of perceptions, not of objects, and are internally felt by the soul, and not perceiv'd externally in bodies" (T 166); "And how must we be disappointed, when we learn, that this connexion, tie, or energy lies merely in ourselves, and is nothing but that determination of the mind" (T 266).

18. Broughton ("Hume's Ideas about Necessary Connection," 217–218, 224ff.) refers to a closely related interpretation of Hume as the "psychological interpretation." Strawson (*The Secret Connexion*, 73 ff., ch.12) discusses different versions of "semantic scepticism" and which of them may and may not be attributed to Hume.

19. See Strawson, *The Secret Connexion*, 8.

20. See, for example, Strawson, *The Secret Connexion*, 50–53, ch. 12. Hume's two definitions of "cause" (T 170; EHU 76–77) admit of the same three interpretations. They can be interpreted as saying either (1) this is all we mean by "cause" (semantic); (2) this is all there is to causation (ontological); or (3) this is all we can know of causation (epistemological).

21. In other words, he rejects what he implicitly assumes in the *Treatise*—namely, that the origin of an idea entirely constitutes its content. See note 16.

22. An intelligible or positive idea is simply an idea that derives from a direct impression or set of direct impressions. So my idea of the felt determination of the mind is my positive idea of necessity. It derives from a direct impression of the felt determination of the mind. A relative idea, however, is not derived from any direct impression. It is (therefore) not of something as it is in itself (or of its intrinsic nature) but of the relation that something bears to something else of which we have had a direct impression.

For example, I have never had a direct impression of gravity. Therefore I cannot have a positive—i.e., impression-derived—idea of it. And if I cannot have a positive idea of it, then it is arguable that I cannot have an idea of gravity as it is in itself, the intrinsic nature of gravity. Nevertheless, I still can have some idea of it. For I have had an indirect impression of it through a direct impression of its effects (e.g., rocks falling, the moon orbiting the earth, waves in the ocean, etc.). Gravity (we say) is simply that which causes these phenomena. So gravity is whatever it is—a something-I-know-not-what—that stands in the same relation to these phenomena as the cause does to its effect. In this way, even though I have never had an impression of gravity and therefore can't have a positive idea of it, I can still have an idea of the relation in which it stands to phenomena of which I can have a positive idea. To this extent, then, I can have an idea of gravity. Again, it is just a relative idea.

23. See Broackes, "Did Hume Hold a Regularity Theory of Causation?" 104–107 and Winkler, "The New Hume," 552–561.

24. "In the notice, that our senses take of the constant vicissitude of things, we cannot but observe, that several particular, both qualities, and substances begin to exist; and that they receive this their existence, from the due application and operation of some other being. From this observation, we get our ideas of cause and effect" (*Essay* II xxvi 1).

25. I can also think of some implausible answers as well. For example, there is the Kantian view that we could not distinguish between perceptions of events and perceptions of stationary or "enduring" objects if causal connections didn't exist. Kant's own argument in the *Second Analogy* (A 189–211, B 233–256) runs like this. When I perceive an enduring object such as a house, the order of my perceptions is determined not by the house itself but by me. The order of my perceptions, in other words, is *subjectively* determined. If I look at a window and then the roof, this was my choice. As a result, the order of my perceptions is perfectly "reversible". There was no "rule" governing the order in which the various appearances of the house were presented to me. I could just as easily have looked at the roof and then the window. Now, if all of my perceptions were subjectively determined and therefore reversible in this way, then I would have no experience of an objective time order or sequence, of one thing preceding or succeeding another independently of me. But since I do have such experience, because I do apprehend certain appearances as occurring in an objective time order, it must be the case that I experience some sequences of perceptions as determined by (or isomorphic with) an objective sequence—i.e., an event as opposed to an enduring object—and therefore as irreversible.

Given that I judge some sequences of perceptions to be reversible and others to be irreversible, I must have some basis, some criterion, by which to make this



judgment. I clearly can't try to run the sequence backwards since all sequences occur in time and time itself is irreversible. Instead, Kant argues, I must judge whether or not the sequence I observe is in accordance or conformity with a "rule"—i.e., a regularity that I have previously observed. If it is, then the sequence of perceptions I am having must be irreversible and therefore correspond to an objective sequence, an event. If not, then the sequence of perceptions I am having must be reversible, subjectively determined, and therefore of an enduring object. The last part of Kant's argument is that these rules or regularities are, for some reason, not possible without causal connections. Either Kant identifies the rules with causal connections or sees the latter as in some way "grounding" the former. Either way, because our ability to distinguish perceptions of events from perceptions of enduring objects depends on our knowledge or experience of these rules, and because the existence of these rules in some way depends on the existence of these causal connections, it follows by transitivity that our ability to distinguish perceptions of events from perceptions of enduring objects depends on the existence of causal connections. And since we clearly have this ability, it follows that there must actually be causal connections.

Hume shows no evidence of subscribing to Kant's argument here. Instead, in his discussion of our idea of time (T 34–37), Hume simply assumes that we can distinguish our perceptions of enduring objects (what he calls "unchangeable objects") from our perceptions of events (what he calls "succession[s] of changeable objects"). The most he says on this particular issue is that in order to acquire the idea of time or temporal order, we must perceive successions of changeable objects. Mere perceptions of unchangeable objects enable us to acquire only the idea of "coexistence" or simultaneity and are therefore insufficient. This suggests that Hume takes our capacity to distinguish perceptions of enduring objects from perceptions of events as simply given. He doesn't even think to question how we can do so, to determine what (if anything) makes this possible. So it is clearly not the case that Hume shows any signs of believing that this capacity depends on the existence of causal connections.

26. *Essay* II xxiii 28–29. One reason that other philosophers (like Leibniz, Malebranche, and Spinoza) find the communication of motion from one ball to another to be mysterious is because it seems to involve what they take to be the nonsensical notion that a mode (motion) can exist independently of a substance (the balls). Locke may have this in mind, but there is no explicit evidence that he does. Moreover, Locke thinks we have at best an obscure idea of substance (II xxii). So it is likely he is not as confident as those who do think we have a clear idea of substance that modes can't exist independently of it. And this would suggest that the problem of transferring modes is not what he has in mind. Instead, I think he has something more like the following in mind:

- (1) In order to understand how one ball communicates motion to another ball, we must have a relatively clear idea of how it communicates motion to the other ball.
- (2) Our ideas of external objects must ultimately arise from perceptions of these external objects.
- (3) Therefore in order to have a relatively clear idea of how one ball communicates motion to another, we must have a perception of the communicating of motion.
- (4) We do not have a perception of the communicating of motion. Instead, all we see is one ball in motion and then another ball in motion.

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- (5) Therefore we cannot have an idea of how one ball communicates motion to the other.
- (6) Therefore we cannot understand how one ball communicates motion to the other.

This would seem to be more consistent with what Locke says in *Essay* II xxvi 1–2 and IV iii 22–29.

R. M. Mattern ("Locke on Active Power and the Obscure Idea of Active Power From Bodies," *Studies in the History of Philosophy of Science* 11 (1980): 39–77), however, disagrees with this kind of analysis. She repudiates philosophers' tendency to read Locke "through a Humean lens" (48). But she offers no alternative account of why Locke finds the communication of motion from one ball to another mysterious. She simply rules out the possibility that Locke thinks the interaction is mysterious because the "modus operandi"—i.e., the manner in which the first ball transmits motion to the second ball—is too small for us to see (44).

Moreover, as Mattern herself points out (44ff.), Locke cannot be suggesting that the mystery of how one ball communicates motion to another is generated by the fact that perceptions of the interaction fail to give us an idea of active power. For Locke suggests all of the following: that (1) the "inner experience" of willing gives us a clearer idea of active power than do perceptions of physical causation; (2) we still can't understand how willing (bodily motion) is possible; and (3) physical causation is still more intelligible—more "level to our understanding"—than is psychophysical causation. Both the conjunction of (1) and (2) and the conjunction of (1) and (3) imply that a clear idea of active power fails to give us an understanding of communication of motion (either from one ball to another or from mind to body). So even if we did have a clear idea of active power, we would still not have an understanding of the communication of motion. Therefore our failure to acquire the former is not responsible for our failure to acquire the latter.

27. See Warnock, "Hume on Causation," 58.
28. It is Ducasse's failure to recognize these questions that leads him to think that the causal connection raises no explanatory mystery (see C. J. Ducasse, "Of the Spurious Mystery in Causal Connections," *Philosophical Review* 39 (1930): 400–401) and possibly even to adopt the position that we can see causal connections (see endnote 14).
29. Philosophers who at least seem to endorse this argument include John Foster, "Induction, Explanation and Natural Necessity," *Proceedings of the Aristotelian Society* 83 (1982–83): 89–93; Laird, *Hume's Philosophy of Human Nature*, 133–134; Strawson, *The Secret Connexion*, ch. 5. I have also been informed that Brand Blanshard subscribes to the Cosmic Coincidence Argument as well. Stout, "Mechanical and Teleological Causation," 47 and Ewing, "Mechanical and Teleological Causation," 77–78, 80 both make an argument that is ambiguous between the Cosmic Coincidence Argument and an argument that Hume's problem of induction must be in principle solvable. Bennett, *Locke, Berkeley, Hume*, 263–264 refers to the Cosmic Coincidence Argument, but it's not clear whether he accepts or rejects it. Blackburn, "Hume and Thick Connexions," 241 simply attributes the argument to laypersons in general and to some philosophers in particular.

The Cosmic Coincidence Argument may actually motivate Ontological PSR above. Some philosophers who subscribe to Ontological PSR may be motivated to do so by their desire to avoid cosmic coincidences.

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Some philosophers interpret Hume as arguing that we have no rational justification of our belief that causal connections exist in the objects. But if this is what Hume is indeed arguing, then the PSR Argument and Cosmic Coincidence Argument seem to refute him. For whether or not either ultimately works, they both initially seem to constitute two at least somewhat plausible reasons to believe that causal connections do exist in the objects. So, contrary to Hume (on this interpretation), our belief that causal connections exist in the objects is not necessarily irrational or unjustified (even if it may be false).

30. Perhaps the clearest example of this is Strawson, who repeatedly suggests that Hume thinks of the necessary connection as "that in reality in virtue of which reality is regular in the way that it is" (*The Secret Connexion*, 3, 122). Other examples include Ayers, "Nature and Laws from Descartes to Hume," 104–107; Blackburn, "Hume and Thick Connexions," 245; Broughton, "Hume's Ideas about Necessary Connection," 237; Costa, "Hume and Causal Realism," 188–189; Kemp Smith, *The Philosophy of David Hume*, 61, 397; Livingston, *Hume's Philosophy of Common Life*, 162; Wright, *The Sceptical Realism of David Hume*, 144.

31. T 167. Hume holds (T 238–239) that we make the same kind of error with secondary qualities. Because the apple causes us to perceive the color red, we mistakenly project red out on to the apple. In fact, the redness is "in us"—in our head—not in the apple itself.

32. See Bennett, *Locke, Berkeley, Hume*, 299; Broughton, "Hume's Ideas about Necessary Connection," 224–225; and H. H. Price, "The Permanent Significance of Hume's Philosophy," *Philosophy* 15 (1940): 21.

33. "But when . . . we make the terms of power and efficacy signify something, of which we have a clear idea, and which is incompatible with those objects, to which we apply it, obscurity and error begin then to take place, and we are led astray by a false philosophy. This is the case, when we transfer the determination of the thought to external objects, and suppose any real intelligible connexion betwixt them: that being a quality, which can only belong to the mind that considers them" (T 168). See also Ayers, "Nature and Laws from Descartes to Hume," 104–105.

34. I am suggesting that *metaphysical* explanatory questions—namely, the EGQs—are absent from Hume's discussion. I am not suggesting that Hume doesn't explicitly discuss *other* explanatory questions. Indeed, as I have already mentioned above, Hume is clearly interested in the *psychological* explanatory question: why do we think we have an intelligible idea of necessity in the objects when we really don't?

35. It is a mistake because, as we have already seen, there is a third position in between the position that there are gap-closing connections and the mere/constant conjunction view. This third position is that there are causal connections that are weaker than gap-closing connections but at least as strong as first-degree causal connections.

36. See Hausman, "It Ain't Necessity, So . . ." 96 ff.

37. See *Essay* IV vi.

38. See *The World* (CSM 96–97); *The Principles* Part Two (CSM 245, 248).

39. See *The Search after Truth*, IV ii 3: "A true cause as I understand it is one such that the mind perceives a necessary connection between it and its effect."

40. EHU 82. See also EHU 87: "From the observation of several parallel instances, philosophers form a maxim that the connexion between all causes and effects is equally necessary." See Broackes, "Did Hume Hold a Regularity Theory of Causation?" 111–112; Craig, *The Mind of God and the Works of Man*, 37–40; Livingston, "Hume on Ultimate Causation," 63–64; Strawson, *The Secret Connexion*, 2–3, 110. Bennett, *Locke, Berkeley, Hume*, 268 ff., thinks Hume's targets are those who seek a "non-inductive basis for predictions" and that Hume simply assumes that such philosophers are, whether they realize it or not, "under tremendous conceptual pressure to adopt a logical-necessity account of causation." That is why he describes the causal connection as gap-closing. Tom L. Beauchamp and Thomas A. Mappes "Is Hume Really a Sceptic about Induction?" *American Philosophical Quarterly* 12 (1975): 119–129 contend that Hume's problem of induction is primarily a criticism of the rationalists' notion that some inductive inferences can be demonstrated a priori rather than, as it is usually interpreted, an argument against the (widespread) notion that inductive inferences can indeed be justified.

41. This actually constitutes yet a second argument (see n. 11 for the first argument) against the claim made by New Humeans that Hume's many references to secret "powers" and "forces" in the soul and in the objects are evidence that Hume believes they actually do exist. Again, he may simply be voicing not his own view but rather what he takes to be laypersons' and/or other philosophers' view.

42. Strawson, *The Secret Connexion*, viii–ix, 1–4, 7, 139, 214–215.

43. *Ibid.*, ch. 5

44. Broackes, "Did Hume Hold a Regularity Theory of Causation?" 102–103 makes a similar point.

45. See Locke's discussions of secondary qualities (*Essay* II viii), the communication of motion by impulse (II xxiii), cohesion (II xxiii, IV vi), psychophysical causation (II xxiii), causal powers or "real essences" (II xxxi, IV vi), the limits of scientific explanation/understanding (IV iii, IV vi), and the possibility of materialism (IV x). All of these explicitly involve the EGQs in one form or another.

46. Passmore, *Hume's Intentions*, 51 and Warnock, "Hume on Causation," endorse this interpretation of Hume. Warnock holds that the explanatory questions Locke raises don't arise for Hume because Hume thinks there is absolutely nothing "out there" that would answer them.

47. "Astronomers had long contented themselves with proving, from the phenomena, the true motions, order, and magnitude of the heavenly bodies: Till a philosopher, at last, arose, who seems, from the happiest reasoning, to have determined the laws and forces, by which the revolutions of the planets are governed and directed. The like has been performed with regard to other parts of nature. And 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" (EHU I 4); "Tis no astonishing reflection to consider, that the application of experimental philosophy to moral subjects should come after that to natural at the distance of above a whole century; since we find in fact, that there was about the same interval betwixt the origins of these sciences; and that reckoning from THALES to

SOCRATES, the space of time is nearly equal to that betwixt my Lord BACON and some late philosophers in England, who have begun to put the science of man on a new footing. . . . So true it is, that however other nations may rival us in poetry, and excel us in some other agreeable arts, the improvements in reason and philosophy can only be owing to a land of toleration and of liberty" (T xvi-xvii).

48. This would actually help to explain both Hume's statement that his two definitions of "cause" are "drawn from something extraneous and foreign to [them] . . . drawn from circumstances foreign to the cause" (EHU 76-77) and Hume's very Lockean statements that our understanding of the world is rather limited, that we are quite "ignorant" of its "secrets" (T 92, 657; EHU 8, 12, 31, 37, 43, 61, 72-73, 76, 93, 94). What is missing in each case (on this interpretation) is intuitive understanding, not scientific understanding.

49. Broughton ("Hume's Ideas about Necessary Connection," 229 ff.) and Nicholas Capaldi (*David Hume: The Newtonian Philosopher* [Boston: Twayne, 1975], 68-70) interpret Hume in this way. I myself think that this interpretation of Hume as Newtonian Empiricist is quite reasonable. There are several passages that could be construed as lending support to it. For example:

For nothing is more certain, than that despair has almost the same effect upon us with enjoyment, and that we are no sooner acquainted with the impossibility of satisfying any desire, than the desire itself vanishes. When we see, that we have arrived at the utmost extent of human reason, we sit down contented; tho' we be perfectly satisfied in the main of our ignorance, and perceive that we can give no reason for our most general and most refined principles, beside our experience of that reality. . . . And as this impossibility of making any farther progress is enough to satisfy the reader, so the writer may derive a more delicate satisfaction from the free confession of his ignorance, and from his prudence in avoiding that error, into which so many have fallen, of imposing their conjectures and hypotheses on the world for the most certain principles. (T xviii; see also T 646)

Livingston (*Hume's Philosophy of the Common Life*, 162, 164) claims that while Newton thinks science can in principle discover causal connections, Hume thinks causal connections are in principle unknowable by us and therefore that science cannot in principle make any progress toward them. It is not clear, however, that there is any textual evidence to support this interpretation of either Newton or Hume.

50. If this is the case, if Hume believes that knowledge of causal connections is necessary for an intuitive understanding of causal relations *and* that causal connections may or do *not* exist, then Hume may very well believe that an intuitive understanding of causal relations may be or is in principle impossible.

51. Strawson, for example, fails to do this. Although he doesn't realize it, virtually all of the evidence he provides for the New Hume is perfectly consistent with Hume's being a CC-agnostic.

52. This is largely in line with Winkler's conclusion that while Hume doesn't explicitly *deny* the existence of causal connections, he does refrain from affirming their existence. As Winkler puts it, Hume's skepticism is "decisive," not "dogmatic."

He thinks we can't think or conceive of causal connections in the objects, but he doesn't positively deny that they exist in the objects. See Winkler, "The New Hume," 543-544, 560, 566-567, 576. Blackburn ("Hume and Thick Connexions," 246-247) concludes from similar thoughts that Hume is not really concerned with whether these causal connections exist. For even if they do, they are inconceivable and therefore of no use to us.