THE DISTINCTION BETWEEN COHERENCE AND CONSTANCY IN HUME'S *TREATISE* I.IV.2

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In the *Treatise*, Book I, Part iv, Section 2, Hume seeks to explain what causes us to believe that objects continue to exist even when they are not perceived. He argues that we won't be able to provide this explanation in terms either of sense or of reason, and that we must instead rely on principles associated with the faculty of imagination. These principles, he claims, work in conjunction with perceptions (or with certain features thereof) in generating our belief in the continued existence of objects. But what is it about perceptions that helps to generate such a belief? Hume claims that it is the *coherence* and *constancy* of perceptions that do so. He goes on to provide a coherence-based explanation of the causes of our belief in the continued existence of objects, and then to provide, in a separate treatment, a constancy-based explanation.

In this paper, I examine Hume's explanations of the causes of our belief that objects continue to exist even when they are not perceived. According to the standard interpretation, Hume seeks to provide—or at least he could have availed himself of—a unified explanation of the causes of that belief. Call this the *unified explanation hypothesis*. This hypothesis is accepted by commentators of two strikingly different sorts. One sort of commentator maintains that Hume is satisfied with his coherence-based explanation.[1] Given this, along with the unified explanation hypothesis, proponents of the *satisfaction hypothesis* maintain that Hume "could have dealt with constancy as a special case [of coherence]."[2] Yet Hume did not do so, choosing instead to treat constancy entirely separately from coherence. This, according to Louis E. Loeb,

[1] See, for example, Louis E. Loeb, *Stability and Justification in Hume's Treatise* (Oxford University Press, 2002), especially §VI.3, pp. 187-193.

[2] Ibid., p. 207.

is "the chief objection to the interpretation in which Hume was satisfied that his treatment of coherence was psychologically adequate."[3]

This objection leads other commentators to opt for an interpretation that accepts the *dissatisfaction hypothesis*,[4] according to which Hume was *not* satisfied with his coherence-based explanation of the causes of our belief in the continued existence of objects. Proponents of the dissatisfaction hypothesis maintain that Hume seeks to provide a unified explanation, and that he realizes that his coherence-based explanation is inadequate. As this interpretation goes, Hume then rejects his coherence-based explanation in favor of a constancy-based explanation.[5] Yet, as proponents of the dissatisfaction hypothesis recognize, their interpretation, too, raises difficulties. For Hume's dissatisfaction with his coherence-based explanation seems ill-founded, and his rejection of that explanation seems too quick.[6]

Given the unified explanation hypothesis, then, Hume runs into trouble at every turn. If he is satisfied with his coherence-based explanation, then, commentators suggest, he could have—and perhaps should have—extended that explanation to cases of constancy. Here, there is the problem of explaining why Hume did not do so. Should this problem motivate us to opt for the dissatisfaction hypothesis, we are faced with the problem of explaining why Hume rejects his coherence-based explanation in the absence of sufficient grounds for doing so.

These problems evaporate once we reject the unified explanation hypothesis, and I wish to argue here that we should reject that hypothesis. For Hume did not seek to provide—nor

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[3] Ibid., p. 207.

[4] I borrow this appellation from Loeb, ibid. (see pp. 187-188).

[5] See Jonathan Bennett, *Locke, Berkeley, Hume: Central Themes* (Clarendon, 1971), pp. 329-330; Mark Collier, 'Filling the Gaps: Hume and Connectionism on the Continued Existence of Unperceived Objects', *Hume Studies* 25 (1999): 155-170, p. 159; John Laird, *Hume's Philosophy of Human Nature* (Archon Books, 1967), pp. 149-150; and John P. Wright, *The Sceptical Realism of David Hume* (University of Minnesota Press, 1983), p. 64.

[6] See, for example, Bennett, op cit., p. 329, where he claims that Hume registers his dissatisfaction with the coherence-based explanation by means of a "blatantly unargued assertion." Collier endorses Bennett's reading (see Collier, op cit., p. 159).

could he have availed himself of—a unified explanation of the causes of our belief in the continued existence of objects. This claim is at the heart of an alternative interpretation, which has received no attention, so far as I can see.[7] When we accept this alternative interpretation, which rejects the unified explanation hypothesis, we can sidestep any number of problems that arise for interpretations that accept that hypothesis.

First, if Hume needs one explanation for cases of coherence and a different explanation for cases of constancy, then coherence and constancy are not related so as to be susceptible to similar treatment. Thus, those who reject the unified explanation hypothesis can easily answer the question that plagues proponents of the satisfaction hypothesis, namely, why doesn't Hume "subsume his explanation of the belief in body as it arises from constancy under his explanation of the belief in body as it arises from coherence"?[8] Hume doesn't do this because coherence and constancy are not related so as to be susceptible to similar treatment.

Second, once we reject the unified explanation hypothesis, we can sidestep the problem that arises for proponents of the dissatisfaction hypothesis, namely, the problem of explaining why Hume rejects his coherence-based explanation. We can sidestep this problem because, according to those who reject the unified explanation hypothesis, Hume needs more than one sort of explanation, and so he may—and does—accept *both* his coherence-based explanation *and* his constancy-based explanation. Thus, the need to explain why he *rejects* his coherence-based explanation simply does not arise for those who reject the unified explanation hypothesis.

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[7] But see H. H. Price, *Hume's Theory of the External World* (Clarendon, 1940), pp. 50-59. There, Price maintains that, for Hume, constancy and coherence are "irreducibly different" (p. 60), which suggests, of course, that we should reject the unified explanation hypothesis. Yet rather than pursuing this interpretation, Price "leav[es] Hume's exposition on one side" (p. 59) and seeks "a simpler theory which will cover [coherence and constancy] both" (p. 59). It is unfortunate, I think, that Price abandons Hume's exposition when he does, for, as I hope to show, he was pursuing just the right sort of interpretation.

[8] Loeb, op cit., p. 179.

In addition, once we have rejected the unified explanation hypothesis, we are free to consider Hume's coherence-based explanation anew and to give it the attention it deserves. One of the primary aims of this paper, therefore, is to examine Hume's coherence-based explanation thoroughly and carefully. Such an examination will allow us to achieve a proper understanding of that explanation. This achievement will be important not only in itself, but also because it will help us to dissolve or fairly easily to resolve several other issues that trouble commentators. For example, a proper understanding of Hume's coherence-based explanation will allow us to offer plain and persuasive explanations of several difficult passages in *Treatise* I.iv.2, and to respond to questions about the role of causal inference in Hume's coherence-based explanation.[9]

The paper's dialectic proceeds in several stages. In Section 1, I argue that Hume's notion of coherence and his notion of constancy are distinct and that neither is a special case of the other. This suggests that Hume will need one explanation for cases of coherence and a different explanation for cases of constancy, and hence that we should reject the unified explanation hypothesis.

In Section 2, I provide a brief reconstruction of Hume's constancy-based explanation of the causes of our belief in the continued existence of objects. In Section 3, I concentrate on Hume's coherence-based explanation, with the primary aim of examining it thoroughly and carefully. As a part of this examination, I endeavor to paint an accurate portrait of the nature of Hume's examples, and I show how our account of his coherence-based explanation applies to those examples. Finally, in Section 4, I provide further support for our new interpretation by providing explanations, in accordance with that interpretation, of some perplexing passages in

[9] For attempts to respond to questions about the role of causal inference in Hume's coherence-based explanation, see Paul Gomberg, 'Coherence and Causal Inference in Hume's *Treatise*', *Canadian Journal of Philosophy* 6 (1976): 693-704; Loeb, op cit., pp. 180-187; Price, op cit., pp. 50-59; and Eric Steinberg, 'Hume on Continued Existence and the Identity of Changing Things', *Hume Studies* 7 (1981): 105-120.

Treatise I.iv.2, and by addressing concerns about the role of causal inference in Hume's coherence-based explanation.

1. The Distinction Between Coherence and Constancy

I argue in this section that coherence and constancy are not related so as to be susceptible to similar treatment, and thus that we should reject the unified explanation hypothesis. I provide an interpretation of Hume's notion of coherence that suggests that coherence is quite distinct from constancy. This requires that we treat cases involving coherence wholly differently from cases involving constancy. I also show how rejecting the unified explanation hypothesis (1) removes our bewilderment over a "perplexing" passage in Section I.iv.2 of Hume's *Treatise*, (2) allows us easily to respond to a question that plagues proponents of the satisfaction hypothesis, namely, why doesn't Hume treat constancy as a special case of coherence, and (3) allows us easily to solve the problem that faces proponents of the dissatisfaction hypothesis, namely, the problem of explaining why Hume rejects his coherence-based explanation in the absence of sufficient reasons for doing so. I begin with a discussion of constancy.

For Hume, two perceptions,[10] A and B, are CONSTANT if and only if A and B "present themselves in the same uniform manner, and change not upon account of any interruption in my seeing or perceiving them" (T 195). Suppose, then, that A is my perception at t_1 of these

[10] Although it's not clear that he may do so (see Loeb, op cit., pp. 177-178, and pp. 184-185, n. 10), Hume uses the terms 'object' and 'perception' interchangeably, at least in *Treatise* I.iv.2. He is explicit about this, saying that

> I here account for the opinions and belief of the vulgar with regard to the existence of body; and therefore must entirely conform myself to their manner of thinking and of expressing themselves. … Those very sensations, which enter by the eye or ear, are with them the true objects, … In order, therefore, to accommodate myself to their notions, I shall at first suppose; that there is only a single existence, which I shall call indifferently *object* or *perception*, … , understanding by both of them what any common man means by a hat, or shoe, or stone, or any other impression, convey'd to him by his senses.

Throughout this paper, I follow Hume in using the terms 'object' and 'perception' interchangeably. (The quotation is from David Hume, *A Treatise of Human Nature*, 2nd ed., L. A. Selby-Bigge and P. H. Nidditch, eds. (Oxford University Press, 1978), I.iv.2, p. 202. In the text, I refer to this work with a 'T' followed by the page number.)

mountains, and suppose that B is my perception at t_4 of these mountains. From t_2 to t_3, however, "I lose sight of them by shutting my eyes or turning my head" (T 194). Still, in this case, A and B are constant, for they "present themselves in the same uniform manner, and change not upon account of any interruption in my seeing or perceiving them" (T 195).

Consider, however, two other perceptions. Let C be my perception at t_1 of my fire, and let D be my perception at t_4 of my fire. From t_2 to t_3, however, I was absent from my chamber. C and D are *not* constant, for they do *not* present themselves in the same uniform manner, and they *do* change. We may ask at this point, though, whether C COHERES with D. So far as I can see, Hume does not answer this question in the affirmative.[11] Hume says of C and D themselves only this: "When I return to my chamber after an hour's absence, I find not my fire in the same situation, in which I left it: …" (T 195). This is to say, though, only that C and D are not constant.

Yet it is clear, of course, that Hume speaks of coherence. If C doesn't cohere with D (or D with C), then what, for Hume, coheres with what? Hume continues by saying that "…: But then I am accustom'd *in other instances* to see a like alteration produc'd in a like time, whether I am present or absent, near or remote" (T 195; emphasis added). And it is only at this point that Hume indicates a coherence. Suppose, then, that yesterday I built a fire in my chamber, and then went out for an hour, at which point I returned to my chamber. Let C* be my perception at t_{-4} of my fire, and D* be my perception at t_{-1} of my fire, where I was absent from my chamber from t_{-3} to t_{-2}. When I compare the set of perceptions that consists of C and D to the set that consists of C* and D*, which is a set of perceptions I have received *in another instance*, I see a like alteration: I recognize that the alteration from C to D is similar to the alteration from C* to D*.

[11] Granted, he doesn't answer it in the negative, either. For more on this, see footnote 14.

That is, the former set of perceptions *coheres* with the latter set of perceptions. This suggests the following interpretation of Hume's notion of coherence:

(COH) Two (or more) sets of perceptions, α, β, … , are COHERENT if and only if the alteration in (or between) the perceptions that constitute α is sufficiently similar to the alteration in (or between) the perceptions that constitute β.[12]

Given this, coherence differs from constancy in at least the following respect: Constancy is a relationship between two individual perceptions, say, between A and B. Again, A and B are constant because they present themselves uniformly and without change.[13] Coherence, on the other hand, is *not* a relationship between two individual perceptions, say, between C and D. No two individual perceptions will ever cohere (on Hume's conception of coherence).[14] If there had been no change from C to D, they would have been constant. Yet since there *is* a change from C to D, they are *not* constant (i.e., inconstant). This set of inconstant perceptions, which consists of C and D, can nevertheless cohere with other sets of (inconstant) perceptions, say, the set that consists of C* and D*.[15]

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[12] For a similar interpretation of Hume's notion of coherence, see Price, op cit., pp. 50, 59-60.

[13] See Hume's discussion of the principle of individuation at T 200-201. He suggests there, in fact, not only that constancy is a relationship between two individual perceptions, but also that it *must* be such a relationship: "We cannot, in any propriety of speech, say, that an object is the same with itself, unless we mean, that the object existent at one time is the same with itself existent at another" (T 201). Hume here refers to two and only two perceptions—one that exists at one time, and one that exists at another.

[14] To say that two individual perceptions are coherent is, for Hume, akin to saying that an argument from analogy is valid. We simply cannot apply the concept of validity to analogical arguments. Likewise, we cannot apply the concept of coherence to two individual perceptions. This is why Hume answers the question whether C coheres with D (or D with C) *neither* in the affirmative *nor* in the negative—we cannot apply the concept of coherence *at all* to two individual perceptions.

[15] Considerations like those presented in this paragraph seem to be at the heart of Price's claim that, for Hume, coherence and constancy are "irreducibly different" (ibid., p. 60) and "mutually irreducible" (ibid., p. 65). Yet, in spite of the fact that he reads Hume in this way, Price himself maintains that when we "reconsider these two characteristics for ourselves" (ibid., p. 59), we will see that coherence and constancy are "sub-species of a common principle" (ibid., p. 60) and hence that Hume was wrong to think that they are irreducibly different. The fact that Price believes that Hume is wrong about the relationship between coherence and constancy has led to confusion over the nature of Price's interpretation of Hume: Some read him—incorrectly, I think—as suggesting that Hume himself sees coherence and constancy as sub-species of a common principle. Clearly, however, it is only *after* Price decides that we should reconsider coherence and constancy "for ourselves" (ibid., p. 59) that he claims that coherence and

There is, of course, a competing interpretation, which stems from the unified explanation hypothesis. When commentators accept that hypothesis, they are apt to see constancy as a special case of coherence. Given this, they're inclined to agree that two perceptions, P and Q, are constant if and only if they are exactly similar. They typically go on to maintain, however, something like the following claim:

(*) P and Q are coherent if and only if they are less than exactly similar but nevertheless exhibit a sufficient degree of similarity.[16]

According to (*), then, C and D *do* cohere, for even though they are less than exactly similar, they nevertheless exhibit a sufficient degree of similarity. The examples of ¶ 20 of *Treatise* I.iv.2, however, should compel us to reject this sort of interpretation. There, Hume says, "…I hear on a sudden a noise as of a door turning upon its hinges; and a little after see a porter, who advances towards me. This gives occasion to many new reflexions and reasonings" (T 196). I want here to consider the first of these (although the points I make here apply equally well to each of his "reflexions and reasonings").

Hume says, "I never have observ'd, that this noise cou'd proceed from any thing but the motion of a door; …" (T 196). He adds later that "I am accustom'd to hear such a sound, and see such an object in motion at the same time" (T 196). In previous, similar cases, Hume has received two perceptions: (1) hearing the distinctive noise as of a door turning upon its hinges,

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constancy are sub-species of a common principle. He does not maintain that Hume himself believes that coherence and constancy are so related.

[16] See Bennett, op cit., p. 323; R. Jo Kornegay, 'Hume on the Ordinary Distinction Between Objective and Subjective Impressions', *Canadian Journal of Philosophy* 23 (1993): 241-270, p. 244; Loeb, op cit., pp. 178-179; Steinberg, op cit., p. 114; and Barry Stroud, *Hume* (Routledge, 1977), p. 100. See, too, David Fate Norton, 'Editor's Introduction' in David Hume, *A Treatise of Human Nature*, edited by David Fate Norton and Mary J. Norton (Oxford University Press, 2000), p. I40. This sort of interpretation contributes to the unfortunate tendency, exhibited by Stroud (see op cit., p. 100) and by Johnson (see Oliver A. Johnson, *The Mind of David Hume* (University of Illinois Press, 1995), pp. 250-252), virtually to disregard Hume's discussion of coherence and to concentrate almost exclusively on his discussion of constancy.

and (2) seeing a door in motion.[17] Yet Hume has "not receiv'd in this particular instance both these perceptions" (T 196). On *this* occasion, Hume receives *only one* perception, namely, the perception of the distinctive noise. This means that (*) is ill-equipped to handle Hume's example, for it applies only in cases in which there are *at least two* perceptions. (*) is therefore idle in this instance, and it cannot explain the coherence that is present in Hume's example.

Clearly, however, this is a case in which there is coherence and in which coherence generates—or helps to generate—a belief in the continued existence of some object. (*), however, can explain *neither* the coherence that's present in this case—there is in this case only one perception, but (*) applies only in cases in which there are at least two perceptions—*nor*, consequently, the generation of a belief in the continued existence of the door. We should therefore reject (*) as an interpretation of Hume's notion of coherence. This, along with the fact that (COH) *can* account for the coherence that's present in Hume's examples, should motivate us to accept (COH).

Yet how does (COH) account for the coherence that's present in the case of the noise and the door? We have had several sets of perceptions, α through φ, each of which consists of two perceptions—hearing the distinctive noise, and seeing the motion of the door.[18] We now receive

[17] Each of these two perceptions, it seems, will itself involve some transition or alteration. In the case of the distinctive noise, there will be some change of pitch, for example, from its beginning to its end. In the case of the motion of the door, there will be some change of position, for example, from the beginning of the motion to its end. (This use of 'perception', although it might not capture Hume's considered conception of a perception, is in accordance with his use of the term during his discussion of coherence. Hume says that "I am accustom'd to hear such a sound, and see such an object in motion at the same time. I have not receiv'd in this particular instance both these perceptions" (T 196). Hume here mentions two and only two perceptions—seeing a door in motion, and hearing a noise as of a door turning upon its hinges. Yet both hearing the distinctive noise and seeing a door in motion involve some transition or alteration, for we could not see the door *in motion*, for example, if we didn't see it change its position. Thus, Hume seems to allow, at least for the purposes of his discussion of coherence, that a single perception can involve some transition or alteration.)

[18] We should perhaps add something that seems consistent with Hume's presentation, namely, that *whenever* we have previously perceived the distinctive noise, we have also seen the door in motion. Hume says, "I *never* have observ'd, that this noise cou'd proceed from any thing but the motion of a door; …" (T 196; emphasis added). Compare Gomberg, op cit., who maintains that at T 196-197, "the *constant* conjunction in past experience is assumed" (p. 697).

a set of perceptions, ω, that consists only of hearing the distinctive noise. ω coheres with α through φ because the alteration in the perceptions that constitute ω is sufficiently similar to the alteration in the perceptions that constitute each of α through φ.[19] Thus, (COH) can account for the coherence that is present in this case. Even though ω consists of only one perception, it is perfectly capable, given (COH), of cohering with other sets of perceptions. And since (*) can't account for the coherence that's present in this case, we should prefer (COH).

We have now seen that coherence, conceived in accordance with (COH), is quite distinct from constancy. This means that Hume needs two different explanations in order fully to account for the causes of our belief in the continued existence of objects. He needs the constancy-based explanation in order to take care of cases that involve perceptions that are constant but not coherent (for example, my perception at t_1 of these mountains and my perception at t_4 of these mountains), and he needs the coherence-based explanation in order to take care of cases that involve perceptions that are not constant but that, as a set, cohere with other sets of inconstant perceptions. We should therefore reject the unified explanation hypothesis.

This interpretation allows us to explain the paragraph that serves as a bridge from Hume's discussion of coherence to his discussion of constancy, a passage that, according to Loeb, has "perplexed commentators":[20]

> But whatever force we may ascribe to this principle, I am afraid 'tis too weak to support alone so vast an edifice, as is that of the continu'd existence of all external

[19] See footnote 17 for the claim that the perceptions that constitute ω, as well as those that constitute α through φ, will themselves involve some alteration.

[20] Loeb, op cit., p. 188.

> bodies; and that we must join the *constancy* of their appearance to the *coherence*, in order to give a satisfactory account of that opinion. (T 198-199)[21]

Rejecting the unified explanation hypothesis allows us to read this passage not as Hume's rejection of the coherence-based explanation, but as it is most naturally read. Hume here says that if one is to give a satisfactory account of our belief in the continued existence of objects, a constancy-based explanation must work together with—it must "join"—a coherence-based explanation. Hume claims that his coherence-based explanation is "too weak" not because it is flawed, but only because it cannot on its own account for all cases in which we come to hold a belief in the continued existence of objects. The coherence-based explanation's weakness is therefore no reason to reject it. On the contrary, its services must be retained—and put together with those of a constancy-based explanation—if we are fully to account for the causes of our belief. Rejecting the unified explanation hypothesis, then, allows us to read the passage quoted above as it is most naturally read, that is, as suggesting that we need more than one kind of explanation. There is no need, on an interpretation that rejects the unified explanation hypothesis, to find the passage perplexing.

One might object at this point that a coherence-based explanation might alone be sufficient for Hume's purposes. For it might be that two (or more) sets of constant perceptions can cohere. It seems, then, that a coherence-based explanation might be able to account not only for those cases that involve inconstant perceptions, but also for those that involve constant perceptions.[22] This objection ignores (what Hume takes to be) the psychological facts. Let me explain. Recall that C and D are inconstant—when there is an interruption between those perceptions, I notice a change from the first perception to the second. In this case, C and D

[21] Commentators who seem perplexed by this passage include Bennett (see op cit., pp. 329-330).

[22] Price seems to have something like this in mind when he claims that coherence and constancy "are in fact sub-species of a common principle" (op cit., p. 60). See ibid., pp. 59-71.

themselves provide an insufficient psychological basis for a belief in continued existence. (This has to do, it seems, with the very fact that C and D are suitably dissimilar and hence inconstant.) To generate such a belief, we need at least one set of previous, similar perceptions, as well as a coherence between that set (or those sets) and the set of perceptions that consists of C and D. Only now, Hume suggests, can we have a sufficient psychological basis for a belief in continued existence. Recall, however, that two perceptions are constant when they "change *not* upon account of any interruption in my seeing or perceiving them" (T 195; emphasis added). Given this, two constant perceptions themselves provide a sufficient psychological basis for a belief about identity, which gives way to a belief about continued existence and, in turn, to a belief about distinct existence.[23] Thus, since Hume is here concerned to provide only a psychologically faithful account, he ought not appeal to his coherence-based explanation in order to account for cases that involve constant perceptions. This is true even if sets of constant perceptions can cohere.[24] For, even in that case, Hume would overlook some of the psychological facts if he were to rely on his coherence-based explanation in accounting for cases that involve constant perceptions.

We have now seen that Hume needs one explanation for cases of coherence and a different explanation for cases of constancy. It follows that coherence and constancy are not related so as to be susceptible to similar treatment. We should therefore reject the unified explanation hypothesis. Doing so allows us to say, as against those who accept both the satisfaction hypothesis and the unified explanation hypothesis, that Hume doesn't *treat*

[23] See, for example, T 199.

[24] As a matter of fact, however, sets of constant perceptions cannot cohere. For, since there is no alteration in constant perceptions—and hence no alteration in the perceptions that constitute a set of constant perceptions—the alteration in the perceptions that constitute one set of constant perceptions can never be sufficiently similar to the alteration in the perceptions that constitute another set of constant perceptions. Here again, it seems that we simply cannot apply the concept of coherence to two (or more) sets of constant perceptions.

constancy as a special case of coherence because he recognizes that constancy *isn't* a special case of coherence. Rejecting the unified explanation hypothesis also affords a straightforward solution to the problem that troubles those who accept the dissatisfaction hypothesis, namely, the problem of explaining why Hume rejects his coherence-based explanation in the absence of adequate grounds for doing so. Since Hume needs more than one sort of explanation, he accepts both his constancy-based explanation and his coherence-based explanation. And the fact that he accepts his coherence-based explanation obviates the need to explain why he rejects it.

2. Hume's Constancy-Based Explanation

We are now in position to see Hume's distinction between constancy and coherence at work in the text of *Treatise* I.iv.2. Since it has been more widely discussed than coherence—and, indeed, since commentators tend to concentrate almost exclusively on it[25]—I begin only with a very brief discussion of Hume's notion of constancy. We want to determine in particular, of course, how, according to Hume, the constancy of our perceptions causes us to believe that objects continue to exist even when they are not perceived.

Hume maintains that we have a "propension" (T 208) to ascribe identity to a succession of related perceptions. In particular, according to Hume, we have a propensity to ascribe identity to successive perceptions "upon account of their resemblance" (T 199). Hume says,

> Nothing is more apt to make us mistake one idea for another, than any relation betwixt them, which associates them together in the imagination, and makes it pass with facility from one to the other. Of all relations, that of resemblance is in this respect the most efficacious; … (T 202-203)

[25] See, for example, Bennett, op cit., pp. 322-345; Johnson, op cit., pp. 250-264; and Stroud, op cit., pp. 100-117. Welcome exceptions to the tendency to disregard coherence include Loeb, op cit. (see especially Chapters V and VI), and Price, op cit., pp. 37-59.

Given this, we may now note that when a perception

> returns upon us after an absence or annihilation with like parts and in a like order, as at its first appearance, we are not apt to regard these interrupted perceptions as different, (which they really are) but on the contrary consider them as individually the same, upon account of their resemblance. (T 199)[26]

That is, when we receive two constant but interrupted perceptions, we ascribe to them identity.

Yet "this interruption of their existence is contrary to their perfect identity" (T 199). For two perceptions are identical, according to Hume, if and only if they are invariable and uninterrupted.[27] Thus, we regard two interrupted perceptions, even if they are constant and hence invariable, as different. Unfortunately, we are now "involv'd in a kind of contradiction" (T 199). Given two constant but interrupted perceptions, we regard them *both* as identical—because "the constancy of our perceptions makes us ascribe to them a perfect numerical identity" (T 201-202)—*and* as different—because two perceptions are identical only if they are uninterrupted.

In order to remedy this difficulty, we come to believe that "these interrupted perceptions are connected by a real existence, of which we are insensible" (T 199).[28] That is, we come to believe that objects continue to exist even when they are not perceived. Our belief in continued existence allows us to see two constant but interrupted perceptions as *un*interrupted. This, along with the fact that such perceptions are invariable, then allows us to see them as identical.[29] Once we assure ourselves in this way that our constant but interrupted perceptions are identical, we avoid the contradiction. Nicely summarizing this line of reasoning, Hume says,

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[26] See also T 201-205.
[27] See T 200-201.
[28] See also T 205-206.
[29] Hume says that our coming to believe that objects continue to exist even when they are not perceived allows us to see those objects as "entirely the same" (T 206) and "to justify this identity" (T 208).

> This resemblance [of constant but interrupted perceptions] gives us a propension to consider these interrupted perceptions as the same; and also a propension to connect them by a continu'd existence, in order to justify this identity, and avoid the contradiction, in which the interrupted appearance of these perceptions seems necessarily to involve us. (T 208-209)

This suggests that the constancy of our perceptions works in four stages to generate in us the belief that objects continue to exist even when they are not perceived:

1. Due to our propensity to ascribe identity to resembling perceptions, we ascribe identity to constant but interrupted perceptions.
2. In accordance with the fact that perceptions are identical only if they are uninterrupted, we regard constant but interrupted perceptions as different.
3. The fact that we regard constant but interrupted perceptions both as identical and as different involves us in a kind of contradiction.
4. To remedy this, we come to believe that objects continue to exist even when they are not perceived. This, along with the fact that such perceptions are invariable, then allows us to see them as identical and hence to avoid the contradiction.[30]

This discussion will suffice, at least for my purposes here, as an account of Hume's constancy-based explanation of our belief in the continued existence of objects.

3. Hume's Coherence-Based Explanation

I turn now to Hume's notion of coherence. Here again, we want to determine how, according to Hume, the coherence of our perceptions causes us to believe that objects continue to exist even

[30] This account, in spite of the fact that it sees four stages where Loeb's sees only three, is in essence identical to the one found in Loeb, op cit., p. 141.

when they are not perceived. So far as I can see, no one has provided anything like the following account of Hume's coherence-based explanation. This is due in part to the fact that commentators accept the unified explanation hypothesis, which leads them to neglect Hume's discussion of coherence and to concentrate almost exclusively on his discussion of constancy. The consequences of this are considerable and bad. For accepting the unified explanation hypothesis and neglecting Hume's discussion of coherence serves only to keep us from a proper understanding of his coherence-based explanation. Here, then, I want to concentrate on Hume's discussion of coherence. I want first of all to better understand the examples he provides in *Treatise* I.iv.2, ¶ 20.

Consider two perceptions—hearing a distinctive noise as of a door turning upon its hinges, and seeing a door in motion. Hume says that "I am accustom'd to hear such a sound, and see such an object in motion *at the same time*" (T 196; emphasis added). Hume is accustomed, then, to receiving both perceptions simultaneously. In his first example, though, only one member of the set is present: "I have not receiv'd in this particular instance both these perceptions" (T 196). In particular, Hume hears the distinctive noise, but fails to see the door in motion. The example therefore involves *no interruption* between perceptions of a single object (e.g. a mountain) via a single modality (e.g. vision). (In this respect, it is unlike both the mountain example, at T 194-195, and the fire example, at T 195.) Rather, from a set of perceptions of a single object (the door) that Hume customarily receives simultaneously via distinct modalities (vision and audition), one perception is missing (the visual perception of the door).[31]

[31] Both the case of the porter and the case of the letter are supposed to be similar to the case of the door. In particular, it is supposed to be true in each case that from a set of perceptions that we customarily receive simultaneously, one perception is missing. Consider the example of the porter. In that case, we are accustomed to see the stairs when we see the porter "mounting in the air … to arrive at my chamber" (T 196). In this case,

In accordance with (COH), the present set of perceptions coheres with previous sets in virtue of the fact that the alteration in the perception that constitutes the present set is sufficiently similar to the alteration in the perceptions that constitute each of the previous sets. These alterations are sufficiently similar because each of them includes the alteration that characterizes the distinctive noise. Nothing else is needed, Hume must think, in order for the alteration in the present set of perceptions to count as sufficiently similar to the alteration in previous sets. For, of the two perceptions that he is accustomed to receiving simultaneously, he receives in the present case only the perception of the distinctive noise.

The fact that the present set of perceptions includes *only one* perception—the perception of the distinctive noise—reinforces the idea that Hume's example involves no interruption. Nevertheless, as I will now demonstrate, there *is* an interruption in this case. Let t_4 be the time at which Hume receives the present set of perceptions, which, given that it coheres with previous sets of perceptions, causes him to believe that the door in his chamber exists. Let t_1 be a time at which he received a different but cohering set of perceptions, which consists both of hearing the distinctive noise and of seeing the door in motion. This set, too, causes Hume to believe that the door in his chamber exists. But what of the time between t_1 and t_4, a time during which Hume had no perceptions of any kind of the door? We see in this case that there *is* an interruption between t_1 and t_4, namely, the interruption between (a) Hume's visual perception at t_1 of the door—and his consequent belief that the door exists at t_1—and (b) the set of perceptions that Hume receives at t_4, from which a visual perception of the door is missing, but which nevertheless causes him to believe that the door exists at t_4. This interruption is not an

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however, I am missing the visual perception of the stairs. In the example of the letter, we are accustomed to see—or to "spreading out in my mind" (T 196)—posts and ferries when we see that a letter has arrived from a friend who is "two hundred leagues distant" (T 196). In this case, however, I am missing the visual perception of posts and ferries. (For objections to the letter example, see C. A. J. Coady, 'Testimony and Observation', *American Philosophical Quarterly* 10 (1973): 149-155.)

interruption between visual perceptions—Hume has no visual perception of the door at t_4—but it is an interruption between a visual perception and a set of perceptions that leads Hume to believe that the door exists. More importantly, it's an interruption *during which we take the door to have existed.*

This leaves Hume with two explanations to provide. First, what causes us to believe that the door exists at t_4? Second, what causes us to believe that the door existed from t_2 to t_3, during which time we had no perception of any kind of the door?

3.1 The first explanation: What causes us to believe that the door exists at t_4?

Let's begin with the first of these questions. We have in the past received sets of perceptions, each of which includes hearing a distinctive noise as of a door turning upon its hinges, and seeing a door in motion. We are also presently receiving a set of perceptions, which includes hearing the distinctive noise, but which lacks a visual perception of the door in motion. The present set of perceptions coheres with previous sets in the way specified by (COH): The alteration in the perception that constitutes the present set is sufficiently similar to the alteration in the perceptions that constitute each of the previous sets. Moreover, the present set's cohering with previous sets causes us to believe that the door is now in motion. Our holding this belief fills the gap in our present set of perceptions.

So far, this is nothing more than causal inference. Describing causal inference in *Treatise* I.iii.6, Hume says that

> after the discovery of the constant conjunction of any objects, we always draw an inference from one object to another. (T 88)

Barry Stroud puts the point nicely when he says,

> Whenever men observe a particular object or event which belongs to a class of things that have been constantly conjoined in their experience with things of another class, then they come to believe that an object or event of the second class exists or will occur. We observe constant conjunctions between things of two kinds, and then upon observing something of the first kind we come to believe that a thing of the second kind exists.[32]

In the case at hand, we have observed a constant conjunction between things of two kinds—the distinctive noise, and the motion of the door. Upon observing something of the first kind—the distinctive noise—we come to believe that the door is now in motion. This is nothing more than what Paul Gomberg calls a "classic case of causal inference."[33]

Moreover, Hume says that "the present phænomenon," which includes our present set of perceptions along with the belief it helps to generate, "is a contradiction to all past experience, unless the door, which I remember on t'other side the chamber, be still in being" (T 196). Our present set of perceptions causes us to believe, via a causal inference that is based on the coherence of certain sets of perceptions, that the door is now in motion. But the door can't be in motion unless it exists. Thus, if the door does not now exist, it is not now in motion, and this case, in which I hear the distinctive noise, is unlike every other case in which I have heard that noise. For each of those cases is a case in which the door was in motion.

Hume also suggests that unless the door now exists, the present phenomenon "may be regarded as [an objection] to those maxims, which we form concerning the connexions of causes and effects" (T 196). I have a maxim, formed in light of several previous sets of perceptions, according to which the door is in motion whenever I hear the distinctive noise. In this case, once

[32] Stroud, op cit., p. 52.
[33] Gomberg, op cit., p. 696.

again, I hear the distinctive noise, and I infer in accordance with my maxim that the door is now in motion. Yet suppose that there is no door. In that case, the door is not now in motion. Nevertheless, I hear the distinctive noise. So, given that there is no door, the present phenomenon represents a counterexample to the maxim that serves as the basis of my causal inference.[34]

To avoid these difficulties, reason demands that I "suppose that the door still remains; and that it was open'd without my perceiving it" (T 196-197).[35] Once I come to suppose this, I need not see the present phenomenon as a contradiction to all past experience, nor as an objection to any causal maxim. I can avoid the difficulties generated by my belief that the door is now in motion by adopting the supposition that the door now exists. "And this supposition," says Hume, "which was at first entirely arbitrary and hypothetical, acquires a force and evidence by its being the only one, upon which I can reconcile these contradictions" (T 197). In this way, then, I come to believe that the door exists at t_4.

3.2 The second explanation: What causes us to believe that the door existed from t_2 to t_3?

We have now seen how, according to Hume, we come to believe via causal inference that the door is now in motion. We have also seen how, via reason and in order to avoid certain contradictions, we then come to believe that the door now exists. Hume has therefore provided the first of the two required explanations. I now turn to the task of determining how Hume

[34] This gives us further reason to think that a *causal inference* is responsible for our belief that the door is now in motion. The supposition that there is no door threatens our causal maxim by threatening a certain inference, namely, the inference from the fact that we hear the distinctive noise to the claim that the door is now in motion. Yet if this inference is not performed on the basis of that maxim—that is, if it is not a causal inference—the supposition that there is no door cannot threaten our causal maxim by threatening this inference.

[35] Although Hume never says so explicitly, I assume throughout that reason is the faculty responsible for keeping us from a contradiction. (If by Hume's lights I am wrong about this, the reader should in what follows understand 'reason' to mean the same thing as 'our efforts to avoid certain contradictions'.)

provides the second required explanation: What causes us to believe that the door existed from t_2 to t_3, during which time we had no perceptions at all of the door?

Recall that we have beliefs at t_1 and again at t_4 that the door is now in motion. Moreover, at both t_1 and t_4, I believe that the door now exists. In holding all of these beliefs, we supply an object—the door—with a certain degree of uniformity that it would not otherwise have had. In order to render this "uniformity as compleat as possible" (T 198), Hume here summons a principle that will fill the interruption between t_1 and t_4. Following H. H. Price, we can call this the *Inertia Principle*:

> …the imagination, when set into any train of thinking, is apt to continue, even when its object fails it, and like a galley put in motion by the oars, carries on its course without any new impulse. …as the mind is once in the train of observing an uniformity among objects, it naturally continues, till it renders the uniformity as compleat as possible. (T 198)

The Inertia Principle plays no role in our coming to believe either at t_1 or at t_4 that the door exists. The causes of those beliefs include only perception, causal inference, and reason.

Still, there is an interruption between our belief at t_1 and our belief at t_4. And Hume introduces the Inertia Principle only when he turns his attention to this sort of interruption. He notes the interruption when he remarks that "we suppose … that the irregular appearances [of objects that are usually connected] are join'd by something, of which we are insensible" (T 198). Irregular appearances are appearances like those we have at t_1 and t_4, where their irregularity consists in the fact that the former appearance includes something—namely, seeing the door in motion—that is absent from the latter. We suppose, Hume says, that these irregular appearances are "join'd by something." That is, we suppose that something insensible exists from t_2 to t_3,

hence filling the interruption between t_1 and t_4. Of course, as Hume acknowledges, this supposition extends "custom and reasoning beyond the perceptions" (T 198). Since this is true, Hume must appeal to principles other than those that govern perceptions if he is to explain what causes our supposition. It is at this point, then, that Hume summons the Inertia Principle. Causal inference, based on the coherence of certain sets of perceptions, causes our belief that the door exists at t_4. Given this belief, along with our belief that the door exists at t_1, the Inertia Principle encourages the further belief that *the door existed from t_2 to t_3*. Here's the story as Hume tells it:

> Objects have a certain coherence even as they appear to our senses; but this coherence is much greater and more uniform, if we suppose the objects to have a continu'd existence; and as the mind is once in the train of observing an uniformity among objects, it naturally continues, till it renders the uniformity as compleat as possible. The simple supposition of their continu'd existence suffices for this purpose, and gives us a notion of a much greater regularity among objects, than what they have when we look no farther than our senses. (T 198)

Hume begins here with the claim that "[o]bjects have a certain coherence even as they appear to our senses." This makes perfect sense since coherence is, after all, a relationship between sets of *perceptions*.[36] This coherence, Hume goes on to suggest, is much more uniform if we believe, for example, that the door exists at t_4: Only after we come to hold this belief will our perceptions at t_1 and t_4 have the degree of uniformity that they have when we believe that the door is in motion both at t_1 and at t_4 and that the door exists both at t_1 and at t_4. Given, then, that we have

[36] This gloss is straightforward if 'object' and 'perception' are used interchangeably. Yet Hume notes that he will adopt this usage only at T 202, and the above quotation is to be found at T 198. It might be argued, then, that Hume has not yet conformed to the usage of the vulgar, and that here he means quite expressly that coherence is a relationship between *objects*. Nevertheless, the gloss is a fair one: If objects cohere in a sense similar to the one specified by (COH), then perceptions of those objects will (tend to) cohere in exactly similar ways. For perceptions will (tend to) exhibit alterations that are exactly similar to those exhibited by the perceived objects. Hence, even if Hume is not yet adopting the usage of the vulgar, we may still maintain that sets of perceptions cohere.

observed at t_1 and t_4 this sort of uniformity among objects, the Inertia Principle works on this uniformity, naturally continuing it, until it fills the interruption between the set of perceptions we receive at t_1 and the set we receive at t_4. And the belief that the door exists from t_2 to t_3—the "simple supposition of [the door's] continu'd existence"—is sufficient to fill this interruption. In this way, the Inertia Principle "renders the uniformity [that we have already observed among objects] as compleat as possible." This "gives us a notion of a much greater regularity among objects" than the one we get when, using causal inference and reasoning, we "look no farther than our senses."

We have now seen how Hume provides the second of the two required explanations: Given that we believe at t_1 and again at t_4 that the door exists—given, that is, that "the mind is … in the train of observing an uniformity among objects"—the Inertia Principle, which makes express our tendency to render observed uniformities among objects as complete as possible, fills the interruption between t_1 and t_4 by causing us to believe that the door exists from t_2 to t_3.

3.3 The fire example

I take it that we can tell similar stories for the examples of the porter and the letter, which are the other examples Hume provides in *Treatise* I.iv.2, ¶ 20. This concludes, then, our discussion of the examples in ¶ 20. But what of Hume's fire example, which he provides in *Treatise* I.iv.2, ¶ 19? In that example, I receive a set of perceptions that includes seeing my roaring fire at t_1, before I absented my chamber, and seeing my dying fire on returning to my chamber, at t_4. There is, however, a considerable gap between those two perceptions, for I was absent from my chamber for an hour, from t_2 to t_3, during which time I received no perceptions of any kind of the fire. Still, Hume maintains, the set of perceptions that includes seeing my fire at t_1 and seeing

my fire at t_4 coheres with other sets, for "I am accustom'd in other instances to see a like alteration produc'd in a like time, whether I am present or absent, near or remote" (T 195). In this example, we are concerned, I take it, to determine what causes us to believe that the fire existed from t_2 to t_3. Should we tell the same story in this case as we told in the case of the door? I don't think so.

Note that causal inference, performed on the basis of the coherence of certain sets of perceptions, leads us to believe in the door case that the door is now in motion, even though our set of perceptions in that case lacks a visual perception of the door in motion. Thus, causal inference fills that gap in our set of perceptions. Sometimes, then, causal inference fills gaps that appear in a set of *two* kinds of perceptions—for example, visual and auditory perceptions—that we receive *at a particular moment*.

At other times, however, as in the fire example, gaps appear in a set of *one* kind of perception—in this case, visual perception—that we receive *over the course of several moments*. In this case, too, though, causal inference fills these gaps. We have always observed a similar alteration in our visual perceptions of fires: Every wood fire we have ever observed has at first burned slowly, and then increasingly hotter and brighter, until its flames begin slowly and then completely to die out. Upon receiving a set of perceptions that coheres with these previous sets, in spite of the fact that the present set includes some gaps, causal inference fills those gaps, causing us to believe that the fire burned from t_2 to t_3. Given this, I must also believe that the fire existed from t_2 to t_3. Otherwise, I will be faced with "a contradiction to all past experience" (T 196) and an objection to my causal maxims. Thus, causal inference and reason are together sufficient to cause in me a belief that the fire existed from t_2 to t_3.

This suggests that there are two kinds of cohering sets of perceptions, those that involve an alteration in one kind of object, and those that involve a connection between alterations in two kinds of objects. In cases involving an alteration in one kind of object—cases like the fire example—causal inference and reason need no help from the Inertia Principle in causing us to believe that, for example, the fire existed from t_2 to t_3. Yet in cases involving a connection between alterations in two kinds of objects, causal inference and reason do need the assistance of the Inertia Principle. We should not view this disparity as a problem, however. For it helps to explain why Hume does not return to the fire example in ¶¶ 20-22 of *Treatise* I.iv.2—those paragraphs are concerned only with cases that require the assistance of the Inertia Principle—and it helps to explain why Hume introduces the Inertia Principle as he does, apparently limiting its application to cases in which "[w]e remark a connexion betwixt two kinds of objects in their past appearance to the senses" (T 197-198).

Still, the disparity might fuel an objection. For, given that the Inertia Principle has no role to play in causing us to believe that the fire existed from t_2 to t_3—given, that is, that causal inference and reason are solely responsible for causing that belief—it seems that at least one of our beliefs in continued existence is *not* a product of the imagination. And this contradicts Hume's claim that our belief in the continued existence of objects is "entirely owing to the IMAGINATION" (T 193).

I begin my response to this objection by making a radical proposal: There is for Hume *a distinction between two kinds of belief in continued existence*. First, there is a kind that is relevant, as I suggest below, in the door example. Beliefs of this kind take something like the following form:

(D) We believe that some object, *o*, exists at t_4, where t_4 is a time at which we

have no perception of *o*, and which corresponds to no time (that is, to no position in any previous set of perceptions) at which we have had a perception of (an object relevantly similar to) *o*.

Next, there is a kind that is relevant, as I suggest below, in the fire example. Beliefs of this kind take something like the following form:

(F) We believe that *o* exists at t_4, where t_4 is a time at which we have no perception of *o*, but which nevertheless corresponds to a time (that is, to a position in some previous set of perceptions) at which we *have* had a perception of (an object relevantly similar to) *o*.

Roughly, a time, t′, *corresponds* to a time at which we have had a perception of (an object relevantly similar to) *o* just in case I have received a set of perceptions that includes *both* a perception of (an object relevantly similar to) *o and* perceptions that are relevantly similar to those that I receive at t′. So, for example, our belief that the door exists at t_4 is a belief of (F)'s sort. First, t_4 is a time at which we have no visual perception of the door. Moreover, t_4 is a time that corresponds to a time at which I have had a perception of the door: I have on previous occasions seen the door in motion while hearing the distinctive noise, and t_4 is a time at which I hear the distinctive noise. On the other hand, our belief that the door existed from t_2 to t_3 is a belief of (D)'s sort: neither t_2 nor t_3 corresponds to a time at which I have had a perception of the door, for both t_2 and t_3 are times at which I experience an interruption in my perceptions of the door—I am, in fact, absent from my chamber both at t_2 and at t_3—and there is no time at which I have both been absent from my chamber and perceived the door.

Evidence for a distinction of this sort comes from Hume himself. Immediately before providing the door example, Hume says that external objects "require a continu'd existence, or

otherwise lose, in a great measure, the regularity of their operation" (T 195-196). One sort of continued existence, then, is meant to preserve the regularity that we have observed in the operations of external objects. It seems that this is just the sort of role played by our belief that the door exists at t_4 and by our belief that the fire existed from t_2 to t_3. Yet just before introducing the Inertia Principle, Hume says that "whenever we infer the continu'd existence of the objects of sense from their coherence, and the frequency of their union, 'tis in order to bestow on the objects a *greater* regularity than what is observ'd in our mere perceptions" (T 197; emphasis added). This sort of continued existence, then, is meant to *extend* or to *expand* the regularity that we have observed in the operations of external objects. And it seems that this is just the sort of role played by our belief that the door existed from t_2 to t_3.

Moreover, Hume is concerned to maintain only that beliefs of (D)'s sort are "entirely owing to IMAGINATION" (T 193). Evidence for this claim includes the fact that Hume does not return to the fire example after using it to introduce the notion of coherence. He does not return to that example because it concerns only a belief of (F)'s sort, which can be produced, as I have argued, without the assistance of the Inertia Principle. But because Hume is concerned to show only that the imagination is responsible for beliefs of (D)'s sort, he need not show that imagination plays a role in cases that involve only a belief of (F)'s sort. Thus, he need not return to the fire example.[37]

[37] Why think that the fire example involves only beliefs of (F)'s sort? Recall that beliefs of (D)'s sort fill the interruptions between coherent sets of door perceptions (for example). And there is no interruption between coherent sets of fire perceptions that corresponds to the interruption between coherent sets of door perceptions. (Note that if there were such an interruption between coherent sets of fire perceptions, the Inertia Principle would have some work to do in this case.) Yet why is there no such interruption between coherent sets of fire perceptions? This is a difficult question. Perhaps there is no such interruption because it is in general true that when we receive a set of perceptions that involves an alteration in one kind of object, and when we have in the past received sets of perceptions that cohere with the present set, there is nothing distinctive that appears in each of the cohering sets, which suggests, perhaps, that none of the cohering sets *closely enough resembles* another to be connected or united with it in the imagination. Why would there be nothing distinctive in each of the cohering sets of fire perceptions? Perhaps because those sets are such that they often include the perception of the object's coming to be, as in the

In addition, Hume maintains that the senses are not responsible for our belief in continued existence "because they cannot operate beyond the extent, in which they really operate" (T 191). This suggests that in believing that some object continues to exist, we thereby believe that it has a quality that lies beyond the reach of the senses. That is, we believe that it has a quality that cannot be detected by the senses. For, Hume suggests, if the senses were able to detect that quality, they would be able to operate "beyond the extent, in which they really operate." (F), however, clearly allows us to believe that some object continues to exist with*out* thereby believing that it has a quality that lies beyond the reach of the senses. Surely, seeing the door in motion while hearing the distinctive noise, even though it's not always the case that I receive the former perception when I receive the latter, is something that is *not* beyond the reach of the senses. After all, I have on several occasions seen the door in motion while hearing the distinctive noise. All of this suggests, then, that Hume is *not* maintaining that the senses aren't responsible for our belief in continued existence because they can't produce beliefs of (F)'s sort. Rather, he maintains that the senses aren't responsible for our belief in continued existence because they can't produce beliefs of (D)'s sort. This suggests in addition that he is concerned to show that imagination *is* responsible for our belief in continued existence because it—and it *alone—can* produce beliefs of (D)'s sort.

Given this, the above objection—that our belief that the door existed from t_2 to t_3 is not produced by the imagination—has force only if it's the case both that our belief is of (D)'s sort and that it is not produced by the imagination. But this means that the objection has no force.

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perception of the fire's being built, or the perception of the object's ceasing to be, as in the perception of the fire's dying out. We thus come to recognize that the members of a set of fire perceptions are peculiar to that set.

In contrast, perhaps the following is true in general of coherent sets of perceptions that involve a connection between alterations in two kinds of objects: There is an interruption between such sets because there *is* something distinctive that appears in each of them. For example, each cohering set of door perceptions includes a distinctive perception, namely, hearing the distinctive noise as of a door turning upon its hinges. Perhaps it is in virtue of this that a cohering set of door perceptions closely enough resembles another to be connected or united with it in the imagination.

For even though our belief that the fire existed from t_2 to t_3 is a belief of (D)'s sort, it *is* produced by the imagination and, in particular, by the Inertia Principle. Our belief that the door existed from t_2 to t_3 is a belief of (D)'s sort. Yet, as we have seen, that belief is generated by the imagination.

Perhaps we can revive the objection by finding a belief of (F)'s sort that *is* produced by the imagination. This, too, is fruitless, for such beliefs are produced with*out* the assistance of the imagination. Our belief that the door exists at t_4, for example, is a belief of (F)'s sort. Yet, as we have seen, causal inference and reason are together sufficient for generating that belief.[38]

We have now seen that the objection with which we are concerned has no force. Hume is concerned to show only that the imagination is responsible for beliefs of (D)'s sort, and such beliefs are produced by the imagination, while beliefs of (F)'s sort are not. Thus, Hume has every right to claim that our beliefs in the continued existence of objects, where such beliefs are to be understood as beliefs of (D)'s sort, are "entirely owing to the IMAGINATION" (T 193).

4. Conclusion

We now have ample reason to accept the distinction between beliefs of (F)'s sort and beliefs of (D)'s sort, as well as ample reason to accept the account of Hume's coherence-based explanation of which that distinction is a part. I close, then, with an outline of his coherence-based explanation of our belief (of (D)'s sort) in the continued existence of objects.

[38] Also, there is in general absolutely no barrier, so far as Hume is concerned, to our saying that causal inference and reason are wholly responsible for beliefs of (F)'s sort. For the habits that serve as the basis of causal inference are acquired by the regular succession of perceptions. Thus, given that the perceptions that we have had of *o*, which include perceptions received at times that correspond to t_4, include an appropriately regular succession of perceptions of *o*, we can acquire a habit that can underwrite a causal inference that will, with the help of reason, cause us to believe that *o* exists at t_4.

1. The coherence of our present set of perceptions with previous sets causes us to hold beliefs that fill in the gaps in the present set. In Hume's door example, our present set of perceptions causes us to believe, via a causal inference that is based on the coherence of certain sets of perceptions, that the door is in motion at t_4.
2. Suppose, however, that the door doesn't exist at t_4. In that case, it is not in motion at t_4. Given that there is no door, then, the present set of perceptions, which includes only the distinctive noise as of a door turning upon its hinges, represents a counterexample to the maxim according to which the door is in motion whenever I hear the distinctive noise.
3. To avoid such difficulties, reason demands that I suppose that the door exists at t_4. This supposition is elevated to the level of a belief because it "acquires a force and evidence by its being the only one, upon which I can reconcile the contradictions" (T 197).
4. The Inertia Principle, having been put in motion by our belief that the door exists at t_4, causes us to believe that the door exists from t_2 to t_3, during which time we had no perceptions whatsoever of the door. In this way, the Inertia Principle fills the interruption between the set of perceptions we received at t_1 and the set of perceptions we receive at t_4.

In addition to those that we have already seen, there are other reasons to accept this account. First, Hume's *constancy*-based explanation involves beliefs of (D)'s sort, which is the same kind of belief involved in our account of Hume's coherence-based explanation. Suppose that I have visual perceptions at t_1 and again at t_3 of these mountains, and that these two perceptions are constant but interrupted at t_2. Given our propensity to ascribe identity to

resembling perceptions and our efforts to avoid certain contradictions, we come to believe that these mountains existed at t_2. This is a belief of (D)'s sort: t_2 corresponds to no time at which I have had a perception of these mountains, for t_2 is a time at which I experience an interruption in my perceptions of these mountains, and there is no time at which I have both perceived these mountains and experienced an interruption in my perceptions of them. Hume goes on to maintain, of course, that our belief that these mountains existed at t_2 is produced by the imagination, and so our account of Hume's constancy-based explanation is consistent with our claim that he is concerned to maintain only that the imagination is responsible for beliefs of (D)'s sort.

Second, our account allows us to respond to certain questions about the role of causal inference in Hume's coherence-based explanation. Gomberg complains that Hume doesn't need the imagination in order to explain the inference from the coherence of our perceptions to the continued existence of objects, for that inference is simply a *causal* inference. He says that Hume

> consistently characterizes causal inference as a transition from the perception of an object to the belief in another object connected with it in experience or as a transition from an impression to an idea. The essence of causal inference, for Hume, is inference to things we do not perceive or remember.[39]

Gomberg is right about Hume's characterization of causal inference, and, as we have seen, he is right that causal inference accounts for certain beliefs in continued existence, namely, those of (F)'s sort. According to our account, causal inference plays a significant role in generating our belief that, for example, the door exists at t_4. Thus, since this is a belief in continued existence, albeit a belief of (F)'s sort, causal inference accounts for certain beliefs in continued existence.

[39] Ibid., p. 694.

Nevertheless, causal inference cannot account for all such beliefs, for it cannot account for beliefs of (D)'s sort. If we are to account for those beliefs, Hume argues, we must summon the imagination. This allows us to make sense of the claim that we come to believe in continued existence via something other than causal inference, and it helps us to make sense of another perplexing passage. Hume says that

> tho' this conclusion from the coherence of appearances may seem to be of the same nature with our reasonings concerning causes and effects; as being deriv'd from custom, and regulated by past experience; we shall find upon examination, that they are at the bottom considerably different from each other, and that this inference arises from the understanding, and from custom in an indirect and oblique manner. (T 197)

The fact that causal inference is responsible for beliefs of (F)'s sort helps to explain why "this conclusion from the coherence of appearances may seem to be of the same nature with our reasonings concerning causes and effects." Nevertheless, beliefs of (D)'s sort are generated in a "considerably different" manner. For such beliefs are produced by the Inertia Principle and hence by the imagination. Still, since the Inertia Principle is put in motion by beliefs that are generated by causal inference and reason—beliefs like our belief that the door exists at t_4—causal inference helps, "in an indirect and oblique manner," to generate beliefs of (D)'s sort.

We have now seem that our account puts us in a much better position to answer questions about the role of causal inference in Hume's coherence-based explanation. Moreover, it helps to explain why there is some debate over causal inference's role. When we suppose that there is only one kind of belief in continued existence, there is an apparently legitimate question as to whether the inference to this kind of belief is causal in nature. And it seems that our responses to

this question are quite limited: we must see the inference either as causal or as something other than causal.[40] There is no reason, however, to think that our responses are so limited. Since there are *two* kinds of belief in continued existence, we are free to maintain that causal inference is responsible for one kind, while also maintaining that something other than causal inference is responsible for the other. This, as we have seen, is exactly the sort of thing we should say—causal inference, with the help of reason, generates beliefs of (F)'s sort, and then the Inertia Principle works on the uniformity that is created by those beliefs in order to generate beliefs of (D)'s sort. This eliminates the need to wonder whether we should see the inference to our belief in continued existence as causal or as something other than causal, for that debate stems from the supposition that there is only one kind of belief in continued existence.

This concludes our examination of Hume's coherence-based explanation of our belief in the continued existence of objects. Our examination brings us much closer, I think, to a proper understanding of Hume's explanation, one that accepts a distinction between kinds of belief in the continued existence of objects, and one that rejects the unified explanation hypothesis.[41]

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[40] Each of the commentaries that I mention in footnote 9 is limited in just this way.

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