

# Certainty, Necessity, and Knowledge in Hume's *Treatise*

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*Abstract: Hume appeals to different kinds of certainties and necessities in the Treatise. He contrasts the certainty that arises from intuition and demonstrative reasoning with the certainty that arises from causal reasoning. He denies that the causal maxim is absolutely or metaphysically necessary, but he nonetheless takes the causal maxim and 'proofs' to be necessary. The focus of this paper is the certainty and necessity involved in Hume's concept of knowledge. I defend the view that intuitive certainty, in particular, is certainty of the invariability or necessity of relations between ideas. Against David Owen and Helen Beebe, I argue that the certainty involved in intuition depends on the activity of the mind. I argue, further, that understanding this activity helps us understand more clearly one of Hume's most important theses, namely that experience is the source of a distinct kind of certainty and of necessity.*

Hume acknowledges that the general maxim in philosophy: "whatever begins to exist, must have a cause of existence" is "suppos'd to be founded on intuition, and to be one of those maxims, which [...] 'tis impossible for men in their hearts really to doubt of" (*T* 1.3.3.1).<sup>1</sup> But he maintains that, if we examine the maxim by his "idea of knowledge," "we shall discover in it no mark of any such intuitive certainty; but on the contrary shall find, that 'tis of a nature quite foreign to that species of

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1. David Hume, *A Treatise of Human Nature*, ed. D. F. and M. Norton (Oxford: Oxford University Press, 2008). Here abbreviated "*T*" with book, part, section and paragraph numbers inserted parenthetically in the text.

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conviction" (*T* 1.3.3.1). The causal maxim is not intuitively certain; neither is it demonstratively certain: "we can never demonstrate the necessity of a cause to every new existence" (*T* 1.3.3.3). But the maxim is, along with propositions such as "the sun will rise tomorrow" and "all men must die," "entirely free from doubt and uncertainty," which is why Hume insists that "arguments that derive from the relation of cause and effect" deserve the title of "proofs" (*T* 1.3.11.2). Proofs are entirely free from doubt and uncertainty, but they are not knowledge because their "assurance" does not arise "from the comparison of ideas" (*T* 1.3.11.2).

Hume also claims that "in reasonings from causation, and concerning matters of fact [there is no] absolute necessity" (*T* 1.3.7.3). After discussing the idea of necessary connection, he remarks: "the necessity of a cause to every beginning of existence is not founded on any arguments either demonstrative or intuitive" (*T* 1.3.14.35). Hume does not deny that the causal maxim is necessary; his point is rather that "there is no absolute nor metaphysical necessity, that every beginning of existence shou'd be attended with such an object" (*T* 1.3.14.35). The causal maxim is necessary, but its necessity is not founded on intuition or demonstration: it does not arise from "reasoning from mere ideas; without which 'tis impossible to demonstrate the necessity of a cause" (*T* 1.3.3.3).

In these and other passages we shall consider in this paper, Hume speaks of different kinds of certainties and different kinds of necessities. There is the certainty that arises from the comparison of ideas, and the certainty that arises from experience or causal reasoning. There is absolute or metaphysical necessity, which is associated with intuitive and demonstrative reasoning, and there is the necessity that arises from causal reasoning, which Hume also refers to as "physical necessity" (*T* 1.3.14.33; *T* 2.3.1.17). The main purpose of this paper is to understand the kind of certainty and necessity that is distinctive of knowledge. But I also hope to show that a better understanding of Hume's concept of knowledge allows us to appreciate the significance of claims Hume makes about the certainty and necessity that arise out of experience and causal reasoning.

The questions I am concerned to examine are these: What is the certainty associated with the comparison of ideas? What exactly is it that we know with such certainty? What is the role of necessity in Hume's conception of knowledge; in particular, what is absolute or metaphysical

necessity? I shall address these questions by focusing mainly on intuitive certainty, which is the most basic form of knowledge for Hume.

The plan for the paper is as follows. First, I distinguish four possible elements of knowledge in Hume's account in *Treatise* 1.3.1-2. Second, I discuss the incompatibility between two such elements: immediacy and invariability. I argue that intuitive certainty is certainty of invariable relations between ideas. Third, I identify this invariability with necessity, and I defend the view that the process or activity that yields the certainty of necessary relations is an exercise of conceivability. Fourth, I articulate what I take to be Hume's account of intuitive certainty, and I discuss the four relations that yield such certainty. Fifth and last, I contrast the certainty and necessity that arise from the comparison of ideas with the certainty and necessity that arise from experience or from causal reasoning.

### I. Hume's "Idea of Knowledge"

In *Treatise* 1.3.1 Hume revisits the seven philosophical relations introduced earlier in the text<sup>2</sup>, and he divides them into two fundamentally different classes: "such as depend entirely on the ideas, which we compare together, and such as may be chang'd without any change in the ideas" (*T* 1.3.1.1). The first kind of relations includes resemblance, contrariety, degrees in any quality, and proportion in quantity or number. Although Hume refers to these relations as "the objects of knowledge and certainty" (*T* 1.3.1.2), in this paper I will sometimes use my expression "knowledge relations" to signal that these "objects" are in fact relations. Thus, in contrast to the knowledge relations, identity, relations of time and place, and causation cannot be known for Hume because they do not depend entirely on the ideas that we compare together; they can change even while the ideas remain the same.

In the first example Hume offers of knowledge he says: "'Tis from the idea of a triangle, that we discover the relation of equality, which its three angles bear to two right angles; and this relation is **invariable**, as long as **our idea** remains the same" (*T* 1.3.1.1). He identifies reasoning

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2. In *Treatise* 1.1 Hume distinguishes *natural* relations from *philosophical* relations. With natural relations ideas *become* associated in the mind; with philosophical relations we can purposefully call to mind ideas and compare them.

as the comparison and discovery of constant or inconstant relations (*T* 1.3.2.2). And referring to the certainty distinctive of knowledge he says: “All certainty arises from the **comparison of ideas**, and from the discovery of such relations as are **unalterable**, so long as **the ideas** continue the same” (my boldface) (*T* 1.3.3.2).

In contrast: “The relations of *contiguity* and *distance* betwixt two objects **may be chang’d** merely by an alteration of their place, without any change on the objects themselves or on their ideas” (*T* 1.3.1.1). And: “There is nothing in any objects to persuade us, that they are either **always remote or always contiguous**” (my boldface) (*T* 1.3.2.2). If there was something in the objects to persuade us that the relation between them always held, then we would have knowledge.

In these texts, we can identify what seem to be two essential elements in Hume’s concept of knowledge. First, all knowledge depends entirely on relations between ideas. Second, knowledge relations are invariable, unalterable, constant, and always hold as long as the ideas remain the same; knowledge relations are in some sense necessary.<sup>3</sup> However, Hume’s discussion of *intuitive* knowledge seems to invite a different, conflicting reading. Hume explains that some of “the objects of knowledge and certainty” “are discoverable at first sight, and fall more properly under the province of intuition than demonstration” (*T* 1.3.1.2). Initially, he identifies only three of the four knowledge relations as capable of intuitive certainty: resemblance, contrariety and degrees in quality. About resemblance he says: “When any objects *resemble* each other, the resemblance will at first strike the eye, or rather the mind; and seldom requires a second examination.” About contrariety: “No one can once doubt but existence and non-existence destroy each other, and are perfectly incompatible and contrary.” And he claims that when the differences in degrees in quality, such as color, taste, etc., are considerable we can “pronounce at first sight, without any enquiry or reasoning,” which one is superior or inferior (*T* 1.3.1.2). He then allows that the relation of proportions of quantity or number can also yield intuitive certainty, explaining that we might “at one view observe a superiority or inferiority betwixt any numbers or figures; especially where the difference is very great and remarkable” (*T* 1.3.1.3).

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3. In part III of this paper I discuss Hume’s conception of this necessity. Until then, I shall follow Hume’s language in *Treatise* 1.3.1-2 and refer to the invariability of relations, instead of their necessity.

These passages suggest two elements in Hume's concept of intuitive knowledge, which, as we shall see, conflict with the elements he identifies as essential to knowledge in general. The first is an element of immediacy or directness: intuitive certainty is simply a matter of being aware or of perceiving a relation; no activity of the mind is required for intuitive certainty.<sup>4</sup> As we shall see, the element of immediacy conflicts with the element of invariability, which is said to be true of all knowledge relations. The second element concerns the *relata* of relations that can be known intuitively: they can be sensory objects or impressions or matters of fact. It seems that not all knowledge depends entirely on ideas. Indeed, it seems that the relation we are immediately aware of can be factual and contingent. For instance, Hume says, about the relation of degrees of any quality, that when the difference between two qualities is considerable, we can "pronounce at first sight" "that any of them is superior or inferior to another" (*T* 1.3.1.2). It seems that what is known in this case is a fact about a relation between two objects, say that 'one is hotter than the other', and that we know this directly or immediately.

Hume's discussion of intuitive certainty has prompted interpreters to argue that, for Hume, knowledge can be factual and contingent. Referring to the relation of degrees of any quality, David Norton maintains that we have intuitive certainty that, for example, "one item in a related pair is heavier or more intensely blue than another," adding that this is "a decidedly factual or contingent matter."<sup>5</sup> David Owen gives the following example of degrees of any quality:

when comparing two impressions of heat, suppose one is the impression received when the left hand is put in water at 50°F while the other is the impression received when the right hand is put in water at 100°F. It is easy to tell which is hotter than the other. And this judgment is intuitive, with the accompanying high degree of certainty. Note that the main issue here concerns certainty rather than necessity. Where the differences are

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4. David Owen insists throughout his discussion that intuitive certainty is "immediate." David Owen, *Hume's Reason* (Oxford: Oxford University Press, 1999), 81-112. See, for instance, pp. 84-5, and p. 91 where he says that intuitive certainty is a matter of having "direct awareness that two ideas stand in a certain relation." Beebee also interprets intuitive certainty as "direct"; we are directly aware of a relation between two ideas. Helen Beebee, *Hume on Causation* (New York: Routledge, 2011), 21.

5. Norton and Norton (2008), Editor's Introduction, I 25, of which David Norton is the sole author.

great, it is quite plausible to claim that we are certain that this is hotter than that. This certainty extends to ideas as well as impressions.<sup>6</sup>

In Owen's example, *impressions* are the relata of degrees in any quality. That "this is hotter than that" is, according to Owen, an instance of intuitive certainty. That "this is hotter than that" is something we know directly; as he puts it: "It is easy to tell which is hotter than the other." Finally, Helen Beebee, following Owen, offers the following example of the knowledge relation of degrees in any quality: "*this* water is hotter than *that* water."<sup>7</sup> She thus defends the view that, for Hume, "two matters of fact *can* stand in intuitive or demonstrative relations to one another, even though no matter of fact can be demonstrated."<sup>8</sup>

We are confronted with a number of important questions concerning Hume's account of knowledge: first, what are the possible "objects of knowledge and certainty"? Invariable relations between ideas? Contingent relations between impressions or matters of fact? Second, how do we know these relations? Immediately? Or is any activity of the mind necessary to know these relations? If the certainty of (all) knowledge depends *entirely on ideas*, then it seems that we cannot be intuitively certain of relations between impressions or matters of fact. And, as I shall argue in a moment, the element of invariability is incompatible with the element of directness or immediacy: the invariability of a relation is not something that is 'given' or present for immediate awareness, either in sense perception or in 'ideational perception'. In the next section, I articulate why intuitive certainty cannot be direct or immediate, or why intuitive certainty cannot simply be a matter of perceiving that a relation holds between impressions, matters of fact or ideas. I urge that we take seriously the element of invariability, and that we acknowledge that some activity of the mind is necessary for all knowledge, even for intuitive knowledge.

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6. Owen, *Hume's Reason*, 94.

7. Beebee, *Hume on Causation*, 24.

8. Beebee, *Hume on Causation*, 21.

## II. Intuition: Direct Awareness and Invariability

Owen claims that intuitive certainty involves a “direct awareness that two **ideas** stand in a certain relation” (my boldface).<sup>9</sup> But, as we have seen, he also maintains that the certainty of intuition “extends to ideas as well as impressions.”<sup>10</sup> And according to Beebee, we can be intuitively certain of relations between matters of fact. I start by considering the possibility that we can be immediately certain of relations between matters of fact, and I assume that ‘matters of fact’ are independently existing sensory objects. Afterwards, I shall consider impressions, *qua* mere perceptions of the mind, as the candidate *relata* for immediate certainty, and, finally, I shall consider ideas as such candidates.

In Owen's example of the water, it is specifically impressions that are related by degrees of any quality.<sup>11</sup> But, in Beebee's example, it appears that the *relata* of degrees of any quality are something else: water, in particular, *this* water and *that* water. According to Beebee, we are intuitively certain that “*this* water is hotter than *that* water” and, as we have seen she claims that “two matters of fact *can* stand in intuitive or demonstrative relations to one another....”<sup>12</sup> Let us assume that “*this* water” and “*that* water” do not stand for perceptions in the mind, in particular, impressions, but for independently existing objects. Can I be intuitively certain of relations between independently existing objects? No. I simply cannot be certain that this water is hotter than that water, since the first water might be in fact 100°F and the second water might be in fact 20°F but, due to the prior temperature of my hand, I judge the second to be hotter than the first. Or, to switch relations, I cannot be certain that this apple resembles that pear in being green, since I might be misperceiving the color of the apple due to the angle of light. The apple might in fact be red. This implies that we must confine our examination to appearances.

Can I be immediately certain of relations between impressions, or the more lively and forceful perceptions of the mind? Since impressions are the objects of sense perception for Hume, the question is whether I can have direct sensory awareness of a relation. Here the answer is yes, but

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9. Owen, *Hume's Reason*, 91.

10. Owen, *Hume's Reason*, 94.

11. Owen, *Hume's Reason*, 94.

12. Beebee, *Hume on Causation*, 21.

not only of the relations Hume identifies as capable of yielding intuitive certainty. Just as I directly see that this green resembles that green, I can also see that this object is next to that object. I am just as certain in my current complex impression that this apple is next to that pear, as I am that this apple resembles that pear. Or to use Owen's phrase, just as "it is easy to tell that this is hotter than that," it is also easy to tell that this is next to that. If I am intuitively certain in the one case, then also in the other.

Consider next ideas as the *relata* of knowledge relations. Owen claims that intuitive certainty is a "direct awareness that two ideas stand in a certain relation."<sup>13</sup> I take it that the "certain relation" does not stand for an invariable relation, but I shall consider this possibility later. Here, I assume that "a certain relation" means a relation such as resemblance or degrees of any quality. Thus, I am directly aware that the idea of this apple and the idea of this pear resemble each other in being green. Now, it might seem strange to talk about one idea being next to another or on top of another. But there is nothing strange about my having a complex idea in which an apple is on top of a pear. Here, we are comparing two objects within an idea, just as in the first example Hume presents of knowledge we discover the relation of equality by considering the relation that the three angles bear to two right ones in the idea of a triangle (*T* 1.3.1.1). Thus, in my example, I discover the relation 'on top of' in my idea of an apple and a pear. I consider this complex idea, and I am immediately aware that the apple is on top of the pear. If intuitive certainty is a matter of direct awareness of a relation between two ideas or objects, then it seems that I can be intuitively certain of relations Hume does not include as "objects of knowledge and certainty."

The problem with the last two possibilities is that they force us to include more relations that we can be intuitively certain of than Hume allows. And this problem stems from two related elements in our interpretation of Hume's account of intuitive certainty. The first is the idea that intuitive certainty is a matter of direct awareness; we merely take in what is present to the senses or to the mind. The second is the idea that what we are intuitively certain of is "that a certain relation holds". Of course, if intuitive certainty is passive, if it is a mere apprehension of what is present to the mind, then only those facts or features about a relation that are present or given to the mind will be

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13. Owen, *Hume's Reason*, 91.

candidates for intuitive certainty. We can't possibly be intuitively certain of the invariability of a relation because invariability is not something that is given to the mind. We can only have intuitive knowledge that "a certain relation holds".

But if we are to preserve the fundamental division Hume establishes in *Treatise* 1.3.1 between relations that can yield knowledge or certainty and relations that cannot, we have to take seriously the element of invariability, or the thesis that we have knowledge exclusively of relations that are invariable. Thus, we do not have knowledge that "a certain relation holds"; we have knowledge that a relation holds invariably. In particular, I shall argue that for Hume, intuitive certainty is certainty that a relation we perceive to hold between two ideas is invariable or necessary. Intuitive certainty does have an element of immediacy: we perceive a certain relation to hold between two ideas, but it goes beyond this perception in ascertaining the relation in question to be invariable or necessary.<sup>14</sup>

Taking the element of invariability seriously means that we must restrict the *relata* of knowledge relations to ideas. We cannot be intuitively certain of invariable relations between impressions. This is because we do not see or feel the invariability of a relation. That a relation is invariable is not something that the eyes (or hands, etc.) can tell you. But neither is the invariability of a relation given to 'ideational perception'. Ideas are present to the mind, and "that a certain relation holds" between the ideas is, for Hume, something that can be given to the mind. But the mind has to be active in ascertaining or cognizing the invariability of a relation it perceives between ideas. And the certainty of intuition is tied to invariability or necessity.<sup>15</sup> I shall next discuss the kind of necessity we can attribute to Hume's concept of knowledge, and the activity of the mind involved in ascertaining this necessity.

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14. Both Owen and Beebee endorse both of these elements, invariability and directness or immediacy, without apparent awareness of their incompatibility. See Owen, *Hume's Reason*, 81-112, and Beebee, *Hume on Causation*, 18-32.

15. Owen acknowledges this when he says: "The certainty stems entirely from the invariability of the relation between an idea and another..." (Owen, *Hume's Reason*, 83). What is not clear to me is how Owen can endorse this while at the same time endorsing both the thesis that intuitive certainty is a matter of direct awareness and the thesis that we can be intuitively certain of relations between impressions.

### III. Necessity and Conceivability

According to Hume, “the objects of knowledge and certainty” are relations that are invariable, unalterable, constant, and always hold. Although Hume does not use the term “necessary” to refer to these relations in *Treatise* 1.3.1-2, these expressions strongly suggest that the relations are in some sense necessary. This interpretation is supported by a number of texts. First, recall that Hume maintains that the necessity of the causal maxim cannot be demonstrated. In particular, he argues that the necessity of the causal maxim does not arise from “reasoning from mere ideas; without which ‘tis impossible to demonstrate the necessity of a cause” (*T* 1.3.3.3). This suggests that, by reasoning from mere ideas, we can, in principle, demonstrate the necessity of a relation. Second, consider the following important and revealing passage:

Thus as the necessity, which makes two times two equal to four, or three angles of a triangle equal to two right ones, lies only in the act of the understanding, by which we consider and compare these ideas; in like manner the necessity or power, which unites causes and effects, lies in the determination of the mind to pass from the one to the other. (*T* 1.3.14.23)

In *Treatise* 1.3.1-2, the consideration and comparison of ideas yields, when there is knowledge, certainty of the invariability of relations. Here, the same activity yields necessity. And this important passage suggests something else about necessity. It suggests the radical idea that relations are not necessary “prior” to the activity of the mind. Hume says that the necessity of two times two equals four “lies only in the act of the understanding, by which we consider and compare these ideas.” Unfortunately, I cannot discuss this radical idea and its implications, but what matters for our purposes is that Hume is concerned with necessity in so far as it is apprehended by the mind; he is concerned with necessity from the standpoint of questions about knowledge and belief. Propositions may be independently or “logically” necessary, but if the necessity is not cognized by the mind there is no knowledge or certainty.<sup>16</sup>

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16. Although I cannot defend this claim here, I want to note that I do not think Hume endorses or allows for what we call “logical” necessity. Necessity for Hume has to be cognized; it arises out of cognition, and it is constitutive of intuitive and demonstrative *certainty*. Owen denies that Hume’s account of knowledge involves necessity. In one

But what is it to cognize the necessity of a relation between ideas? What is the process or activity of knowledge, in particular, of intuitive certainty? We “consider and compare” ideas, but what is involved in this consideration and comparison? What seems to be involved in cognizing the necessity of a relation for Hume is an exercise of conceivability. I suggest that the conceivability test is not just an additional or external test one can perform to confirm intuitive or demonstrative certainty; conceivability is internal to the process by which we attain the certainty of knowledge.<sup>17</sup> In intuitive certainty, in particular, the mind perceives a relation between ideas and attempts to conceive or ascertain whether the relation is one that could fail to take place between the two ideas.

And Hume famously links conceivability to metaphysical possibility: “whatever we can *conceive* is possible, at least in the metaphysical sense” (*Abs.* 11). We can add that, if we cannot conceive two ideas to fail to be related in the way we perceive them to be, then the relation is metaphysically necessary. This is the kind of necessity that is denied of the causal maxim, and that is internal to intuition and demonstration (*T* 1.3.14.35).

But my claim that intuitive certainty involves essentially an exercise of conceivability that ends with the cognition of the necessity of a relation between ideas meets with some textual resistance. There are some passages that suggest that what is involved in intuitive certainty is not cognitive exercise, but a *determination* of the mind, something much more immediate. For instance, when Hume raises the issue of the difference between believing and disbelieving a proposition in *Treatise* 1.3.7, he claims that the question is easy to answer when a proposition is

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place, however, where he discusses the relation *degrees of any quality*, he claims that “necessity does creep in” when we consider the fact knowledge relations “depend solely on the ideas related” (Owen, *Hume's Reason*, 94). Owen says this despite having claimed earlier in the same chapter that “no one would classify” “this is an idea of red which is much brighter and more saturated than that idea of red” “as analytic or necessary.” (Owen, *Hume's Reason*, 84, n.1). I take it that the necessity that “creeps in” on Owen's page 94 is precisely the analytic or logical kind; otherwise it would not “creep in.” And despite his denial of necessity, Owen resorts to characterizing knowledge as involving necessity at various other places in the same chapter. See, for instance, p. 100 and p. 105. But if I am right, Hume does not endorse our analytic or logical necessity—it does not creep in at all.

17. Both Owen and Beebe take conceivability to be “the test” of intuitive and demonstrative certainty, but they do not take this test to be constitutive of the process that leads to the certainty of knowledge. See Owen, *Hume's Reason*, 98-104, and Beebe, *Hume on Causation*, 24 and 29.

“prov’d by intuition or demonstration.” And he continues: “In that case, the person, who assents, not only conceives the ideas according to the proposition, but is necessarily determin’d to conceive them in that particular manner” (*T* 1.3.7.3). This passage supports the interpretation that in intuitive and demonstrative certainty we simply find ourselves unable to conceive things differently; we do not actively engage in the conceivability of alternative relations between ideas.<sup>18</sup>

But I think Hume’s reference to the “necessary determination” is meant to capture what we might call ‘the phenomenology of knowledge’ from the personal level. Hume claims that the person who assents is “necessarily determined to conceive a proposition in a particular manner” (*T* 1.3.7.3). That there is another level of description is revealed in the sentences that follow. Hume adds that it is impossible “for the imagination to conceive any thing contrary to a demonstration,” but that in “reasonings from causation [...] this absolute necessity cannot take place, and the imagination is free to conceive both sides of the question” (*ibid.*). There is the level of the mind or the imagination, and at this level, there is indeed an activity or process in which the mind attempts to conceive something contrary to what is perceived to be the case. The mind perceives that two times two equals four, and attempts to conceive a different result, but is unable to do so. In contrast, in reasonings from causation “the imagination is free to conceive both sides of the question” (*ibid.*). Thus, the person being necessarily determined to conceive something in a certain way can be the result of the imagination having attempted but being unable to conceive something as different from what it perceives to be the case.

Finally, when Hume examines the question in *Treatise* 1.3.3 of whether the causal maxim is necessary, he acknowledges that many take the maxim to be intuitively certain. But he argues that the certainty and necessity of the casual maxim do not arise from the comparison of ideas

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18. Thus Owen speaks of our being “compelled” to consider ideas in a certain way (Owen, *Hume’s Reason*, 104). But when he considers the question of the nature of “the conviction” of intuition he refers to the passage above about the necessary determination and adds that “If the ideas could be conceived to be not related in that way, they would not be the same ideas” (Owen, *Hume’s Reason*, 97). It is not clear then whether Owen takes conceivability to be internal to intuitive certainty or not. But if it is, then the certainty of intuition cannot also be immediate. Beebe speaks of our being “forced” and our being unable to “fail to see” that relations take place between objects (Beebe, *Hume on Causation*, 21).

or from “reasoning from mere ideas” (*T* 1.3.3.3). Hume’s argumentative strategy in *Treatise* 1.3.3 is not to invite his opponent to see if he finds himself “necessarily determined” to conceive a beginning of existence as necessitating a cause; instead, he proposes a test that “proves at once, that [the maxim] is neither intuitively nor demonstratively certain” (*T* 1.3.3.3). The test involves conceivability, and it reveals that we can indeed conceive a beginning of existence without a productive principle. Thus, Hume concludes that the relation we take to hold between them cannot be (metaphysically or absolutely) necessary.

But if intuitive certainty is essentially active, if it involves an activity of the mind, then what do we make of expressions such as ‘at first sight’ and ‘in one view’, which Hume employs to characterize intuitive certainty? In the next section, I address this question and discuss the four relations he identifies as capable of yielding intuitive certainty.

#### IV. Intuitive Certainty

Hume claims that some of the “objects of knowledge and certainty” are discoverable “at first sight, and fall more properly under the province of intuition than demonstration” (*T* 1.3.1.2). He says that some of the relations “strike the eye, or rather the mind” and that they require “one view” (*T* 1.3.1.2-3). If intuitive certainty involves, as I maintain, an activity on the part of the mind, what is the significance of these expressions? One possibility is that Hume does not intend these expressions in a literal way. Instead, he is contrasting the activity involved in demonstrative reasoning with intuition: *relative* to demonstration, the mental activity involved in intuition is minimal.<sup>19</sup>

But there is another possibility that is more convincing and appealing for two reasons. First, it allows for a literal element of immediacy. Second, it contrasts intuition, not with demonstration, but with causal reasoning. What is the literal element of immediacy? I have characterized intuitive certainty as certainty that a relation we perceive to hold is necessary. Intuitive certainty thus involves two stages. The first is

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19. Locke, for instance, calls intuition “immediate” when he contrasts it with demonstration. He claims that in intuition ‘the Mind perceives the Agreement or Disagreement of two *Ideas* immediately by themselves, without the intervention of any other’ (*E*. 4.2.1). John Locke, *An Essay Concerning Human Understanding*, edited by P.H. Nidditch (Oxford: Clarendon Press, 1975).

passive: we simply perceive that a certain relation holds between two perceptions. This stage might take place at the level of sense perception or ideational perception. I can immediately perceive that these two impressions of green resemble each other. Or, I can have direct awareness that these two ideas of green resemble each other. The second stage, as we have discussed, involves an exercise of conceivability where the mind moves beyond what is immediately given to ascertain whether the relation is necessary. This ascertaining must always happen at the level of ideas. The certainty of intuition issues from the cognition of the necessity of the relation.

The literal element of immediacy also invites an interesting contrast between intuitive certainty and the certainty that arises from causal reasoning. Unlike the certainty associated with causal reasoning, the certainty of intuition can arise from one single view of the objects or ideas. Knowledge, unlike causal belief, requires minimal input: one view, one instance, one sight, one presentation.<sup>20</sup> One instance is enough for the mind to ascertain whether the relation perceived is necessary. If it is, then there is intuitive certainty. In contrast, the certainty and the necessity that arise from causal reasoning require multiple views or “several instances” (*Abs.* 12); in particular, they require observations of constant conjunctions. Next, I illustrate with examples and discuss all four cases of intuitive knowledge: resemblance, contrariety, degrees in any quality and proportion in quantity or number.

*Resemblance*: I perceive the resemblance between two patches of green and my mind considers whether the relation between their ideas is one that could fail to hold. Could the resemblance I perceive to hold between these two ideas fail to hold between the same two ideas? If not, then I am intuitively certain of the necessity of the relation between the two ideas. This certainty does not arise from having observed the green patches multiple times; it arises from considering the ideas of these two objects, and one single view of the objects or ideas is enough for me to be certain of the necessity of the relation.

*Contrariety*: Hume says that “no one can doubt but existence and non-existence destroy each other....” (*T* 1.3.1.2) It is a little harder to

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20. When Hume discusses resemblance he says that the resemblance between two objects *seldom* requires a second look, thus implying that on some occasions one single view is not enough. But he is there probably thinking of the case of perfect resemblance. The judgment that two objects resemble each other in being exactly the same shade of green may require more than one view of the objects in question.

understand what he is saying here, but I suggest the following: I consider two ideas which are both of a uniformly yellow patch, except that only one has a black dot on it. I perceive that the one contains the black dot and the other does not. The ideas are contrary with respect to the presence of the black dot. My mind cognizes that the relation of contrariety obtaining between the two ideas is necessary: I cannot conceive the same two ideas not to be contrary with respect to the existence of the black dot.

*Degrees in any quality:* You poke me two times, once in each arm, and I perceive that one sensation of pain is sharper or more intense or more painful than the other. I perceive the relation of 'more painful than' to obtain between sensation A and B. My mind then attempts to conceive this kind of pain (if you will, you can assign it a number, just as when you go to the physician and you are asked to rate your pain on the scale from 1-10.) I discover that this kind of pain (#7) cannot fail to be more painful than this kind of pain (#3). I have intuitive certainty that these two kinds of pains will always be so related; the relation is invariable, unalterable, necessary, as long as the ideas remain the same.<sup>21</sup>

*Proportions in quantity:* I call to mind two ideas, the idea of a grain of sand and the idea of a giraffe.<sup>22</sup> I perceive that the grain of sand is much smaller than the giraffe. And I cannot conceive these two objects, as I perceive them, not to be related in this way. I am intuitively certain that this grain of sand has to be, always, smaller than this giraffe.

In contrast to these four relations, the other three philosophical relations cannot yield knowledge. I perceive this pear to be next to that apple, but I can clearly conceive them not to be related in the way I perceive them to be. Thus, the relation is not necessary. The same applies to time, identity, and causation. In the next section I discuss causation, in particular, why the causal maxim and other proofs are neither intuitively nor demonstrably certain, although they are certain.

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21. The type is not determined by objective circumstances, but by the appearance or phenomenology of the sensations; next time you poke my arm with (objectively) equal force, the pain I experience might be # 5 instead of # 7. Thus the sensation, and therefore the type, is different.

22. Again, both objects are considered as appearances. They are the ideas of the grain of sand and the giraffe *as they are presented* to consciousness.

### V. A Priori and A Posteriori Certainty and Necessity

One of Hume's most interesting, but often missed, contributions to philosophy is, I think, the thesis that the source of some beliefs that are certain and necessary is not 'pure' reason, or to use his own phrase, "the comparison of ideas," but experience (*T* 1.3.11.2). The point is not that some beliefs we take to be—but are not—certain and necessary originate in experience; the point is that experience can be the source of certainty and necessity. This subtle but crucial point was missed by many of Hume's contemporaries. In a letter to John Stewart in 1754, Hume clarifies that he never asserted "so absurd a proposition that anything might arise without a Cause." Rather, the point he intended to make was that "our Certainty of the Falsehood [that anything might arise without a cause] proceeded neither from Intuition nor Demonstration, but from another Source."<sup>23</sup> There is another source of certainty besides intuition and demonstration, just as there is another source of necessity besides the comparison of ideas.

Hume introduces the figure of Adam to illustrate his claims about the status of the causal maxim and proofs in general. If proofs were knowledge Adam could, upon encountering one single instance of, say, smoke following fire, ascertain that the relation was invariable or necessary. Adam could do this because his reasoning capacities are fully in place; he only lacks experience. But when Adam perceives an instance of smoke following fire, he can clearly conceive the relations of contiguity and priority between fire and smoke to fail to take place. Thus, Adam is not certain of the necessity of those relations; indeed, he does not even believe the relations to be necessary.

Although he does not introduce him explicitly, it is the figure of the seasoned experiencer, call him Moses, which is most important in Hume's thought. Moses not only believes that fire causes smoke; he is certain of it. He is certain of the truth of the causal maxim; he finds it impossible to doubt. When he perceives smoke he "immediately" infers the existence of fire. He has learned from constant experience that the relation between fire and smoke is invariable.<sup>24</sup> The sophisticated Moses,

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23. Hume's letter to John Stewart of Feb 1754, *The Letters of David Hume*, ed. J. Y. T. Greig, 2 vols. (Oxford: Clarendon Press, 1969), vol. 1, 187.

24. That is, we learn from experience that fire and smoke are constantly conjoined. In *Treatise* 1.3.2.2 Hume says: "There is nothing in any objects to persuade us, that they are either always *remote* or always *contiguous*; and when from experience we discover, that

the philosopher, refers to his certainty as intuitive, or believes the necessity of the causal relation to be demonstrable. In *Treatise* 1.3.3, Hume acknowledges that we all, seasoned experiencers, feel absolutely certain of the causal maxim and other proofs; but, as he often insists: “no inference from cause and effect amounts to demonstration” (*Abs.* 11). The process by which the mind generates a belief and a feeling of determination is not the process of demonstrative reasoning, which also gives rise to certainty and necessity. How can Hume convince the philosopher that the causal maxim and other proofs are not intuitively certain or demonstrable, that their necessity is not absolute or metaphysical? We may inspect the ideas of fire and smoke and see if the relation of causation seems invariable or necessary, or we may pay attention to whether we are ‘determined’ to conceive the relation in that way. But the phenomenology of belief, of constant experience, can be so similar to that of knowledge. The conceivability test is supposed to loosen the grip of experience: can I not conceive experience to be different from what it is? Smoke follows fire, but I can clearly conceive that not to be the case. I cannot bring myself to believe it, but I can conceive it. Hence, it is metaphysically possible that smoke does not follow fire. Thus, the necessity of the causal maxim is not absolute or metaphysical, and the certainty of the causal maxim is not intuitive or demonstrative.

Had Hume's contemporaries not missed the point about what we might call ‘*a posteriori*’ certainty and necessity, they might still have been rather unimpressed. After all, *a posteriori* certainty is not ‘absolute’ certainty or knowledge, and *a posteriori* necessity is not ‘real’ or ‘metaphysical’ necessity: it is subjective, something that depends on the mind. In response, Hume frames the relevant contrasts in a new light, one that ought to have impressed at least some of his readers. First, it is true that *a posteriori* certainty is not knowledge, because the mind can conceive what we take to be certain as a result of experience to be otherwise, and, thus, it is metaphysically possible that things are other than the way we are certain, through experience, that they are and must be. But what is metaphysically possible is not very important to our practical lives: Mere conceivability is not enough to affect belief. We can

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their relation in this particular is **invariable**, we always conclude there is some secret *cause*, which separates or unites them” (my boldface). Experience can teach us that some relations are invariable; the mind then cognizes these invariable relations as connected to a cause.

conceive the sun not to rise tomorrow, but we do not, and we cannot, believe it. It is belief which drives our lives, even most of our philosophical lives. Second, what do we mean by “objective necessity”? The right contrasting concept to *a posteriori* necessity is *a priori* necessity, the necessity that is involved in Hume’s account of knowledge, intuitive and demonstrative. And the necessity of knowledge shares with the necessity of experience something absolutely fundamental as Hume makes clear in a passage we discussed earlier. Both necessities lie only in the mind (*T* 1.3.14.23). They share the same fundamental source. We cannot complain that the necessity of the causal maxim is inferior because it does not reside “in the world”: all necessities, even the most absolute or metaphysical ones, *lie only in the mind*.

Hume considers (his account of) knowledge to be “the foundation of science” (*T* 1.3.2.1). But Hume’s account of knowledge is not foundational because it plays a great positive role on its own. Rather, knowledge seems foundational because it sets the theoretical framework against which we can measure and appreciate Hume’s astonishing accomplishments with respect to causation and causal reasoning, which include his claims about the new certainty and necessity he identifies as arising from experience.<sup>25</sup>

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25. Hume’s claim about the foundational status of his account of knowledge must, in the end, be assessed against other claims he makes in *Treatise* 1.4.1 or “*Of Scepticism with regard to reason*.” But this is a complex interpretative issue that I cannot address in this paper.