SHOULD HUME HAVE BEEN A TRANSCENDENTAL IDEALIST?

DON GARRETT

Kant assigns to Hume—“that great thinker” and “acute man”—a crucial role in the history of metaphysics: it is Hume’s “spark” that should have ignited, and in Kant’s own thinking did ignite, the flame that lights the way to transcendental idealism. This spark, on Kant’s view, consisted chiefly in Hume’s posing a challenge:

He [Hume] challenged reason, which pretends to have given birth to this concept [of cause and effect] of herself, to answer him by what right she thinks anything could be so constituted that if that thing be posited, something else also must necessarily be posited; for this is the meaning of the concept of cause. (Prolegomena 257)

On Kant’s view, Hume concluded that his challenge could not be met, holding instead that reason was altogether deluded with reference to this concept, which she erroneously regarded as one of her children, whereas in reality it was nothing but a bastard of imagination, impregnated by experience, which subsumed certain representations under the law of association, and mistook a subjective necessity (custom) for an objective necessity arising from insight. (Prolegomena 257-258)

This outcome was not only unfortunate but unnecessary, Kant held, for Hume would himself have been drawn to see the need for transcendental idealism and its distinctive account of causal necessity if only he had thought more carefully about the status of mathematics and its implications:

For he imagined that its nature, or, so to speak, the constitution of this province, depended on totally different principles, namely, on the principle of contradiction alone, and although he did not divide judgments in this manner [i.e., into analytic and synthetic] formally and universally and did not use the same terminology as I have done here, what he said was equivalent to this: that pure mathematics contains only analytic, but metaphysics synthetic, a priori judgments. In this, however, he was greatly mistaken, and the mistake had a decidedly injurious effect upon his whole conception. But for this, he would have extended his question concerning the origin of our synthetic judgments far beyond the metaphysical concept of causality and included in it the possibility of mathematics a priori also; for this latter he must have assumed to be equally synthetic. And then he could not have based his metaphysical judgments on mere experience without subjecting the axioms of mathematics equally to experience, a thing that he was far too acute to do. The good company into which metaphysics would thus have been brought would have saved it from the danger of a contemptuous ill-treatment; for the thrust intended for it must have reached mathematics, which was not and could not have been Hume’s intention. Thus that acute man would have been led into considerations which must needs be similar to those that now occupy us, but which would have gained inestimably from his inimitable elegant style. (Prolegomena 272-273)
In consequence of this oversight, Kant alleges, Hume “did not suspect such a formal science [as metaphysics] but ran his ship ashore, for safety’s sake, landing on skepticism, there to let it lie and rot” (Prolegomena 262). What Kant calls “Hume’s problem”—namely, that of meeting the original challenge and thereby explaining the origin of the concept of causation in such a way as to “determine the conditions of its use and the sphere of its valid application” (Prolegomena 258-259) was thus left to Kant for its solution.

What would Hume have made of this story of his role in the history of metaphysics as the forerunner of transcendental idealism? Did he actually pose the challenge that Kant describes concerning the concept of causation and find reason to be incapable of meeting it? Did he in effect suppose that mathematics consists only of necessary analytic judgments? Did he, as a result of his findings, abandon his ship of inquiry to “lie and rot” in skepticism? Would he have been obliged, in order to achieve a tenable position about causation, mathematics, and the scope of human knowledge, to become a transcendental idealist? Those are the questions that I shall try to answer.

**Hume’s Challenge Concerning Causation: The Origin of the Concept**

Kant represents Hume as challenging reason with respect to its right to regard a cause and its effect as such that, “if one is posited, the other must necessarily be posited.” In characterizing Hume’s challenge, Kant places it in the context of two claims that, he implies, Hume would endorse: (i) that reason “pretends to give birth” to the concept of causation and (ii) that a necessary connection is “the meaning” of the concept of cause. In order to determine whether Hume made such a challenge and denied that reason could meet it, it will be helpful first to determine his attitude toward these two claims. In the course of doing so, we will also have occasion to investigate Kant’s further claim that Hume regarded reason as “mistaking a subjective necessity (custom) for an objective necessity arising from insight.”

Reason, for Hume, is simply the faculty of making inferences, which may be either demonstrative or probable. Accordingly, reason, on his account, could “pretend to give birth” to the concept of causation only by yielding a (self-referential) inference to the conclusion that reason does give birth to that concept. On the face of it, such a conclusion about the concept’s origin would seem to be unwarranted, however, since the characteristic outputs of reasoning are beliefs rather than new concepts. Indeed, Hume criticizes Locke for giving an essential but unexplained role to reasoning in his account of the origin of the idea or concept of causal power—an account that, as Hume remarks (EHU 7.8n), violates Locke’s own principle that reason can never give rise to any new idea. Yet there is nevertheless a way in which reason, for Hume, does—and does not merely pretend—to “give birth” to the concept of causation. In order to understand how this is so, it is necessary to understand his theory of causal inference and his theory of causal judgment—which, in turn, requires, respectively, an understanding of his theory of necessity and an understanding of his theory of concepts.

Hume remarks that all reasoning, whether demonstrative or probable, is a “discovery of relations” (THN 1.3.2.2). Probable reasoning or inference, he holds, is always a “discovery” of specifically causal relations; and in this case, he declares, “the nature of the relation depends so much on that of the inference” that one cannot fully understand the former without first explaining the latter (THN 1.3.14.30). On his well-known account of it, probable reasoning or inference consists in a transition from an impression or memory to a lively idea, occurring after a previously experienced constant conjunction of objects that are like the former with objects like
the latter, and accompanied by a distinctive internal impression that is the felt “determination of the thought to pass from causes to effects, and from effects to causes, according to their experienced union” (THN 1.3.14.1 and 1.3.14.22). This impression of felt determination is the “impression of necessary connection” from which the idea of necessary connection is copied. It is properly termed an impression of necessary connection because, for Hume, the proper application of the term ‘necesity’ always signifies a relation to some kind of mental determination to conceive things in a certain way—i.e., an inability of the mind to think or conceive otherwise. There are two kinds of such necessity. The first is that of self-evident or demonstrable “relations of ideas,” for which the inability to conceive otherwise is grounded in the intrinsic nature of the ideas themselves. The second is that of causes, which involves instead a psychological difficulty in conceiving two things apart and an inability to avoid believing that they exist together—both of which arise after experience of constant conjunction. Thus, Hume writes:

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. (THN 1.3.14.23)

Probable or causal inference, as Hume describes it, presupposes no uniquely human capacities. Indeed, he argues (THN 1.3.16; “Of the reason of animals”) that this fact constitutes an important point in favor of his account, since animals as well as humans show by their behavior that they perform causal inferences. But although animal reasoning implicitly discovers and depends on causal relations in order to infer one thing from another—and thereby implicitly represents things as standing in causal relations—animals do not make explicit judgments of the form: “Object A and Object B stand in the relation of cause and effect.” This is because, while they perceive causes and make inferences from them, they lack a “general or abstract idea”—what we would call a “concept”—of causation.

Perceptions may have, and may represent their objects as having, many different qualities; for example, they may represent their objects as being round and a particular shade of red. Similarly, perceptions may stand in, and may represent their objects as standing in, many different relations; for example, a pair of perceptions may represent one object as identical in shape but double in size to another while also representing the objects as existing simultaneously but at a distance equal to the height of the smaller. In order for perceptions to represent objects as having particular qualities and relations—and also in order for the perceptions themselves to have the qualities and relations that determine the nature of further cognitive operations—it is not necessary, or at least not always necessary, for the mind to have concepts of the qualities or relations in question. In order to think with generality about qualities and relations, however, or about the classes of things that have them, it is necessary to form concepts—that is, “general ideas”—of them.

Yet no idea, Hume argues, is general or indeterminate in its own nature. In order to have concepts or general ideas, therefore, the mind must employ what he calls the “imperfect” device of “abstract ideas” (THN 1.1.7.1). Such ideas arise in the mind, on Hume’s view, in the following way. When perceptions resemble one another in some respect, it is psychologically natural to apply the same term to each, notwithstanding their difference. Later uses of the term come to elicit a particular and determinate idea (which we may call the “exemplar”) together
with a disposition to revive and “survey,” as needed for reasoning or other purposes, the other ideas (which we may call, together with the exemplar, the “revival set”) whose objects resemble one another in the operative respect (THN 1.1.7.7-8). Similarly, the abstract idea of a relation consists, for Hume, of a determinate idea of a pair (triple, etc.) of particular things taken to stand in that relation and associated with a term in such a way that the mind is disposed to revive and survey for use as needed any of a set of ideas of other pairs (triples, etc.) whose objects strike the mind as similarly related.

To judge explicitly that a particular object has a specified quality, then, is to include a “lively” idea of that object—which, in virtue of its “liveliness,” constitutes belief in the object’s existence—within the revival set of the abstract idea of that quality; and to judge explicitly that two particular objects stand in a specified relation is to include a lively idea of that pair of objects in the revival set of the abstract idea of that relation. To judge that two objects A and B stand in the relation of cause and effect, therefore, is to include a lively idea of A and B in the revival set of the abstract idea of the causal relation. This is the revival set that has resulted from the effect on the mind of the resemblance holding among the various pairs of objects that, following experience of constant conjunction of like pairs, sustain causal inference with its characteristic impression of determination or necessary connection. Hume aims to capture this revival set with two definitions of “cause”, one in terms of constant conjunction and one in terms of association and inference:

We may define a Cause to be ‘An object precedent and contiguous to another, and where all objects resembling the former are plac’d in like relations of precedency and contiguity to those objects, that resemble the latter.’

‘A Cause is an object precedent and contiguous to another, and so united with it that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other.’ (THN 1.3.14.30-31)

These two definitions express what we might call the “external” and “internal” conditions, respectively, that lead to the impression of necessary connection and the inclusion of a pair of objects in the revival set of the abstract idea of cause and effect.

In Book 3 of the Treatise, Hume discusses distinctive sentiments of “moral approbation and disapprobation.” Like the impression of necessary connection, these sentiments are impressions of reflection; and he characterizes our ability to feel them as a “moral sense” that enables us to discriminate vice and virtue (THN 3.1.2). He goes on to offer (in the Treatise and even more clearly in An Enquiry concerning the Principles of Morals) two definitions of ‘virtue’, one of which involves a condition that is external to the moral judge (“the possession of mental qualities, useful or agreeable to the person himself or to others” [EPM 9.1]) and one of which involves a condition that is internal to the moral judge (“whatever mental action or quality gives to a spectator the pleasing sentiment of approbation” [EPM Appendix 1.9]). At the same time, he also compares the perception of virtue and vice with the perception of secondary qualities. These analogies analogy suggest that the mental operations by which constant conjunction leads to association, inference, and the impression of necessary connection may also be viewed as a kind of sense—a “causal sense”—that allows the mind to distinguish those pairs of objects that are causally related from those that are not.

Of course, senses need not be, and generally are not, infallible; not all things that appear to resemble one another other in a given respect do resemble one another in that respect. Hence, not every object, or set of objects, that we might initially include in the revival set of an abstract idea
is properly so classified, and principles to correct for idiosyncrasies of perspective are required. This is true, Hume notes, for primary and secondary qualities of bodies, for moral qualities of persons, and for aesthetic qualities of artifacts and other objects. In parallel fashion, Hume offers, near the end of his discussion of causation in the Treatise, a set of eight “rules by which to judge of causes and effects” (THN 1.3.15), rules that serve precisely to guide the refinement of the revival set of one’s abstract idea of the relation of cause and effect. These rules “are formed on the nature of our understanding, and on our experience of its operations in the judgments we form concerning objects”—that is, by reflection on the mechanism of causal reasoning in light of the past successes and failures of causal inferences of various kinds—and by means of them “we learn to distinguish the accidental circumstances from the efficacious causes” (1.3.13.11). Of course, the greatest problem of perspective or situation in discerning causal relations lies in the limitation of one’s experience to only a small part of what actually occurs in the world, with the resulting danger of insufficient or unrepresentative samples. Enquiry into causes involves experimentation, conducted and evaluated in accordance with the rules by which to judge of causes and effects, that aims to mitigate this insufficiency. Just as the correct or proper revival set for the abstract idea of a sensible, moral, or aesthetic quality is the one that would arise in an idealized human observer possessing both the appropriate sense and a sufficient range of experience, judging in accordance with proper rules of correction, so the correct or proper revival set for the abstract idea of cause and effect is the one that would arise in an idealized observer having both the human causal sense and sufficient observations to constitute a representative sample for any causal judgment, and employing the proper rules by which to judge of causes and effects.

The concept of causation thus arises originally as the result of probable inference, in which the similarities (involving temporal priority, contiguity, and constant conjunction) among the various pairs between which inferences are made become salient and give rise to the abstract idea of the causal relation; and that idea is refined through the application of rules derived from further reasoning on the successes and failures of probable reasoning itself. Hence it is not unfair to say that reason, for Hume, does “give birth” to the concept of cause-and-effect. And since Hume thinks we can uncover this origin for ourselves through the elaborate causal reasoning presented in Treatise Book 1, Part 3, we may add that reason ultimately claims to do so as well.

Hume’s Challenge Concerning Causation:
Necessity, Subjectivity, and the Meaning of ‘Cause’

In addition to the errors of sensory perspective that require correction by rules, however, the mind is also subject, on Hume’s view, to systematic errors of sensory mislocation or projection. Thus, he appears to suggest in An Enquiry concerning the Principles of Morals that the mind has a tendency to locate both moral and aesthetic sentiments—which are in fact internal impressions that do not resemble any qualities in objects—in the objects of evaluation themselves, thereby “gilding or staining … natural objects with the colours, borrowed from internal sentiment” (EPM Appendix 1.25). More explicitly in the Treatise, he compares similar errors concerning smells, sounds, and necessary connection:

The mind has a great propensity to spread itself on external objects, and to conjoin with them any internal impressions which they occasion, and which always make their appearance at the same time that these objects discover themselves to the senses. Thus, as certain sounds and smells are always found to attend certain visible objects, we naturally
imagine a conjunction, even in place, betwixt the objects and qualities, though the qualities be of such a nature as to admit of no such conjunction, and really exist no where ….. [T]he same propensity is the reason why we suppose necessity and power to lie in the objects we consider, not in our mind, that considers them; notwithstanding it is not possible for us to form the most distant idea of that quality, when it is not taken for the determination of the mind, to pass from the idea of an object to that of its usual attendant. (THN 1.3.14.25)

As a result of this projective mislocation, we often include an idea of necessary connection, as a part, in our ideas of cause and effect pairs themselves, and we erroneously suppose that we can observe causal power or necessity as a quality located in the causally related objects themselves.

This projective error of mislocation naturally leads, Hume thinks, to the further error of conflating the two distinct species of necessity with which we are acquainted. For it leads us to treat the necessity of causes, like the necessity that belongs to demonstrable and intuitable relations of ideas, as an inability-to-conceive-otherwise that is grounded in the intrinsic character of the ideas themselves—whereas in fact the necessity of causes lies in a psychological difficulty of separating two objects in thought and an inability to separate them in belief that results not from the intrinsic characters of the objects as we conceive them but rather from the habitual association that has been established between them by constant conjunction.  

In this sense, Hume does maintain that we mistake a “subjective necessity for an objective necessity,” just as Kant reports—for we often fail to realize that our sense of the necessity of causal relations derives from the effects of custom on subjects like ourselves rather than from observation of the intrinsic characteristics of the objects themselves.

It does not follow from this, however, that causal relations themselves are “subjective” in the further sense of depending on the mind for their existence. Hume considers explicitly the objection that his account of causation would “reverse the order of nature” by making “the efficacy of causes” depend on thought, imagining an objector who exclaims:

What! The efficacy of causes lie in the determination of the mind! As if causes did not operate entirely independent of the mind, and would not continue their operation, even tho’ there was no mind existent to contemplate them, or reason concerning them. (THN 1.3.14.26)

To this he responds:

As to what may be said, that the operations of nature are independent of our thought and reasoning, I allow it; and accordingly have observ’d, that objects bear to each other the relations of contiguity and succession; that like objects may be observ’d in several instances to have like relations; and that all this is independent of, and antecedent to the operations of the understanding. But if we go any farther, and ascribe a power or necessary connexion to these objects; that is what we can never observe in them, but must draw the idea of it from what we feel internally in contemplating them. (THN 1.3.14.28; emphasis added)

Resemblances among pairs of objects of the kind that the actual human causal sense happens to pick out would continue to hold, Hume thinks, whether there were human minds or not, and events in nature would continue to exemplify true generalizations. Furthermore, although the “necessity” of causal relations would no longer be felt, the basis of that necessity in constant conjunction would continue to exist, in much the same way that the basis of sensory “redness”
would (at least according to what Hume calls “the modern philosophy”) continue to exist in the corporeal structure of bodies even if the impression of red (which, according to that same philosophy, does not resemble its basis in the bodies) were never to occur—and also in much the same way that the necessity of mathematical relations would never be felt in the absence of minds, even though the basis of that felt necessity would continue to exist in the intrinsic natures of related things. For this reason, Hume is willing to say that “the constant conjunction of objects constitutes the very essence of cause and effect” (THN 1.4.5.33) and that “’tis from the constant union that the necessity arises” (THN 2.3.1.4). The resemblances that are in fact detected among causal pairs by a feeling of necessity are not dependent for their existence on the existence of the human mind or of a causal sense that detects them.8

Does Hume then deny Kant’s claim that a necessary connection between cause and effect constitutes “the meaning of the concept of cause?” The answer depends on what is meant by “the meaning of the concept of cause,” and on what is meant by “a necessary connection.” The meaning of the term ‘cause’ is, for Hume, simply the idea for which the term stands—in this case, the abstract idea consisting of an exemplar that is associated with a term and a particular revival set. This is why he can remark that “we must not here be content with saying, that the idea of cause and effect arises from objects constantly united; but must affirm, that it is the very same with the idea of these objects” (THN 2.3.1.16; emphasis added). The purpose of his two definitions of ‘cause’ is precisely to pick out these revival sets. The two definitions do so in ways that are cognitively distinct from one another—since one appeals to the concept of resemblance, while the other appeals to the concepts of determination, idea, impression, and liveliness. Both of these ways are also cognitively distinct from the way in which we capture the revival set in our ordinary use of the term ‘cause’, since that requires wielding no additional concepts at all—at least not until we begin to develop and apply the (conceptually formulated) rules for judging of causes and effect.9 The occurrence of the impression of necessary connection, and its projective mislocation in the objects themselves, plays an important causal role in rendering the resemblance among cause-and-effect pairs more salient, and thus facilitates the development of the concept of causation—just as the projective mislocation of the moral sentiments may facilitate the development of concepts of vice and virtue. But the representation of each causal pair as having something resembling the impression of necessary connection as an intrinsic part is not essential to the Humean abstract idea of cause and effect itself. To overcome the projective illusion—as Hume implies can be done with care and attention (THN 1.3.14.31, 1.4.7.5-6)—is not to change the pairs of objects whose ideas constitute the revival set of the idea of cause and effect, but only to correct the way in which they are represented.

This is not, of course, to deny that causal relations involve a necessary connection in any way. Hume begins his investigation of the causal relation by noting that, in addition to contiguity and priority, “there is a NECESSARY CONNEXION to be taken into consideration; and that relation is of much greater importance, than any of the other two” (THN 1.3.2.11); and he later adds that the necessary connection “makes so essential a part” of the causal relation (THN 1.3.6.3). However, he regards his own account of the way in which causal inference gives rise to a concept of causation as one that does take this “necessary connexion” sufficiently “into consideration,” for it is one that allows judgments of causal relations to be properly considered “necessary.” This can be seen clearly from his willingness to treat the satisfaction of his two definitions of ‘cause’ as entirely sufficient to establish the presence of causal necessity, as he does particularly in connection with the necessity of human actions (THN 2.3.1-2; EHU 8), as well as in his reference to the “absolute impossibility” of miracles (EHU 10.27).
We are now in a position to answer the original question of whether Hume “challenged reason … to answer him by what right she thinks anything could be so constituted that if that thing be posited, something else also must necessarily be posited.” On Hume’s account, there are two species of necessity—that is, unthinkability of the opposite—and one of these is causal necessity, grounded in constant conjunction. Accordingly, reason—or rather, a human being when reasoning—is perfectly entitled to think of causal relations as necessary. Since belief in the principle that every event has a cause is itself based on such conjunctions, we are entitled to think of that principle as causally necessary as well. We are not entitled, however, to regard that principle as demonstrable, for we are not entitled to conflate the necessity of causal relations with the (“absolute” or “metaphysical”) necessity of relations of ideas, and we are not entitled to assume that the basis of causal necessity is an intrinsic quality lying in individual cause and effect pairs themselves.

**Hume’s View of Mathematical Judgment**

Was Kant right in thinking that Hume in effect took all mathematical judgments to be analytic? In order to answer this question, it is necessary first to apply Hume’s theories of concept-formation and judgment, as previously developed, to the case of mathematics.

Just as animal minds naturally represent things as having non-mathematical qualities and relations (such as being a particular shade of red or being spatially contiguous) but lack the ability to make conceptual judgments ascribing those qualities and relations, so too animal minds can represent things as having mathematical qualities and relations (such as having three parts or being congruent in shape) but lack the ability to make conceptual judgments ascribing them. Only human beings make mathematical judgments, in a full-blooded sense, for only they have concepts of mathematical qualities and relations. These concepts are, for Hume, abstract ideas for which the relevant aspect of resemblance among members of the revival set is one concerning quantity, shape, or spatial relation. To judge that a particular object has a mathematical quality is to include a lively idea of the object within the revival set of the abstract idea of that quality; to judge that two (three, etc.) objects stand in a mathematical relation is to include a lively idea of that pair (triple, etc.) of objects in the revival set of the abstract idea of that relation. To judge that everything with one mathematical quality also has another, or that every pair of things standing in one mathematical relation also stands in another, is to include a lively exemplar, as associated with the relevant term, and lively versions of the rest of the revival set of the abstract idea of the one quality or relation within the revival set of the abstract idea of the other quality or relation. Thus, the concept of “two” consists, presumably, of a lively idea of some particular pair of things, associated with the term ‘two’ in such a way as to dispose the mind to revive ideas of other pairs as needed; the concept of “two plus two” consists of an idea of one pair of things—an exemplar or other member of the revival set of the concept of “two”—conjoined with an idea of a pair of other things (again either an exemplar or another member of the revival set of the concept of “two”), associated with the term ‘two plus two’ in such a way as to dispose the mind to review ideas of other such pairs of pairs; and the judgment that “two plus two is four” consists of the inclusion of the lively idea of the exemplar of “two plus two” in the revival set of the abstract idea of “four,” together with a disposition to include lively ideas of all other members of the revival set of the abstract idea of “two plus two” within the revival set of the abstract idea of “four.” Similarly, the judgment that “the shortest distance between two points is a straight line” consists, for Hume, in a lively idea of the exemplar of the abstract idea...
of “line that is the shortest distant between two points”—itself derived from operations on the
revival sets of “point” and “shortest distance”—within the revival set of the abstract idea of
“straight line,” together with a disposition to include lively ideas of all other members of the
revival set of “shortest distance between two lines” within the revival set of “straight line.”

True mathematical judgments are, for Hume, knowable intuitively or demonstratively,
because they are among those truths that depend only on the relations of the ideas. (Other such
judgments include “Blue is more like green than it is like scarlet” [THN 1.1.7.7n].) As such, they
have a distinctive, non-causal kind of necessity—that is, of unthinkability of the opposite. To say
that “two plus two is four” is not only true but necessary is, for Hume, to say not only that every
actual pair of pairs is an actual four-membered collection, but also that the contrary of this is
unthinkable. This requires, in turn, that even when the mind imagines non-actual pairs of pairs
and non-actual four-membered sets, the former are again always among the latter. The necessity
of this judgment is felt when the attempt to imagine a pair of pairs that is not four-membered
consistently fails, despite the mind’s best efforts: the mind finds that it can imagine a collection
that is not within the revival set of “four” only by also making it no longer an example of a pair
conjoined with a pair. Similar remarks apply to “the shortest distance between two points is a
straight line”—or would, if Hume were convinced that this judgment is precisely true. In the
Treatise (THN 1.2.4, with which Kant was presumably unfamiliar), Hume maintains, in order to
avoid what he regards as paradoxes of infinite divisibility, that the axioms of geometry are only
very nearly true—and sufficiently close to being true as to make little practical difference. That
they are at least nearly true, however, is itself necessary and knowable by immediate intuition.

We are now in a position to determine whether Hume would regard mathematical judgments
as analytic or synthetic. Kant offers two definitions or characterizations of analytic judgments
(e.g., at Prolegomena 266-267). The first is that an analytic judgment is one in which the concept
of the predicate is contained and thought in the concept of the subject; the second is that an
analytic judgment is one the denial of which is a contradiction.

For Locke, a concept is a single mental particular that is inherently abstract in its
representational content. Because such abstract mental particulars may be either simple or
complex, many Lockean concepts are literally parts of others: for example, the concept of
“extension” is part of the concept of “body,” and the concept of “metal” is part of the concept of
“gold.” Indeed, Locke recognizes a species of knowledge that corresponds precisely to analytic
judgments in Kant’s concept-containment sense—although it is not what Locke called
knowledge of “identity and diversity,” as Kant himself supposed (Prolegomena 270), but rather
what Locke calls “trifling propositions” (E.H.U. 4.8). Because Humean concepts represent not
simply as single abstract mental particulars, however, but rather in virtue of being determinate
mental particulars that are associated in a particular way with a term and a revival set, the
application of the concept-containment test to them is more complicated. The proper revival set
(including exemplar) associated with the predicate need not be contained within the proper
revival set (including exemplar) associated with the subject in a true Humean mathematical
judgment, but the converse will be true: the proper revival set associated with the subject will
always be contained within the proper revival set associated with the predicate. However, this
latter kind of containment by itself could hardly be sufficient for “analyticity”—for precisely the
same inclusion relation between revival sets would occur in any true predicative judgment,
including such obvious examples of synthetic propositions as “gold is expensive” or “bodies
have weight.” Rather, what is required for Humean analyticity is a different kind of concept-
containment. Many concepts, for Hume, have revival sets that are effectively picked out by an
immediate resemblance, without the mediation of other concepts as criteria. We may call such concepts “semantically simple”—as long as it is kept in mind that the semantic simplicity of a concept or abstract idea is an entirely different question from that of the simplicity or complexity of its exemplar or of the other members of its revival set. (This latter question depends only on the existence of parts within the particular idea in question; and it is in this sense only that Hume himself uses the terms ‘simple idea’ and ‘complex idea’.) Other concepts, however, such as the concept of “bachelor,” may be semantically complex because of the way in which the revival set is picked out by using other concepts (such as “unmarried,” “adult,” “male,” and “human”) as criteria. A judgment will qualify as analytic if the revival set associated with the subject is contained within the revival set associated with the predicate because the subject concept is semantically complex in a way that employs the predicate concept as a constitutive criterion.

Given this understanding of analyticity, standard arithmetical judgments will not be analytic for Hume. In the judgment that “two plus two is four,” for example, the concept “two plus two,” while depending for its generation on the prior possession of the concept “two,” does not depend for its generation on the possession or use of the concept “four”; nor does the generation of the concept “four” depend on the possession or use of the concept of “two” or of “two plus two.” Similar remarks apply to the judgment that “the straightest distance between two points is a straight line.” Indeed, Hume himself emphasizes that the ways in which the concepts of “straight line” and “shortest line between two points” pick out their revival sets are very different from one another (THN 1.2.4.27).

Still, in An Enquiry concerning Human Understanding, Hume remarks that, while to deny a “matter of fact” does not “imply a contradiction,” the falsehood of any demonstrable relation of ideas “would imply a contradiction and could never be distinctively conceived by the mind” (EHU 4.2). By Kant’s second criterion, then, it appears that all demonstrable Humean mathematical judgments, which Hume explicitly identifies as relations of ideas, will be analytic after all. In fact, however, this appearance results simply from a difference in the way in which Kant and Hume conceive of contradictions. Like Leibniz, Kant has a conception of contradiction that is formal: all contradictions can be reduced by conceptual decomposition or other form-based transformations to a logical form in which the same thing is explicitly both affirmed and denied. Like Descartes, Spinoza, and Locke, Hume has a broader and non-formal conception of contradiction.11 For Hume, a contradiction consists of two things that cannot be thought together—as his own elaboration of his point about contradiction by appeal to “distinct conceivability” indicates, and as a survey of his broad range of references to “contradictions” confirms. To say that the denial of “two plus two is four” is a contradiction is, for Hume, to say no more than that, from the nature of the ideas themselves, the mind cannot think something that is both a combination of a pair with another pair and yet is not four-membered. It would likewise be a contradiction for Hume, and for similar reasons, to say that blue is more like scarlet than it is like green—even though no formal contradiction can plausibly be derived from this claim by formal conceptual decomposition or other form-based transformations. Thus, we may conclude, Hume himself already effectively considered many mathematical judgments to be necessary synthetic judgments—without being led thereby to transcendental idealism.12

Humean Skepticism
Hume allowed, as we have seen, that reason does in a sense give birth to the concept of causation; that objects or events may be “objectively” related as cause and effect independent of their actual relation to the mind; and that it is correct to ascribe a species of necessity to that relation—even though we often mislocate the impression of necessary connection and consequently conflate causal necessity with the necessity characteristic of relations of ideas. He also allowed, in effect, that mathematical judgments are both necessary and synthetic—without finding a need to explain their necessity through transcendental idealism. Did he nevertheless, as the result of his failure to discover transcendental idealism, “run his ship ashore … on skepticism, there to let it lie and rot?”

The ship metaphor is, of course, Hume’s own, presented in the concluding section of Book 1 of the Treatise (THN 1.4.7.1). In the first half of that section, he writes that his ship is indeed “weather-beaten” and in danger of sinking as a result of his review of the many “infirmities” of human cognitive faculties that he has discovered in the course of his scientific investigation of their operations. Among the infirmities he surveys is the susceptibility of the imagination to the “illusion” concerning the impression of necessary connection whereby it supposes that there is some conceivable quality in individual causes and effects themselves—rather than the constant conjunction between them—that constitutes their power or necessity. Yet although his disconcerting discoveries render him, by the end of the section, what he later calls (EHU 12.3) a “mitigated” skeptic—that is, one whose general level of assent, along with his confidence in his faculties, has been moderated—he has not concluded that his beliefs lack all epistemic merit. On the contrary, he has given positive normative endorsement to a principle of belief sometimes called “The Title Principle”: “Where reason is lively, and mixes itself with some propensity, it ought to be assented to. Where it does not, it never can have any title to operate upon us” (THN 1.4.7.11). Having thus determined that we may, with moderation, “assent to our faculties,” he is ready to re-launch his ship of inquiry, propelled by curiosity and ambition, into the deep waters of human nature—and he proceeds to do so, carefully and methodically discovering many truths about the passions and morals in Books 2 and 3 of the Treatise.

There are, to be sure, a number of specific points about which Hume is much more skeptical than Kant. For example, while he grants that it is causally necessary both that every event has a cause and that nature is uniform, he doubts—indeed, denies—that these principles of universal causation and uniformity of nature can be established a priori. But in that, Hume seems to be right, not wrong. He also doubts—indeed, denies—that space can be known a priori to be perfectly Euclidean. But in that, too, he seems to be right, not wrong. More generally, Hume finds our knowledge of an external world of “continuing and distinct existences” to be problematic. The belief in such existences, while originating in confusions and conflations in the imagination, may properly be accepted as the deliverance of our senses, he holds; but he regards the question of whether these existences actually have qualities resembling our impressions of secondary qualities—and, if not, what space-filling qualities they do have—as a vexed and unresolved one that calls into question our ability even to conceive these existences adequately. (Quantum mechanics raises a somewhat similar question about our ability to conceive adequately the properties of subatomic particles today.) Yet on this score—the epistemic merit of beliefs about the qualities of things as they really stand independent of consciousness of them—Hume is still much less skeptical than Kant, who represents himself as extending Locke’s denial that bodies have qualities resembling our ideas of secondary qualities to ideas of primary qualities as well.
Finally, if we take into account what Kant allows us to believe on grounds of practical need, then Hume is more skeptical than Kant about God, freedom of spontaneity, and immortality. Concerning these matters, Kant alleges that Hume “overlooked the positive injury which results if reason be deprived of its most important prospects, which can alone supply to the will the highest aim for all its endeavors” (Prolegomena 258n). But in allowing that Hume’s “moral character” was “quite blameless” despite his rejection of these prospects (A746/B774), Kant only sharpens the question of whether faith in them is really a practical need or only a personal want.

Conclusion: Hume and Transcendental Idealism

Wayne Waxman has presented a compelling account of how Kant could have thought of himself as carrying through a fundamentally Humean investigation, by less empiricist means, to a happier conclusion. Hume, like Kant, investigates the origins of concepts and purported concepts in a way that is intended to clarify their conditions of application. Like Kant, too, Hume critically examines his own cognitive faculties by means of those very faculties and thereby aims to discern their proper bounds while improving both our science and our morals. Kant’s “critical” turn to transcendental idealism is certainly one turn that such an investigation can take, a turn that Hume did not foresee. But if what I have argued is correct, then Hume—with an account of objective causes possessing a distinctive species of necessity, an account of mathematical truths as effectively both necessary and synthetic, and a discriminating mitigated skepticism—might not have been obliged to take that turn even if he had seen it; for his own final position was, if sometimes embarrassing to our philosophical pretensions, nevertheless more tenable than Kant supposed.

Footnotes

1. The accounts of necessity, causal inference, concepts and causal judgment provided in this and the subsequent subsection are drawn directly from more extensive discussions of these topics in my essay, “Hume’s Theory of Judgment: Inference, Judgment, and the Causal Sense” in Ainslie forthcoming. This material appears with permission of Cambridge University Press.

2. In calling the impression of necessary connection a “felt determination of the mind,” Hume cannot mean that the mere occurrence of this impression in the mind constitutes immediate knowledge, independent of experience, of the causal relation between an impression or memory and the believed idea that results from the customary transition of thought that he has described. Since all discovery of causal relations depends on experience of constant conjunction, according to Hume, the discovery of the causal role of this impression must do so as well. It is nevertheless properly characterized as an impression of the mind’s “determination,” for one in fact feels this impression whenever the mind makes, or is about to make, a custom-or-habit-based inference. Indeed, given its own constant conjunction with the occurrence of such inferences, the impression may well be a state of mind that itself constitutes an essential contributing cause to the completion of the inference from the impression or memory to the believed idea; hence, it may even be characterized as “the determination of the mind” itself, and not merely as an impression “of” the presence of such a determination.

3. The term ‘relation’, Hume claims, may be understood in either of two senses. The first, or “natural,” sense is restricted to “that quality, by which two ideas are connected together in the imagination, and the one naturally introduces the other”; this sense includes the three associative
relations of resemblance, contiguity, and causation. The second, or “philosophical,” sense encompasses more broadly any “particular circumstance, in which, even upon the arbitrary union of two ideas in the fancy, we may think proper to compare them”; this sense includes seven different species of relations, including relations of resemblance, space and time, and causation, but also identity, contrariety, degrees in quality, and proportions in quantity or number (THN 1.1.5.1-2).

4. Thus, for example, the abstract idea of the quality red is a determinate idea of a particular thing having a particular shade of red but associated with the word ‘red’ in such a way that the mind is disposed to revive and survey any of a set of other ideas of red things for use as needed. If, for example, one’s abstract idea exemplar of red is an idea of a dark red circle, and the claim is made that all red things are dark red circles, the ideas of red things of other shades or other shapes will immediately come to mind, allowing one to reject the claim proposed. (For further details, see Garrett 1997).

5. The apparent sizes, shapes, and relative positions of bodies as they are initially sensed must often be corrected, Hume allows, by consideration of the position of the observer (THN 3.3.3.2); and the apparent colors, sounds, tastes, and smells of objects must also sometimes be corrected, he notes, for features of the circumstances of observation, including the health of the sense organs. He emphasizes how the immediate deliverances of the moral sense must likewise be “corrected” by taking into account differences of perspective on the individuals judged so as to reduce the “contradictions” in felt response that the same character would otherwise produce among different observers and even within the same observer at different times (THN 3.3.3.2). The initial deliverances of the sense of beauty must often be corrected as well, both by a consideration of the physical circumstances of observation (THN 3.3.1.15) and by reflectively developed rules of criticism (THN 2.2.8.18).

6. These rules include such principles as “the cause and effect must be contiguous in space and time”; “the same cause always produces the same effect, and the same effect never arises but from the same cause”; and “where several different objects produce the same effect, it must be by means of some quality, which we discover to be common amongst them” (THN 1.3.15.1-8).

7. Thus he writes:

'Tis natural for men, in their common and careless way of thinking, to imagine they perceive a connexion betwixt such objects as they have constantly found united together; and because custom has render’d it difficult to separate the ideas, they are apt to fancy such a separation to be in itself impossible and absurd. (THN 1.4.3.9)

8. It might be objected that causal pairs resemble each other solely in the effect that they produce on the mind. But Hume, at least, cannot allow this objection, for his fifth “rule by which to judge of causes and effects” requires that “where several different objects produce the same effect, it must be by means of some quality, which we discover to be common amongst them. For … like effects imply like causes …” THN 1.3.15. 7).

Nor need we say that causal relations are whatever the causal sense happens to pick out—at least not if this is taken to mean that a difference in what produced association, inference, and the distinctive impression of necessary connection would entail a difference in what the causal relation is. Consider an analogy. Suppose that the basis of redness consists in a particular complex (and perhaps highly disjunctive) structural surface reflectance quality. Suppose, too, that, had the human sensory apparatus been different, a different quality of bodies would have produced the impression of red under standard circumstances. Then although it may be true that
the quality of redness is what the visual sense of red actually discerns—and that this quality turns out to be a particular complex structural surface reflectance property—it will not follow that redness itself would have been a different quality of bodies if the human sensory apparatus had been different. For the referent of ‘quality of red’ may be fixed rigidly by its relation to the actual present human sensory apparatus—that is, in such a way that redness is whatever quality it is that produces the impression of red through the actual human sensory apparatus under standard circumstances in the actual world now, not whatever would produce the impression of red in a different apparatus or under other circumstances. The quality of redness itself need not vary with the nature of the mind, even if a change in the nature of the human mind would lead to something other than redness playing the role (including producing the qualitatively distinctive “impression of red”) that redness plays for us. Similarly, the referent of ‘causal relation’ may be fixed rigidly by its relation to the actual causal sense—so that the causal relation is, in each possible world, that relation among pairs that produces association, inference, and the impression of necessary connection in normal reflective human beings in the actual world, and not whatever relation would produce it in that other possible world. So understood, the relation of causation itself need not vary with the nature of the mind, even if a change in the nature of the human mind would lead to a relation other than causation playing something of the role (including the production of association, inference, and an impression of necessary connection) that the relation of causation plays for humans in the actual world.

9. Commentators have generally judged that the two definitions are not even co-extensive. However, I have argued (Garrett 1997, Chapter 5) that the two definitions of ‘cause’ are each systematically ambiguous between a “subject-relative” reading and an “absolute” reading. On the subject-relative reading, the first definition concerns what has been observed to be constantly conjoined in a given subject’s experience, while the second definition concerns the subjects of association and inference in that subject’s mind. On the absolute reading, the first definition concerns what has been, is, and will be constantly conjoined through all time, while the second definition concerns the subject of association and inference in the mind of an idealized subject. So understood, the definitions are co-extensive on their subject-relative readings and are again co-extensive on their absolute readings; whereas the first reading specifies what a subject will include in his or her own revival set for the abstract idea of cause (and hence reflects what he or she takes to be causally related), the second reading specifies what a fully corrected revival set would include (and hence what is in fact causally related).

10. Strictly speaking, this would be Hume’s account of the judgment that “two plus two is four” taken as a predication about pairs of pairs; and the reverse inclusion would be required for the predicative judgment “four makes two plus two” taken as a predication about four-membered groups. Both inclusion relations, we may suppose, would be required for the further judgment “two plus two is four” understood as a “mathematical identity” or a universal generalization over a biconditional.

11. See Owen 1999, especially Chapters 2 and 3, for a good account of non-formalism in early modern logic.

12. Coleman 1979 also notes the broadness of Hume’s use of the term ‘contradiction’ and argues—though without developing a Humean theory of concepts or judgments—that Hume should be interpreted as regarding mathematical judgment as synthetic yet necessary a priori.
Bibliography

Primary Sources

David Hume


John Locke

Immanuel Kant

Prolegomena: Prolegomena to Any Future Metaphysics that will be able to come forward as science, English translation by Paul Carus, rev. L.W. Beck (Indianapolis: Bobbs-Merrill, 1950; repr. with further revision by J. Ellington, 1977). Cited by section number and volume and page numbers in Kants Gesammelte Schriften, 29 vols., ed. Deutsche Akademie der Wissenschaften, Berlin: George Reimer/Walter de Gruyter, 1900-.

Secondary Sources


