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CAUSATION AND NECESSARY CONNECTION

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1. Introduction

It is difficult to say anything about Hume’s views on causation and necessary connection without making claims that are hotly disputed amongst interpreters of Hume’s work. Some interpreters take Hume to be a causal realist, while others hold that he is a regularity theorist. Some take him to hold that ‘causation’ is an irretrievably defective notion that could not possibly apply to any worldly phenomena, and some take him to be a non-cognitivist about our causal talk and thought. Some take him to hold that there is such a thing as objective necessary connection, while others take him to be a subjectivist about necessity. And so on. In this chapter, I shall strike a path through these and other interpretative controversies as follows. I begin in §2 by sketching, in what I hope is a reasonably interpretatively neutral way, the bare bones of Hume’s account of causation, and in §3 I discuss his famous ‘two definitions’. In §4, I outline the three main classes of interpretative position – what I shall call the traditional, sceptical realist and projectivist interpretations – and briefly examine the main items of evidence that are normally marshalled for and against each interpretation. Roughly speaking, these interpretations take Hume to be, respectively, a regularity theorist, a non-cognitivist, and a realist about causation. Finally, in §5, I sum up the current state of play, which, as I see it, is something of a stand-off between the projectivist and sceptical realist

interpretations, and say something about the specific problems that each interpretation needs to overcome if it is to prevail over its rival.

2. Hume's basic account of causation

For Hume, causal thinking lies right at the heart of our conception of the world: all 'reasonings concerning matters of fact and existence seem to be founded on the relation of Cause and Effect. By means of that relation alone we can go beyond the evidence of our memory and senses' (EHU 4.3 / 26). In other words, our access to external reality, beyond the 'evidence' of current experience and memory, entirely depends on reasoning from causes to effects (and vice versa). When I form the belief that my dinner will not poison me, or that what I am reading in the newspaper is true, or that the kettle I turned on a few minutes ago will have boiled by now, I do so on the basis of such reasoning.

This being so, the primary task that Hume sets himself is to uncover the nature of this mysterious relation – or rather, to discover what our idea of causation consists in, since it is 'impossible to reason justly, without understanding perfectly the idea concerning which we reason; and 'tis impossible to understand any idea, without tracing it up to its origin, and examining that primary impression from which it arises' (THN 1.3.2.4 / 74-5). He quickly discovers that 'whatever objects are consider'd as causes and effects are contiguous' (THN 1.3.2.6 / 75) and are also such that the cause is temporally prior to its effect. But those two conditions clearly do not exhaust our idea of causation, for 'there is NECESSARY CONNEXION to be taken into consideration' (THN 1.3.2.11 / 77).

Hume's search for the impression-source of the idea of necessary connexion is a long one, for it turns out that this crucial component of 'the idea concerning which

we reason' has its source in that very reasoning itself. So Hume needs to discover the nature of our reasoning from causes to effects (what I shall call 'causal reasoning') before he can locate the impression-source of the idea of necessary connection.

Hume's investigation into causal reasoning – what is traditionally described as his discussion of the 'problem of induction' – yields two results that are significant for present purposes. First, causal reasoning proceeds on the basis of past observed regularity: on observing a C, we infer that an E will follow just when we have experienced sufficiently many Cs followed by Es. Second, that reasoning proceeds not by consideration of any argument, but as a matter of 'Custom or Habit' (EHU 5.1.5 / 43). There is simply a mental mechanism that, given relevant past experience, conveys the mind from the impression of a C (one billiard ball striking another, for example) to a belief that an E will follow (the second ball moving). And it turns out, in 'Of the idea of necessary connexion' (THN 1.3.14, EHU 7.2), that it is the operation of this very mechanism that furnishes us with the impression, and so the idea, of necessary connection. Before Hume can establish this latter claim, however, he needs to show that we have no sensory impression of necessary connection. Before briefly rehearsing his argument, it is worth saying something about the importance of the issue for Hume.

One of Hume's main aims is to provide a 'science of man': an account of how the mind works that is based on a clear-headed, 'experimental' investigation. A plausible account of his primary target is given by Edward Craig,¹ who sees Hume's major adversaries as those who uphold what he calls the 'Image of God' doctrine (we are made in God's image) and a corresponding epistemological doctrine: the 'Insight Ideal'. According to the Insight Ideal, the nature of reality – or at least some of it – is in principle accessible to reason; thus philosophers before Hume had subscribed to the

self-evident or a priori status of the claim that every event has a cause, or had claimed that the essence of objects can be known by what Descartes calls ‘purely mental scrutiny’.ⁱⁱ Hume, by contrast, sets out to systematically undermine the claim that any aspect of the nature of reality is knowable a priori, and, moreover, to show that no ‘matter of fact’ can be inferred a priori from any other distinct matter of fact.

Hume takes himself to have established this claim in his discussion of causal reasoning; but it is a claim to which he returns in the negative phase of his discussion of the idea of necessary connection (EHU 7.1 / 60-73; THN 1.3.14.1-18 / 155-65), where he argues that the idea does not have a sensory impression-source. Hume assumes, in this discussion, that such an impression-source for the idea of necessary connection would have to be such that it delivers certainty that the effect will follow: ‘were the power or energy of any cause discoverable by the mind, we could foresee the effect, even without experience [of past constant conjunction]; and might at first, pronounce with certainty concerning it, by the mere dint of thought and reasoning’ (EHU 7.1.6 / 63). With this assumption (to which I return below) in place, it is an easy matter to establish Hume’s negative conclusion, since, as we already know from his discussion of causal reasoning, observation of a particular event never delivers such certainty: we can always imagine the cause happening without its effect, and so it is always epistemically possible that the effect will not occur.

The assumption just mentioned has caused much puzzlement amongst commentators. Hume is apparently arguing for a phenomenological claim – that on first observing them, ‘[a]ll events seem entirely loose and separate. One event follows another; but we can never observe any tie between them’ (EHU 7.2.1 / 74) – and yet his argument for this claim proceeds by way of pointing out that we cannot ‘pronounce with certainty’ that the effect will follow, on observing the cause. But

how is the former claim supposed to follow from the latter? In particular, isn't Hume confusing two distinct notions? On the one hand, we have the claim that there is no observable power, within the cause itself (e.g. the striking of one billiard ball by another), such that observing it would deliver certainty that the effect will follow. (J. L. Mackie calls such a power 'necessity₂'.ⁱⁱⁱ) But this does not entail that there is no observable connection or 'tie' between cause and effect (necessity₁). It might easily be that we can observe such a connection – that is, we can observe the causal relation – despite the fact that we cannot observe any power, in the cause itself, that produces certainty about the effect.

It seems that Hume does indeed run these two distinct notions together; however, by his own lights it is not clear how much of a problem this is. Hume's central concern, remember, is with inference from one matter of fact to another – that is, from causes to effects (and vice versa). The observability of necessity₁ – of a mere causal 'tie' between causes and effects – would make no substantive difference to the account that Hume has already offered of such reasoning, since such a tie could only be observed by, as it were, observing c-causing-e as a package deal, and could therefore not serve as the basis of causal reasoning. For how would we then reason, when confronted with a C? The best we could do is reason that, since Cs have always been observed to cause Es in our past experience, the currently observed C will likewise cause an E. But this inference cannot be a priori, since it is still epistemically possible that the former is true and the latter false. So we need to postulate a different mental mechanism that supplies the inference, and that mechanism would turn out (according to Hume's own argument) to be custom or habit. Thus the only difference between the account just canvassed and Hume's own account of causal reasoning is

that according to the former account the impression of causation is supplied by sensation, whereas on Hume's account it has another source.

That source, of course, turns out to be the very inference from causes to effects itself: the 'transition arising from the accustom'd union' (THN 1.3.14.19 / 165), that is, the habit that takes the mind from an impression of the cause, together with experience of past constant conjunction, to the belief that the effect will follow. As Hume puts it,

when one particular species of event has always ... been conjoined with another, we make no longer any scruple of foretelling one upon the appearance of the other, and of employing that reasoning, which can alone assure us of any matter of fact or existence. We then call the one object, Cause; the other, Effect. (EHU 7.2.2 / 74-5)

Hence the 'connexion ... which we feel in the mind, this customary transition of the imagination from one object to its usual attendant, is the sentiment or impression from which we form the idea of power or necessary connexion' (EHU 7.2.3 / 75).

Hume thus finally achieves what he set out – nearly a hundred pages earlier, in the Treatise (THN 1.3.2.4 / 74) – to achieve: the impression-source for the idea of necessary connection. Unfortunately, however, it is far from clear what consequences Hume takes his discovery to have for our causal talk and thought, for he appears to endorse three positions that are mutually inconsistent. (1) He seems to think that we are apt to project the impression – and the idea – of necessary connection into the world: 'the mind has a great propensity to spread itself on external objects, and to conjoin with them any internal impressions, which they occasion' (THN 1.3.14.23 /

167). And he seems to suggest that this projection is a mistake: ‘we are led astray by a false philosophy’ when ‘we transfer the determination of the thought to external objects, and suppose any real intelligible connexion betwixt them; that being a quality, which can only belong to the mind that considers them’ (THN 1.3.14.25 / 168). This suggests that it is a mistake to think that events in the worlds really are necessarily connected to one another. (2) He does not appear to suggest that the idea of causation can be stripped of the component idea of necessary connection: he does not appear to respond to the mistake just identified by advocating a revisionary account of the concept of cause. Finally, (3), he appears to think that our causal thought and talk is truth-apt. (Certainly it is subject to normative constraints: in the Treatise the very next section lists ‘rules by which to judge of causes and effects’ (THN 1.3.15 / 173-6).)

The inconsistency is easy to see: by (2), we really do deploy the idea of necessary connection when we engage in causal talk and thought; and, by (3), that causal talk is in general entirely legitimate (not least because it is subject to normative constraints; it is hard to see how this could be so if all such talk was irredeemably defective). And yet, by (1), that talk is irredeemably defective. There can be nothing in the world that answers to the idea of necessary connection, since that idea derives solely from the ‘determination of the mind’. The three broad interpretative rivals discussed in §4 below resolve the inconsistency in different ways. Roughly speaking, the traditional interpretation denies (2),^{iv} and both the projectivist and sceptical realist interpretations finesse (1): they hold Hume to the claim that there is a mistake in the offing, but deny that the mistake in question is that of thinking of events in the world as causally or necessarily connected. Finally – and this is what distinguishes these two interpretations – the projectivist interpretation finesse (3) as well: Hume does

endorse our causal talk and thought, but that talk and thought is to be understood in non-cognitivist terms. For the sceptical realist, by contrast, our causal talk and thought is straightforwardly referential: there is something in the world that answers to our idea of causation (or at least we believe that there is, and there is nothing defective about that belief).

One more piece of the already difficult puzzle needs to be put on the table, namely Hume's famous two definitions of causation; this is the topic of the next section. Before leaving Hume's discussion of the origin of the idea of necessary connection, however, it is worth noting what is, in my view, an often misunderstood feature of his account. It is routinely taken for granted that on Hume's view, all events 'seem entirely loose and separate'. That is, phenomenologically speaking, our experience is merely as of one event following another, even once the habit of inference has been established, and so even once the impression of necessary connection is present. This has forced some interpreters to cast the impression of necessary connection as, for example, simply a 'peculiar feeling'^v or a 'feeling of helplessness or inevitability' (where the inevitability is the inevitability of one's expectation, and not the inevitability of the effect itself).^{vi}

Hume is not, in fact, committed to this view. What he says is that 'all events seem entirely loose and separate', he does so in the context of 'single instances of the operation of bodies' (EHU 7.2.1 / 73) – that is, when we first observe a pair of contiguous events, and hence before the habit of association has arisen. He does not explicitly state a view about how things seem once the habit of association has arisen, but it is plausible to suppose that he takes the impression of necessary connection to affect, precisely, how things seem – that is, to affect the nature of visual experience itself.

This interpretation removes the need to think of the impression of necessary connection as a ‘feeling of expectation’ or similar; how things seem, when the impression arises, is, precisely, necessarily connected, just as it is by virtue of the impression of red that things seem red to us. It also helps to explain why Hume offers a non-phenomenological argument for the claim that there is no sensory impression of necessary connection. After all, if all events really did seem entirely loose and separate to us, Hume would not need such an argument; unbiased phenomenological reflection would do the job just by itself (and would thereby establish the stronger claim that we have no impression of either necessity₁ or necessity₂).^{vii}

3. The two definitions

Here are Hume’s two definitions of causation – or, more precisely, definitions of ‘a cause’ – as they appear in the Treatise, towards the end of his discussion of the idea of necessary connection:

(D1) ‘An object precedent and contiguous to another, and where all the objects resembling the former are plac’d in like relations of precedency and contiguity to those objects, that resemble the latter’. (THN 1.3.14.29 / 170)

(D2) ‘[A]n 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 [that is, a belief in] the other’. (ibid.)

Unfortunately, rather than clarifying the situation, the two definitions are problematic in their own right. The first thing to note is that they are not even extensionally equivalent. The conditions in (D2) can easily be satisfied without (D1) holding, by someone having observed an unrepresentative sample of ‘objects’ (or events), so that the two kinds of event are constantly conjoined in their experience but not universally. And (D1) can be satisfied without (D2) holding, for instance in the case of constant conjunction between two kinds of events that nobody has observed, so that nobody’s mind is determined to move from the idea of one to the idea of the other.

A standard solution to this problem^{viii} has been to claim that Hume only intends (D1) as a genuine definition of causation, while (D2)’s aim is different: to explain the conditions under which we do, in fact, come to make causal claims, for example. This move seems somewhat ad hoc, however, given Hume’s claim that the two definitions present ‘a different view of the same object’ (THN 1.3.14.29 / 170).

A second solution, offered by Don Garrett,^{ix} is to distinguish a ‘subjective’ from an ‘absolute’ reading of each definition. Roughly, a subjective reading of (D1) would take ‘all objects’ to mean all objects observed so far by a particular person. This would then be coextensive with (D2) read subjectively, with ‘the mind’ understood as referring to the same person, since an ‘object’ that meets (D1) now will be such that the mind of the person in question is indeed determined by the idea of the object to form the idea of its effect. As Garrett puts it, read subjectively, the two definitions tell us when an object ‘functions psychologically’ as a cause.^x An absolute reading of (D1) takes ‘all objects’ to be unrestricted, so that (D1) appeals to universal constant conjunction. This is coextensive with (D2) read absolutely, with ‘the mind’

now understood to refer to some sort of ‘idealized spectator’, that is, an observer who observes representative samples of all kinds of constantly conjoined events.

A third solution – similar to Garrett’s ‘subjective’ reading and to Robinson’s proposal concerning the second definition – is to read both definitions not as ‘definitions’ in the standard contemporary sense at all, but as saying how it is we come to believe that one thing is a cause of another. As Edward Craig puts it, the definitions characterize the ‘circumstances under which belief in a causal connection arises, one concentrating on the outward situation, the other on the state of the believer’s mind that those outward facts induce’.^{xi}

My own view is that none of these solutions are satisfactory, because they all ignore Hume’s preceding remark in the Treatise that ‘two definitions of this relation may be given of this relation, which are only different, by their presenting a different view of the same object, and making us consider it either as a philosophical or as a natural relation; either as a comparison of two ideas, or as an association betwixt them’ (THN 1.3.14 / 169-70). Hume’s distinction between philosophical and natural relations is a distinction between two kinds of mental operation. Roughly, the former is the conscious ‘placing’ of two ideas under a relation (hence ‘plac’d’ in (D1)), and the latter is the unconscious ‘transition’ of the mind from one idea to another. For example, resemblance – which is the other relation that is both natural and philosophical – can operate in two distinct ways, as when I consider whether a painting of a particular scene resembles the image of a particular remembered scene I have in my mind and come to judge that it does (philosophical relation), or when I see a picture of the Queen and my mind is automatically drawn to the idea of the Queen herself (natural relation). Similarly for causation: I can ‘place’ two ideas under the relation of causation, and will (or should) do so precisely when the conditions

specified in (D1) are met (contiguity, precedence, and observed constant conjunction), thereby coming to form the judgement that one event is the cause of the other. And I ‘naturally’ judge two one event to be the cause of another when I have acquired the relevant habit of association: my mind is drawn from the idea (or impression) of the first event to the idea of (or belief in) the second, and, again, I thereby come to form the judgement that the first event is the cause of the second.^{xii}

Note that neither of the last two of the four interpretative positions just outlined delivers any verdict about the meaning of ‘cause’, since both deny that the definitions are definitions in anything like the standard contemporary sense. Instead, the definitions tell us something about how it is we come to make causal judgements. As we shall see, the availability of these interpretative options with respect to the two definitions undermines a key component of the motivation for the traditional interpretation of Hume on causation, according to which he is a naïve regularity theorist. We are not required to read the first definition as a definition of the meaning of ‘cause’, and so we are not required (at least not required by the two definitions) to hold Hume to the view that causation consists in contiguity, precedence and constant conjunction.

4. Interpretations: traditional, sceptical realist and projectivist

It is uncontroversial that Hume endorses the following three theses. First, at least in the most basic cases we come to make causal judgements – judgements of the form ‘c caused e’, or ‘c will cause e’ – on the basis of the temporal priority and contiguity relations that hold between these two events, and the observed constant conjunction between events of the kinds that c and e instantiate. In such cases we infer that e will occur on the basis of having observed c, and we also think of c as a cause of e, in a

way that, somehow or other, involves deploying the idea of necessary connection. Second, the impression-source of that idea is the inference just described: the impression of necessary connection is not a sensory impression but an impression of reflection. Finally, there is – or can be – something awry in our deployment of the idea of necessary connection. Perhaps the easiest way of seeing the difference between the three main interpretative positions is to consider how they interpret the second and third of the claims just described. I shall thus start my brief account of each of the positions by describing their attitudes to those claims.

The traditional interpretation

According to what I am calling the ‘traditional’ interpretation, Hume is a naïve regularity theorist about causation: c causes e if and only if c is contiguous with and prior to e, and events similar to c (the Cs) are constantly conjoined with events similar to e (the Es).^{xiii} In other words, ‘c causes e’ just means ‘all Cs are followed by Es’. What is awry in our deployment of the idea of necessary connection, on this view, is, precisely, that we deploy it at all: given that the source of that idea is the transition of the mind, it cannot possibly represent any mind-independent feature of the world. Thus (and this is an issue on which versions of the traditional interpretation differ) either (i) necessary connection is not, in fact, part of the meaning of ‘cause’ as we actually deploy the idea ‘cause’, or (ii) it is part of the ordinary meaning of ‘cause’ but Hume is in effect offering a revisionary conceptual analysis of ‘cause’ (shorn of the troublesome concept of necessary connection), or (iii) it is part of the ordinary meaning of ‘cause’ and Hume offers no such revision.

The major problem with the traditional interpretation is an almost total lack of evidence in its favour. The major source of evidence has standardly been thought to

be the ‘two definitions’ – or rather, the first definition. However, as we saw in §3, the interpretation of the two definitions relied on here (according to which the first definition really is Hume’s attempt to offer a conceptual analysis of ‘cause’) has recently come under attack. In addition, the accounts given of the role of the idea of necessary connection offered by different versions of the traditional interpretation fit badly with the text. Against alternative (i) above, Hume does not suggest (setting aside the first definition) that the idea of necessary connection is no part of the actual meaning of ‘cause’; nor, contra (ii), does he suggest that the concept of causation needs to be revised. He does, of course, suggest that something is apt to go awry when we deploy the idea of necessary connection; but he does not suggest that the appropriate response is to stop deploying it; indeed, it is hard to see how Hume could even consider this to be a genuine psychological possibility. Finally, against (iii), which I take to be Barry Stroud’s position, Hume clearly and persistently endorses a wide range of causal claims, and indeed provides ‘rules by which to judge of causes and effects’ (THN 1.3.15 / 173-6). This is extremely difficult to square with the claim that he takes all causal talk to be equally and irredeemably false.

Sceptical realist interpretations

In stark contrast to the traditional interpretation, the sceptical realist interpretation takes Hume to hold that our causal talk refers – successfully – to real, mind-independent causal connections in nature, or what I shall call ‘causal powers’.^{xiv} Exactly what role the idea of necessary connection plays here is something that sceptical realist interpreters differ on. In particular, John Wright holds that the idea of necessary connection refers to genuine mind-independent necessary connections, so that if only we could penetrate into the true, underlying nature of causes, we would be

able to discern those (causal) powers by which causes really do absolutely necessitate their effects: he ‘retained an ideal of knowledge of true causes which was derived from the Cartesians’,^{xv} so that the ‘true manner of conceiving a particular power in a particular body’ (of which we are in fact incapable) would involve being ‘able to pronounce, from a simple view of the one, that it must be follow’d or preceded by the other’ (THN 1.3.14.12 / 161).^{xvi} Thus the mistake we are apt to make when it comes to the idea of necessary connection is the mistake of holding that it derives from an impression of sensation, and thus holding that we really do perceive necessity. Hence our idea of necessary connection is defective, in that – being derived from an impression of reflection – it cannot adequately represent real necessity in nature; nonetheless, it succeeds in referring to real necessity. In other words, Hume agrees with his opponents when it comes to the metaphysics of the Image of God doctrine, as far as causation is concerned, but he disagrees with them over the Insight Ideal: we lack the God-like ability to penetrate into the essences of things in a way that would reveal their true, effect-guaranteeing underlying nature to us.

According to Galen Strawson, by contrast, Hume takes all necessity (whether causal or logical) to be purely subjective: our idea of necessity does not track any real necessity in nature, but is ‘just a feeling we have about certain things – about $2 + 2 = 4$, and about what this billiard ball does to that one, and about the sum of the angles of a triangle’.^{xvii} Nonetheless, our idea of causation succeeds in referring to more in the world than mere regularities: it refers to (to use Hume’s own expression) that upon which the ‘regular course and succession of objects totally depends’ (EHU 5.2.12 / 55); or, in Strawson’s words, ‘whatever it is about the universe (or matter) which is that in virtue of which it is regular’.^{xviii} Again, a central thought here is that our idea of causation is inadequate to what it represents: we can have a ‘relative’ idea of it, but

not what Strawson calls a ‘positively contentful’ idea of it. Thus Wright’s Hume conceives of the referent of ‘cause’ to be objective necessity – the feature of the cause that absolutely guarantees that the effect will occur – whereas Strawson’s Hume conceives of the referent of ‘cause’ to be a regularity-guaranteeing feature of nature.

The starting-point for the claim that there is serious textual evidence to justify (some version of) the sceptical realist interpretation is to take the first Enquiry rather than the Treatise as expressing Hume’s considered view about causation. This is because it is in the first Enquiry that Hume refers, on several occasions, to the ‘powers and forces, by which [the course of nature] is governed’ that are ‘wholly unknown to us’ (EHU 5.2.11 / 54), the ‘powers and principles on which the influence of these objects entirely depends’ that nature ‘conceals from us’ (EHU 4.2.2 / 33), and so on. It is also the place where he says that our idea of causation is ‘imperfect’, and that it admits of no ‘just definition, except what is drawn from something extraneous and foreign to it’ because we ‘have no idea of this connexion, nor even any distinct notion what it is we desire to know, when we endeavour at a conception of it’ (EHU 7.2.4 / 76-7).

It is possible to reinterpret these claims in a way that does not commit Hume to belief in causal powers. In particular, one might take the claims about nature’s ‘secret’ powers be mere suppositions for the sake of the argument.^{xix} Or one might point out that, since Hume explicitly takes ‘power’ to be synonymous with ‘cause’ (THN 1.3.14.4 / 157), and since he doubtless thinks that there are additional, not-yet-known regularities underlying the observed behaviour of objects, talk of secret powers presents no problem for the other interpretations.^{xx} But there is nothing in the text of the first Enquiry itself to motivate such a reinterpretation (or so defenders of sceptical realism maintain): the most natural interpretation of the first Enquiry, taken

on its own terms, reads Hume's claims at face value, as expressions of belief in, but ignorance concerning the nature of, causal powers.

One advantage of Wright's version of the sceptical realist interpretation over the traditional interpretation is that it makes sense of the tension noted in §2: Hume endorses our (necessary-connection-involving) causal thought and talk, and yet he apparently thinks there is something wrong with the idea of necessary connection. Wright's account resolves the tension by identifying what is 'wrong' with the idea of necessary connection as our tendency to think that necessary connections are perceivable, and our corresponding tendency to think that we have thus penetrated into the essence of bodies: '[t]he vulgar mistake an associational connection for a genuinely perceived rational connection'.^{xxi} This tendency does not, on Wright's account, affect the meaning of our causal talk, however. Our habits of inference give rise to the belief that there are necessary connections in nature, and that belief is (for all we know) true; the mistake we tend to make is the mistake of thinking that our idea of necessary connection is fully adequate to what it represents. When we 'make the terms of power and efficacy signify something, of which we have a clear idea, and which is incompatible with those objects, to which we apply it, obscurity and error begin then to take place' (THN 1.3.14.25 / 168). This is because we are in effect claiming that there is some feature of the external world that is adequately represented by an idea whose impression-source is a mere transition in the mind, when in fact there can be no such feature. But this mistake plays no role in the meaning of 'cause': our idea of necessary connection really does refer to real necessity, even if we are apt to be mistaken about the nature of what it is we thereby represent.

It is unclear whether Strawson's interpretation also has this advantage over the traditional interpretation, given his claim that Hume takes all necessity to be

subjective. Strawson says that ‘the E-intelligible [that is, positively contentful] meaning of the term ‘causation’ can only encompass certain aspects of the experience Causation [that is, causal power] gives rise to ... [including] the feeling of determination’.^{xxii} So on Strawson’s account, the idea of necessary connection is only a part of the ‘meaning’ of ‘causation’ in the sense that it is the idea of an experience that causation ‘gives rise to’. But of course such a claim could equally be made by a defender of the traditional interpretation; so if Strawson’s claim here makes adequate sense of the fact that Hume endorses our necessary-connection-involving causal talk and thought, the same can be said of the traditional interpretation. My own view is that Strawson’s suggestion does not adequately capture the thought that the idea of necessary connection really is part of the meaning of ‘cause’: Hume really does seem to think that our causal thought involves the claim that causes and effects are necessarily connected, and not merely that they happen to give rise to a certain kind of ‘feeling’.

A second advantage that the sceptical realist interpretation has been claimed by Strawson to have over the traditional interpretation is that the latter saddles Hume with the preposterous (according to Strawson) claim that there is nothing more to the world than mere regularity (‘one of the most baroque metaphysical suggestions ever put forward’).^{xxiii} The traditional interpretation need make no such claim, however. According to the traditional interpretation, Hume’s claim is only that our thoughts cannot successfully reach out to any mind-independent relations between causes and effects, aside from priority and contiguity. This is not to positively assert that such relations do not, or cannot, exist – only that we cannot succeed in referring to them in our causal thought and talk (if we try, we ‘lapse into obscurity and error’). We can (as Strawson says) form a ‘relative’ idea of such relations – we can consider the

possibility that they exist (without being able to form adequate ideas of what they might be like), but to do so would be, at best, to indulge in idle metaphysical speculation. From a semantic point of view, then, the crux of the difference between the traditional interpretation and Strawson's version of sceptical realism is that for Strawson, the 'relative' idea we form is a relative idea of real causal powers, which are what our ordinary causal talk refers to. According to the traditional interpretation, by contrast, we can form a relative idea of some possible not-further-specifiable relation between causes and effects, but that idea is not the idea of causation: the idea of causation is exhausted by contiguity, priority and constant conjunction.

The projectivist interpretation^{xxiv}

The projectivist interpretation in some sense represents a middle ground between the sceptical realist and traditional interpretations (indeed Angela Coventry calls it the 'intermediate interpretation').^{xxv} It shares with sceptical realism the thought that our causal talk and thought does more than merely register the existence of regularities in nature, and with Wright's version of sceptical realism the thought that this involves the legitimate deployment of the idea of necessary connection. However, the projectivist interpretation shares with the traditional interpretation a broadly meaning-empiricist interpretation of Hume, according to which experience places strict limits on what can be represented, via our ideas, in our thought and talk. In particular, the two interpretations agree that nothing in reality answers to our idea of necessary connection: causation 'in the objects', as it is sometimes put, amounts to no more than contiguity, priority and constant conjunction.

The projectivist interpretation squares the apparent circle – on the one hand, the idea of necessary connection is deployed legitimately in our causal talk and thought,

but on the other, no aspect of reality answers to this idea – by adopting a non-cognitivist approach. A standard interpretation of Hume’s ethical (and indeed aesthetic) writing takes him to be a ‘sentimentalist’ about moral (and aesthetic) claims: when we make an evaluative claim about an action or a person (that they are good or bad, brave or cowardly, and so on), we are expressing a sentiment or moral attitude towards that action or person, rather than attributing to them some mind-independent moral property. Moreover (this further move is admittedly more controversial), we do not merely express the relevant sentiment; we project it onto the object of our experience or judgement, so that the painting we are observing looks beautiful, or the murder will seem vicious thanks to the projection of the relevant sentiment, and we correspondingly judge them to be so thanks to the projection of the relevant idea. Thus Michael Smith notes that when Hume says that you can ‘never can find’ the viciousness of a murder ‘till you turn your reflexion into your own breast, and find a sentiment of disapprobation’ (THN 3.1.1.24 / 468-9), he ‘is precisely trying to focus our attention away from where it is naturally focused when we judge a wilful murder to be wrong: that is, away from the murder itself, and on to an otherwise quite unnoticed ‘calm passion’ he supposes to arise in us’.^{xxvi}

Part of the point here, according to the projectivist line on morality, is that Hume is not merely making a straightforward phenomenological claim; it is not supposed to be just obvious to us that there is nothing in the murder itself that constitutes its viciousness. On the contrary, he only gets to this claim after quite a lot of argument. So – the thought is – it seems to us that our moral and aesthetic judgements are responses to genuine features of external objects, and their so seeming is due to the projection of the relevant sentiment. Our sentiment-derived judgements are, however, subject to normative constraints – so, for example, there are ‘rules of

art' which deliver a true standard of taste and sentiment',^{xxvii} even though 'no sentiment represents what is really in the object'.^{xxviii} Hence moral and aesthetic claims can legitimately be regarded as correct or incorrect (there is a 'true standard' for them to meet) on the basis of those normative constraints.^{xxix}

In the case of causation, the analogue of 'sentiment' is, of course, the impression – and hence the idea – of necessary connection. On the projectivist view, we are apt to mistake the impression of necessary connection for a sensory impression (this is a point of agreement with Wright), and we are apt to do this because we project the impression onto the external objects that trigger it. (My own proposal here is that the 'impression' of necessary connection is in fact, for Hume, not a self-standing 'feeling' at all, but merely the modification of visual experience that occurs once our habit of expectation is formed; see §2 above.) And when we 'describe' what is going on – when we 'call the one object, Cause; the other, Effect' (EHU 7.2.2 / 74-5) – we similarly project the idea of necessary connection onto those objects. Our causal talk and thought, then, is not descriptive: it does not attribute a mind-independent relation to causes and effects, but projects our idea of necessity onto them.^{xxx}

As with the moral and aesthetic cases, however, this is not to say that Hume is a subjectivist about causation, for there are norms that govern the appropriateness of our causal claims to their objects, for example in his 'rules by which to judge of causes and effects' (THN 1.3.15 / 173-6).^{xxxi} More generally, Hume is certainly in a position to regard our natural, instinctive causal judgements as eminently revisable in the light of the evidence.^{xxxii} Thus, for example, As might all have been followed by Bs in my experience, so that I judge that the As are causes of Bs. But I might then find out that there are two distinct kinds of A (call them A1s and A2s), that all the As

I have observed are in fact A1s, and that A2s are often not followed by Bs. This would give me good grounds to revise my initial judgement that As cause Bs in favour of the judgement that A1s cause Bs but A2s don't, since the 'difference in the effects of two resembling objects must proceed from that particular, in which they differ' (THN 1.3.15 / 174, rule 6). And this would be so even if the habit of inference that has been established naturally inclines me, on next observing an A, to expect a B, and thus to judge that they are causally connected if a B does indeed follow; I know that that judgement is hostage to information I do not possess, namely whether or not the observed A is an A1 or an A2. In other words, the relevant rule acts as a normative constraint on the causal judgement I am naturally inclined to make.

Direct textual evidence for the projectivist interpretation is admittedly rather thin. Indirect support comes largely from similarities between Hume's treatment of causation on the one hand, and moral and aesthetic judgements on the other. In each case, we have the thought that our judgement (causal, moral or aesthetic) 'adds' something to mind-independent matters of fact. In the causal case, Hume says that the mind does this via its 'propensity to spread itself on external objects' (THN 1.3.14.23 / 167); in the moral and aesthetic cases, he postulates 'a productive faculty, and gilding or staining all natural objects with the colours, borrowed from internal sentiment, raises in a manner a new creation' (EPM App.1.21 / 294).

A further piece of evidence – and at the same time a response to the charge that Hume shows no serious positive inclination towards a non-cognitivist account of causation – comes from his selective use of the terms 'matter of fact' and 'belief'. Hume never talks about causal 'beliefs' or considers causal claims to fall within the class of 'matters of fact'. We make causal judgements, but these would appear not to have the status of belief for Hume, nor would they appear to be judgements about

matters of fact – or at least, Hume never claims that they are.^{xxxiii} In other words, Hume appears to restrict ‘matter of fact’ – and correspondingly, ‘belief’ – to the relata of causation. From the perspective of the traditional and sceptical realist interpretations, this is rather puzzling. For on both interpretations, there are perfectly good facts about causation to be had, and so our causal ‘judgements’ should count as beliefs, every bit as much as the existence of a moving billiard ball is a matter of fact and our expectation that the billiard ball will move is a belief.

From the perspective of the projectivist interpretation, by contrast, there is no real anomaly here. Causal reasoning, Hume says, is reasoning from one matter of fact to another. If causal judgements are projections of the idea to which this reasoning gives rise, then those judgements are not beliefs about matters of fact, any more than moral and aesthetic judgements are beliefs about matters of fact: they are projections of our habits of thought onto matters of fact, and so do not constitute beliefs about matters of fact.^{xxxiv}

5. Problems and prospects

For quite a large part of the 20th Century, most analytic philosophers steadfastly avoided appealing to the concept of cause: a ‘horrid little word’, according to Peter van Inwagen,^{xxxv} and ‘a truly obscure’ concept, according to John Earman.^{xxxvi} In particular, discussion of the problem of induction overwhelmingly proceeded as though inference from the observed to the unobserved is largely independent of beliefs about the causal structure of reality. (For example ‘causation’ does not even appear in the index of Colin Howson’s 2000 book, Hume’s Problem: Induction and the Justification of Belief.)

Hume is, of course, the philosopher from whom we are supposed to have learned that causal thinking is both suspect and dispensable. The irony is that this is not Hume's view at all: for Hume, causal thinking is central to our understanding of, and beliefs about, the nature of reality. But how are we to understand what 'causal thinking' amounts to for Hume? As we have seen, the range of interpretative possibilities is very wide indeed.

My own view is that the traditional interpretation, in all its forms, is untenable: Hume holds that causal thinking amounts to more than belief in regularities, for it involves the idea of necessary connection. Moreover, that idea is entirely legitimate, when correctly understood, and it does serious philosophical work for him.^{xxxvii} But this leaves both projectivism and at least one version of sceptical realism still in the running, and deciding between these possibilities is a difficult task. Part of the difficulty lies in the differences between the Treatise and the first Enquiry. Reading the first Enquiry as a reworking of the Treatise, with no substantial change in the philosophical views presented, inclines one towards projectivism, correspondingly encouraging one to reinterpret Hume's talk of secret powers and the like in the Enquiry so that they do not express a commitment to the existence of real causal powers. Reading the first Enquiry on its own, by contrast, with no preconceptions carried over from reading the Treatise, on the grounds that Hume took the first Enquiry to best express his considered philosophical view, inclines one towards sceptical realism. But of course which strategy one should adopt is largely a question of historical fact that further attention to the texts themselves will not resolve.^{xxxviii}

There is, however, at least one reason to be sceptical about sceptical realism. Sceptical realism (or at least Wright's and Kail's versions thereof) inevitably saddles Hume with a deeply puzzling view. On the one hand, all sides agree that Hume rejects

what Craig calls the ‘Insight Ideal’: we cannot penetrate into the ‘essence’ of bodies in such a way as to reveal any features that would license a priori inferences from causes to effects. Nonetheless, Wright’s and Kail’s versions of sceptical realism attribute to Hume one aspect of the ‘Image of God’ doctrine, the metaphysical position that underlies the Insight Ideal, for they both attribute to Hume ‘an ideal of knowledge of true causes which was derived from the Cartesians’.^{xxxix} In other words, ‘true causes’ are such that we would, if only we could penetrate into their nature, be able to infer effects from causes a priori. And the question is: why would Hume commit himself to such a metaphysical position? After all, the only motivation for such a view is the thought that the nature of reality must be such that God himself (and so we, if we are sufficiently God-like) can infer effects from causes a priori. And this is a motivation that Hume himself clearly lacks: he has no reason whatsoever to want to cling on to a picture of the nature of reality that derives from views about God’s epistemic access to that reality.

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ⁱ Craig, E., The Mind of God and the Works of Man (Oxford: Clarendon Press, 1987), Ch. 1.

ⁱⁱ Descartes, R., Meditations on First Philosophy (1641), trans. and ed. J. Cottingham (Cambridge: Cambridge University Press, 1996), 21.

ⁱⁱⁱ Mackie, J. L., *The Cement of the Universe* (London: Oxford University Press, 1974), 12-13.

^{iv} In fact, Barry Stroud's interpretation (which I class as a version of the traditional interpretation) does not deny (2); on Stroud's view, we simply do, inevitably, 'come to believe, mistakenly, that there are objective necessary connections between events' (Stroud, B., Hume (London: Routledge, 1977), 87). So Stroud apparently embraces, rather than attempting to resolve, the tension described above.

^v Stroud, Hume, 86.

^{vi} Noonan, H., Hume on Knowledge (London: Routledge, 1999), 142.

^{vii} For more on this, see my *Hume on Causation* (Abingdon: Routledge, 2006), §4.3.

^{viii} see e.g. Robinson, J. A., 'Hume's two definitions of "cause" '. Philosophical Quarterly 12 (1962), 162-71; Coventry, A., Hume: A Guide for the Perplexed (London: Continuum, 2007), 110; Dicker, G., Hume's Epistemology and Metaphysics (London: Routledge, 1998), 115; Noonan, Hume on Knowledge, 151.

^{ix} Garrett, D., Cognition and Commitment in Hume's Philosophy (New York: Oxford University Press, 1997), Ch. 5.

^x Garrett, Cognition and Commitment, 108.

^{xi} Craig, The Mind of God, 108; see also Garrett, Cognition and Commitment, 106.

^{xii} For more on this, see my Hume on Causation, pp. 94-107.

^{xiii} Interpretations that come under this general heading include Beauchamp, T. L. and Rosenberg, A., Hume and the Problem of Causation (New York: Oxford University Press, 1981); Stroud, Hume; Mackie, The Cement of the Universe; and Garrett, Cognition and Commitment. There are important differences between the interpretations offered by these authors, however, on the troublesome issue of what to do about the idea of necessary connection; see my Hume on Causation, Ch. 5, for discussion.

^{xiv} The major contributions to the sceptical realist literature have been Kemp Smith, N., The Philosophy of David Hume (London: Macmillan, 1941); Wright, J. P., The Sceptical Realism of David Hume (Manchester: Manchester University Press, 1983); Strawson, G., The Secret Connexion: Causation, Realism, and David Hume (New York: Oxford University Press, 1989); Buckle, S., Hume's Enlightenment Tract (Oxford: Oxford University Press, 2001); and Kail, P. J. E., Projection and Realism in Hume's Philosophy (Oxford: Oxford University Press, 2007).

^{xv} Wright, The Sceptical Realism of David Hume, 147. Kail takes the same line, holding that the 'causal necessity of which we may be ignorant can be understood as that which, were we to be acquainted with it, would yield *a priori* inference and render it impossible to conceive cause without effect' (Kail, Projection and Realism, 103).

^{xvi} Quoted in Wright, The Sceptical Realism of David Hume, 140.

^{xvii} Strawson, The Secret Connexion, 157.

^{xviii} Strawson, The Secret Connexion, 126.

^{xix} See Jacobson, A. J., 'From cognitive science to a post-Cartesian text: what did Hume really say?', in R. Read and K. Richman (eds), The New Hume; Debate (London: Routledge, 2000), pp. 156-66.

^{xx} See Winkler, K., 'The new Hume', in Read and Richman (eds), The New Hume; Debate, pp. 52-87, and Blackburn, S., 'Hume and thick connexions', in Read and Richman (eds), The New Hume Debate, pp. 100-12. See my Hume on Causation, 180-93 for further discussion of both options, and Kail, Projection and Realism, 118-21, for more critical assessment.

^{xxi} Wright, The Sceptical Realism of David Hume, 95.

^{xxii} Strawson, The Secret Connexion, 132-3.

^{xxiii} Strawson, The Secret Connexion, 87.

^{xxiv} The projectivist interpretation is suggested by some remarks of Simon Blackburn's; see for example Blackburn, S., Spreading the Word (Oxford: Oxford University Press, 1984), 210-12 and 'Hume and thick connexions', 107-11). It is given a fuller treatment in my Hume on Causation, Ch. 6, and in Coventry, A., Hume's Theory of Causation: A Quasi-Realist Interpretation (London: Continuum, 2006). For a general discussion of the notion of 'projection' see Kail, Projection and Realism, Ch. 1, and for a discussion of Hume's (allegedly problematic) attitude towards 'projection', see Stroud, B., ' "Gilding or staining" the world with "sentiments" and "phantasms" ', in R. Read and K. Richman (eds), The New Hume Debate, pp. 16-30.

^{xxv} Coventry, op. cit.

^{xxvi} Smith, M., 'Objectivity and moral realism: on the significance of the phenomenology of moral experience', in J. Haldane and C. Wright (eds), Reality, Representation, and Projection (New York: Oxford University Press, 1993), 246.

^{xxvii} Hume, D., 'Of the standard of taste', in Essays: Moral, Political and Literary, ed. E. F. Miller, (Indianapolis: Liberty Press, 1985), 230.

^{xxviii} *ibid.*, 230.

^{xxix} See Coventry, Hume's Theory of Causation, 117-33, for further discussion.

^{xxx} See Kail, P. J. E., 'Book review: Helen Beebe, Hume on Causation', Mind 117 (2008), 453-4, for a worry about the use of the notion of projection here, however.

^{xxxi} See Coventry, Hume's Theory of Causation, 133-7.

^{xxxii} See my Hume on Causation, 160-7.

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- ^{xxxiii} The same is generally true of the moral and aesthetic cases, although, as Coventry notes, in ‘Of the standard of taste’, Hume twice appears to count matters for which there is a ‘standard’ (as in ‘standard of taste’) as ‘matters of fact’; see Coventry, Hume’s Theory of Causation, 119, and Hume, op. cit., 230 and 242.
- ^{xxxiv} See my Hume on Causation, 152-4, for more discussion in the context of Hume’s distinction between reason and taste.
- ^{xxxv} van Inwagen, P., An Essay on Free Will (Oxford: Clarendon Press, 1983), 65.
- ^{xxxvi} Earman, J., A Primer on Determinism (Dordrecht, D. Reidel, 1986), 5.
- ^{xxxvii} See my Hume on Causation, §6.5.
- ^{xxxviii} For a defence of the latter strategy, see ‘David Hume: objects and power’, in R. Read and K. Richman (eds), The New Hume Debate, pp. 31-51. For brief discussion, see my Hume on Causation, 221-5
- ^{xxxix} Wright, The Sceptical Realism of David Hume, 147.