Hume, Causal Realism, and Causal Science

Hume's Advocacy of Causal Science
- Hume seems in general to have a very positive attitude towards causal science:
  - He says that causation is the basis of all empirical inference.
  - He proposes "rules by which to judge of causes and effects".
  - He talks of "secret powers".
  - He advocates a search for hidden causes underlying inconstant phenomena.

The Basis of Empirical Inference
- "The only connexion or relation of objects, which can lead us beyond the immediate impressions of our memory and senses, is that of cause and effect." (T 1.3.6.7)
- "Tis evident, that all reasonings concerning matter of fact are founded on the relation of cause and effect." (E 4.4, cf. E 7.29)
- "All reasonings concerning matter of fact seem to be founded on the relation of Cause and Effect." (E 4.4)

The Rules of Treatise 1.3.15
- "Since therefore it is possible for all objects to become causes or effects to each other, it may be proper to fix some general rules, by which we may know when they really are so." (T 1.3.15.1)
- "[Phenomena] in nature [are] compounded and modified by so many different circumstances, that we must carefully separate whatever is superfusius, and enquire by new experiments, in every particular circumstance of the first experiment was essential to "E"." (T 1.3.15.11)

Hume’s Talk of “Secret Powers”
- "the ultimate cause of any natural operation ... that power, which produces any single effect in the universe ... the causes of these general causes ... ultimate springs and principles" (E 4.16).
- "the secret powers [of bodies] ... those powers and principles on which the influence of ... objects entirely depends" (E 4.16).
- "Those powers and forces, on which this regular course and succession of objects totally depends" (E 5.22).

Necessity as Essential to Causation
- "Power" is a term from the same family – derived from the same impression – as "necessity", which Hume sees as an essential part of our idea of causation: according to my definitions, necessity makes an essential part of causation. (T 2.3.1.18)
- "Necessity may be defined two ways, conformably to the two definitions of cause, of which it makes an essential part." (E 8.27)

Hume: Realist or Anti-Realist?
- Berkeley proves that this attitude to science need not imply Causal Realism, but the frequency and enthusiasm of Hume’s references to powers etc. might seem to tell in favour of a Realist reading.
- Against this, the standard basis for seeing him as a Causal anti-Realist is his argument concerning the origin of the idea of necessary connexion, in Treatise 1.3.14 and Enquiry 7.
- An important footnote connects the power references in Enquiry 4 with the apparently anti-Realist argument of Enquiry 7...

The Search for Hidden Causes
- "philosophers, observing, that, almost in every part of nature, there is contained a vast variety of springs and principles, which are hid, by reason of their minuteness or remoteness, find, that it is at least possible the contrariety of events may ... proceed ... from the secret operation of contrary causes ... they remark, that, upon an exact scrutiny, a contrariety of effects always betrays a contrariety of causes, and proceeds from their mutual opposition." (E 8.13, copied from T 1.3.12.5)

Practical Limits on the Search
- "the utmost effort of human reason is, to reduce the principles, productive of natural phænomena, to a greater simplicity, and to resolve the many particular effects into a few general causes, by means of reasonings from analogy, experience, and observation. But as to the causes of these general causes, we should in vain attempt their discovery ... and we may esteem ourselves sufficiently happy, if, by accurate enquiry and reasoning, we can trace up the particular phænomena to, or near to, ... general principles." (E 4.12)

Berkeley’s Instrumentalism
- "the difference there is between natural philosophers and other men, with regard to their knowledge of the harmonies, and agreements are discovered in the works of Nature, and the particular effects explained, that is, reduced to general rules ... which rules grounded on the analogy, and uniformness observed in the production of natural effects (Principles I 100)"

An Argument for Anti-Realism
- Hume’s entire argument is structured around the Copy Principle quest for an impression.
- The Principle is a tool for deciding questions of causation, and Hume’s references to powers etc. seem to tell in favour of an anti-Realist reading.
- Against this, the standard basis for seeing him as a Causal anti-Realist is his argument concerning the origin of the idea of necessary connexion, in Treatise 1.3.14 and Enquiry 7.
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Kames and a Footnote
- Kames (1751) quoted Hume’s references to powers in the Enquiry (at 4.16) against him, as evidence of inconsistency; they knew each other well and swapped manuscripts for publication.
- In 1750 Hume added a footnote to E 4.16: “The word, Power, is here used in a loose and popular sense. The more accurate explication of it would give additional evidence to this argument. See Sect. 7.”

Semantics or Epistemology?
- “New Humeans” claim that Hume’s statements about “meaning”, “definition” etc. should not be interpreted semantically but epistemologically.
- Thus Peter Kail insists that we should “view Hume’s talk about ‘meaning’ as meaning ‘acquaintance with’”, as opposed to “thinkable content” (2001, p. 38).
- Even if possible, this gives no positive evidence for the New Hume. The texts of T 1.3.14 and E 7 remain prima facie strongly anti-Realist.

Other “New Humean” Arguments
A. “The anti-realist interpretation is a twentieth-century positivist invention”
- Clearly false. Kames (1751), Leland (1757), and Reid (1765) all see Hume as anti-realist.
B. “Causal anti-realism is too outrageous to have been contemplated by Hume”
- “of all the paradoxes, which I have had, or shall hereafter have occasion to advance in the course of this treatise, the present one is the most violent …” (T 1.3.14.24).

Hume’s “Strict Scepticism”
- Strawson dubs Hume a “strict skeptic” who “does not make positive claims about what ... knowably ... does not exist” (p. 34).
- But Hume’s anti-realism about causation is a limit on our ideas and what we can mean by “power”, etc., not a limitation on reality.
- Anyway the claim that he is a “strict skeptic” brings the question. Where are the texts?
- Hume does deny the existence of some things, e.g. substantial forms, occult qualities.

Is the Enquiry Realist?
D. “All the main support for the view that Hume was an outright regularity theorist derives from the Treatise, and vanishes in the Enquiry” (Strawson 2000, p. 32). But this is not true:
- “When we say, therefore, that one object is connected with another, we mean only, that they have acquired a connexion in our thought ...” (E 7.28).
- “The necessity of any action, whether of matter or of mind, is not, properly speaking, a quality in the agent, but in any thinking or intelligent being, who may consider the action” (E 8.22).

The “AP” Property
E. In Enquiry 7 Part 1, Hume repeatedly argues that perception of an object or an internal feeling cannot yield an impression of necessary connexion, because it if could, this would enable us to infer the effect a priori, which we cannot do.
- On this basis, New Humeans claim that “genuine” Humean necessity must, quite generally, licence a priori inference.

Defective Definitions?
F. One of the most commonly cited passages in support of the New Hume:
- “so imperfect are the ideas which we form ... that it is impossible to give any just definition of cause, except what is drawn from something extraneous and foreign to it, ... we cannot remedy this inconvenience, or attain any more perfect definition, which may point out that circumstance in the cause, which gives it a connexion with its effect.” (E 7.29).

Imperfect Ideas, not Definitions
- Hume describes our ideas as “imperfect”, but the definitions as “just”.
- He’s discussing his definitions of cause, not of necessary connexion (which he clearly distinguishes, e.g. in the Enquiry index).
- “that circumstance in the cause, which gives it a connexion with its effect” is very unlikely to mean the necessary connexion, especially given the footnote to this paragraph.

“That Circumstance in the Cause”
A “circumstance” is a factor that is variable between situations, to which eliminative force can be applied to identify the true causal factor (e.g. T 1.3.13.11, E 7.30).
- The footnote to E 7.29 makes clear that the relevant “circumstance” is identifiable only by experiment, and even then can be hard to isolate (e.g. it could be the velocity, or the square of the velocity).

Quantitative Forces
- In the Enquiry, Hume is clear that mechanics involves forces: theoretical entities that can be quantified and enter into equations describing objects (e.g. E 12-13).
- “Force” is in the same family as “power” etc.
- This, rather than Causal Realism, explains the Enquiry’s prominent “power” language.
- E 7.20n and E 7.29n both suggest an attitude to such forces corresponding exactly to the anti-realist spirit of Enquiry 7. Forces are to be treated instrumentally (cf. Newton and Berkeley).
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Inconsistent Definitions?

- The argument of T 1.3.14 and E 7 ends, notably, with two definitions of cause:
  - The first definition is based on regular succession of the "cause" A followed by "effect" B (plus contiguity in the Treatise).
  - The second definition is based on the mind's tendency to infer B from A.

- Beebee (2007: 430) and Kail (2007: 266) claim that the two definitions – being inconsistent – cannot be intended as semantic.

- But this presumes that the only way a definition can be semantic is by specifying necessary and sufficient conditions.

- Hume's conception of meaning, associated with his Copy Principle, suggests a different view. The meaning of causal necessity can only be understood through the impression from which its idea is derived: reflexive awareness of our own inferential behaviour in response to observed constant conjunctions.

- The second definition, accordingly, specifies a paradigm case in which we experience this impression and thus can acquire the idea.

- Nothing in Hume's theory requires that, having once acquired the idea, we must restrict its application to those paradigm cases that characteristically generate it.

- Indeed his advocacy of "rules by which to judge of causes and effects" etc. implies that he must think we can go beyond these cases by systematising our application of the idea.

- Accordingly the two definitions can be seen as complementary rather than conflicting. The second identifies the relevant idea; the first specifies the criterion for applying it.

Moving Onto the Offensive

- There is a parallel case in Hume's treatment of virtue or personal merit in the Moral Enquiry.

- Here again he gives two definitions:
  - "PERSONAL MERIT consists altogether in the possession of mental qualities, useful or agreeable to the person himself or to others. ... the preceding ... definition ..." (M 1.3.1 vv. 1, 9,12)
  - "[Hypothesis ... defines virtue to be whatever mental action or quality gives to a spectator the pleasing sentiment of approbation, ...]" (M Appendix 1.10)

- Again we have a characteristic idea, whose application is then to be systematised.

- This understanding of the paired definitions tells strongly in an anti-Realist direction. For it suggests that the system of causes, like the system of virtues, is essentially being read into the world rather than being read off it.

- We thus have a process of systematisation in which our natural judgements, refined and applied more systematically, in accordance with the relevant rules, "raises, in a manner, a new creation", by "gliding or staining natural objects with the colours, borrowed from internal sentiment" (M Appendix 1.121).

The 1.4.5 Dilemma

- The arguments in favour of the New Hume are all rather weak – none of those we've considered seem sufficient to establish the onus of proof generated by the context, structure and content of Hume's argument.

- But there are far stronger arguments to be added to the other side of the debate, because the "New Hume" literature – very strikingly and surprisingly – almost entirely ignores the point of Hume's two definitions.

- If we search for subsequent paragraphs in the Treatise that mention the definition of "cause", "power" or "necessarily", we find just three, at T 1.4.5.31, 2.3.1.16, and 2.3.2.4.

- If we search instead for "constant conjunction" or "constant union", we find mainly T 1.4.5.30-33, 2.3.1.416, and 2.3.2.4 (T 1.4.1.2 and 1.4.3.2 also mention "constant union" briefly).

- Similar searches in the Enquiry point very clearly to Section 8 (10.5 is the only other).

- Hume then goes further to insist that material motion is indeed found to be the cause of thought:
  - "we find ... by experience, that they are constantly united, which being all the circumstances, that enter into the idea of cause and effect ... we may certainly conclude, that motion may be, and actually is, the cause of thought and perception." (T 1.4.5.30, my emphasis)

- "as the constant conjunction of objects constitutes the very essence of cause and effect, matter and motion may often be regarded as the causes of thought, as far as we have any notion of that relation." (T 1.4.5.33, my emphasis)

Hume's Use of His Two Definitions

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Caution and the Mind

- Hume is especially keen to establish causality and necessity in respect of the mind:
  - In principle, matter could be the cause of thought (T 1.4.5.30, "Of Intersubjectivity of the Soul")
  - The "doctrines of necessity" apply as much to the mental world as to the physical world (T 2.3.1.2 and E 8 "Of Liberty and Necessity")

- Both arguments crucially turn on the claim that there is nothing to causal necessity beyond the two definitions ...

Of the Immateriality of the Soul

- The standard anti-materialist argument insists that material changes cannot cause thought, because the two are so different.

- "... and yet nothing in the world is more easy than to refute it. We need only to reflect on what has been proved at large ... that to consider the matter a point, any thing may procure any thing, and that we shall never discover a reason, why any object may or may not be the cause of any other; however great, or however little the resemblance may be between them " (T 1.4.5.30)

- "...the cause of thought and perception."

- "...as the constant conjunction of objects constitutes the very essence of cause and effect, matter and motion may often be regarded as the causes of thought, as far as we have any notion of that relation."

- "...we find ... by experience, that they are constantly united, which being all the circumstances, that enter into the idea of cause and effect ... we may certainly conclude, that motion may be, and actually is, the cause of thought and perception." (T 1.4.5.30, my emphasis)

- "...because the two are so different."

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Liberty and Necessity

Hume's argument that the same necessity is applicable to the moral and physical realms depends on taking our understanding of necessary connexion to be completely exhausted by the two factors of constant conjunction and customary inference.

These two factors can be shown to apply in the moral realm, and he insists that we can't even ascribe any further necessity to matter.

“A New Definition of Necessity”

Even more explicitly than with “Of the Immortality of the Soul”, Hume portrays his argument here as turning on his new understanding of necessity:

“... our author, pretending, that this reasoning puts the whole controversy in a new light, by giving a new definition of necessity.” (A 34)

Again, the New Humean interpretation fails to make any sense of this portrayal.

Kail’s Defence (a)

Such objections “crucially miss the fact that Hume refutes the dispute at the level of common life rather than as an issue in the metaphysics of causation.” (2007: 264)

But this, based on E 8.1 alone, looks extremely tenuous: moreover E 8.16, 8.23 and 8.27 all seem to tell strongly against it.

Besides, the corresponding discussions in the Treatise and Abstract give the same argument, but no passage corresponding to E 8.1 ...

Kail recognises the latter objection in a footnote, giving an explicit response:

“Response: all this means is that the Enquiry affords a better case for realism. Realist readers ... view the Enquiry as superior to the Treatise with respect to the discussion of causation in this respect not least because the references to secret powers are more prominent, so such a move is not ad hoc. Those who prefer the first Enquiry to the Treatise thus have reason to take this as authoritative. (2007: 268 n. 26)

This seems to accept that he cannot explain the argument in the Treatise or Abstract.

Kail’s Defence (b)

Even in the midst of the discussion ..., Hume’s language, when treating of powers, sounds more naturally epistemic and sceptical than semantically restrictive and reductive:

... our faculties can never carry us farther in our knowledge of this relation than (constant conjunction) ... But though this conclusion concerning human ignorance ... we know nothing farther of causation of any kind.” (2007: 266)

Kail’s Defence (c)

“At the midst of the discussion Hume is prepared to grant, for the sake of argument, power in matter, but that it makes no difference to the reconciliation. But if the reconciliation is turned on the claim that no further thought is possible with regard to causation, even this small concession would violate the alleged central move ... Here is an opportunity for him to reassert his alleged conclusion that no such thought is possible ... But he does not take this opportunity.” (2007: 266)

Anti-Realism supporting realism

all objects, which are found to be constantly conjunct, are upon that account only to be regarded as causes and effects, ... the constant conjunction of objects constitutes the very essence of cause and effect ...

two particulars [are] essential to necessity, viz., the constant union and the inference of the mind ... wherever we discover these we must acknowledge a necessity. (T 2.3.1.4)

A Double Irony

Kail (2007: 255) observes that “Realism constituted an anti-reductionism regarding meaning and content is not only compatible with scepticism but appears to require it: a great irony for those who might object to realist readings of Hume by a blunt appeal to his scepticism.”

Indeed, but it is the non-sceptical, pro-scientific approach of Hume’s discussions in “Of the Immortality of the Soul” and “Of Liberty and Necessity” that give the most solid refutation of the claim that he holds such Causal Realism!

Conclusion

The New Hume has little to recommend it. A la carte selection of texts and principles can be used to support any number of Humean readings, but only those that can make sense of the detailed flow of his arguments – and the systematic relations between them – are worth taking seriously.

On causation, Hume’s arguments seem to be quite unambiguously anti-Realist.