

Early Modern Philosophy

(HPPH5033/HPPH6033)

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Is the ‘problem of induction’ a consequence of applying inappropriate (deductive) standards to arguments which are perfectly valid by their own quite different criteria?

Introduction:

Every day you bet on the future.

You expect the sun to rise in the morning, the pavement to hold, or the kettle to boil, and the same kinds of causes to keep producing the same kinds of effects. Is this guaranteed by logic alone? It’s like crossing a familiar bridge in the dark: you have crossed it a hundred times, so you take another step forward – confident, but not certain.

Hume’s ‘sceptical doubts concerning the operation of the understanding’ (Hume, 1861, p. 16) begins here. We constantly reason from what we have observed to what we haven’t observed: from past to future, from tested cases to untested cases, from so far to so next (Hume, 1739, pp. 106-107). The question now begs whether we have any *rational* right to do this, or whether we are merely pushed along by habit. Hume’s challenge is that the link we rely on is not secured by demonstration, and yet, we live and practice science whilst relying on it, no? As he puts it, even if we accept that one claim is inferred from another, he asks us to ‘produce that reasoning’ (Hume, 1861, p. 23) that authorises the step from experience to expectation.

This essay looks at whether the *problem* is partly a mistake of standards. What if induction looks unjustified because we demand the wrong kind of justification – deductive certainty?

Inductive reasoning could be valid by a different criterion: fallible, revisable, and assessed by how well it guides us through the world rather than by whether it guarantees truth. The main issue, then, is whether Hume has exposed a real defect in our reasoning or whether later philosophers are right to say that the defect lies in the philosopher's demand.

Point 1: On the problem of induction

The way Hume has set the problem up is straightforward. He thinks there are only two broad ways an argument can support its conclusion: 'demonstrative reasoning' (Hume, 1861, p. 24) (deduction, if the premises are true, the conclusion must be true), and 'probable reasoning' (Hume, 1739, p. 53) (what we now call inductive or probabilistic: premises make the conclusion *likely*). The problem of induction bites here as the step from experience to future expectation discloses an integral principle – that nature will continue to behave uniformly - Hume argues neither kind of support can secure it: deduction cannot, because the opposite is always imaginable without contradiction; and induction cannot, because it would justify the principle by already relying on the very principle in question (Leah, pp. §1 - introduction). The IEP frames this as the classic dilemma: any justification looks either circular or question-begging (Psillos & Stergiou, pp. §1 - introduction).

I aim to test the essay question's suggestion: Maybe the problem only appears fatal if we demand a steel-strong deductive guarantee from a tool that was never meant to provide it. I will 1) lay out Hume's dilemma clearly, 2) show why some philosophers believe the demand for external justification is confused (Strawson), and then 3) assess whether alternative standards – pragmatic success (Reichenbach)– actually dissolve the problem or simply change what counts as a satisfactory answer.

Point 2: Are we judging induction by the wrong standards?

It might feel like Hume has set a trap. He's asked us to show the *reasoning* that authorises the step from experience to expectation, and then argues that no demonstrative (deductive) proof can do the job since it 'implies no contradiction that the course of nature may change' (Hume, 1861, p. 24). As a result, we start to imagine that a good justification must be something like a steel certificate – a stamped guarantee from logic that the bridge to the future will not collapse. If that is the standard, induction will always fail, because induction was never designed to be *truth-preserving* in the way deduction is. It does not lock the future in its place; it *projects*.

Hume himself admits this; even when the certificate cannot be produced, he doesn't conclude that we ought to stop crossing the bridge. Instead, he explains why we cross anyway. In the *Enquiry*, he says: 'All inferences from experience, therefore, are effects of custom, not of reasoning. Custom, then, is the great guide of human life' (Hume, 1861, p. 31). That sounds like a demotion: if our most trusted expectations are just trained reflexes. But it fuels the thought behind the essay question: maybe the problem only looks fatal because we have demanded the wrong kind of backing – deductive certainty – rather than critiquing induction by its own, different criteria.

That said, there is a reason Hume's challenge does not instantly disappear. Even if we lower the standard from *certainty* to *reasonable support*, we still seem to rely on a hidden assumption – that nature will keep to stable patterns, therefore the future will (in relevant ways) resemble the past. If we try to justify the assumption through deduction, we fail (because its denial is always conceivable). If we try to justify it by induction, we risk circularity (we use the very bridge we are trying to certify). The issue becomes: is justification here supposed to mean a proof from outside ordinary practice, or can it mean something more human – that induction is the best way to navigate the world we inhabit?

This is why it is important not to turn Hume solely into a deductivist. Peter Millican stresses that 'Hume does not end on a purely sceptical note' (Millican, 1995, p. 32), revealing how Hume 'extends the notion of reason...to accommodate inferences drawn from this essential and fundamental instinct' (Millican, 1995, p. 32). So, Hume's point may be less induction is irrational and more: *stop asking a wooden bridge for a steel certificate*. The question now is

whether later philosophers are correct in suggesting that asking for that certificate at all constitutes a category mistake.

Point 3: Why the steel certificate demand is a mistake

Strawson's reply is: Hume didn't discover that induction is unreasonable – he discovered that philosophers were asking for the wrong kind of support. If you demand a general justification for induction (a proof that any move from past to future is rational), you are asking for a certificate that can only be issued from outside all our everyday ways of forming beliefs (Strawson, 1958, p. 20). You would have to stop using ordinary 'canons' (Strawson, 1958, p. 20) for thinking about evidence, do that and you'd have no standards left to run the test.

Strawson pushes back against the idea that if induction can't be justified, then it must be mere convention. He insists that for Hume, inductive habits aren't a policy we freely pick; they are a part of how humans *find themselves thinking*. As he puts it, Hume 'did not think that induction could be given a general justification' (Strawson, p. 21), but he also 'did not...think that inductive beliefs were conventional; he pointed out that they were natural' (Strawson, p. 21). A belief that Strawson insists Hume would agree on, that our acceptance of the basic inductive canon is 'not forced upon us by cognitive considerations' (Strawson, p. 21) (by reason); as it is forced upon us by nature.

In the bridge metaphor, we don't demand a steel certificate and then decide to cross; we are already walkers, already crossers. The bridge to the future is built into ordinary life. The demand for proof that authorises *all* crossing is (for Strawson) like demanding a legal document that authorises you to have legs. This doesn't mean anything goes; Strawson's next move explains how reason still has a role once Nature has committed us to induction. He says: 'It is a requirement of reason that our beliefs should form a coherent system' (Strawson, p. 21). So, reason doesn't form induction from scratch; instead, it organises and improves it – adding railings to the wooden bridge, repairing weak planks, and keeping the

whole route consistent. Hence why Strawson thinks it wasn't inconsistent for Hume to give 'rules for judging' (Strawson, p. 21), cause and effects. Nature pushes us onto the bridge, and reason helps us cross better.

Finally, Strawson gives a practical test against the idea that we could choose a consistent counter-inductive policy. Even if someone claims there is nothing to choose between induction and counter-induction 'as far as reason goes' (Strawson, p. 21), Strawson asks: 'Is an arbitrary choice then really open to me? Is it? (just try to make it)' (Strawson, p. 21). Strawson's verdict is sympathetic to the essay question: the classic problem arises because we demand a deductive-style guarantee for a kind of reasoning whose authority is grounded in our natural practices – and then refined by coherence, not certified proof.

Point 4: Reichenbach's best wager

If Hume's challenge makes it feel like the bridge to the future has no steel certificate, Hans Reichenbach's move is to say: *stop asking for a certificate that no bridge could ever have*. The bridge here is not a theorem. It is a way of placing bets, and the whole point is to place them as intelligently as we can. Reichenbach states the key diagnosis bluntly: 'Hume demanded too much when he wanted a justification of the inductive inference, a proof that its conclusion is true' (Reichenbach, 1938, pp. 356, §35). That demand treats induction like deduction, as if its job were to guarantee truth. But induction – whether in science or in ordinary life – does not even pretend to do that. Reichenbach says what induction gives us is a 'wager' (Reichenbach, pp. 357, §40). We step onto the bridge because we have to move forward; we cast the net because doing nothing guarantees no catch.

On this view, the right standard is not certainty, but the best strategy under uncertainty. Reichenbach thinks the inductive method earns its place because it is the necessary route to prediction at all: 'it's the best wager we can lay because it corresponds to a procedure the applicability of which is the necessary condition of the possibility of predictions' (Reichenbach, pp. 357, §40). In other words: if prediction is possible, induction is part of

what makes it possible – and if prediction isn't possible, no method will rescue us anyway. This is why his defence is often called *pragmatic*: it does not show that induction must succeed, but that it is the most rational policy available given what we are trying to do. He even gives a clean formulation: 'if there is any method which leads to the limit of the frequency, the inductive principle will do the same' (Reichenbach, p. 355). Induction is not magic; it is the rule of thumb that stays closest to the data with the 'smallest risk' (Reichenbach, p. 355).

The metaphor now evolves: Hume says Show me the certificate. Reichenbach replies: You can't get one, but you *can* choose your steps well. If you want fish in an unknown sea, should you cast your net? – yes, because 'it is preferable to try even in uncertainty than not to try and be certain of getting nothing' (Reichenbach, p. 363). That is a different standard than deduction, but it might be exactly the right one for creatures who live and act.

Point 5: Counterargument – Hume's challenge doesn't disappear just by lowering the standards

Strawson and Reichenbach provide a powerful case that Hume's problem looks scarier than it should if we demand a deductive steel certificate for a tool that isn't meant to provide certainty. A Hume-friendly reply is: *even after we drop deductive standards, we haven't answered Hume's real question. We've only changed what we are willing to accept.* Robert J. Fogelin states the core Humean worry in the bluntest way: the bridge to the future relies on an assumption (that nature will keep a stable course), and 'no argument can justify this assumption' (Norton & Jacqueline, 2009, p. 215). That's the key point; it is not simply that induction isn't deduction. Hume already knows this; the deeper issue is that any attempt to *justify* the assumption runs into a dilemma. Induction doesn't work because probabilistic reasoning already assumes the future will resemble the past, and deductive proof falls short because we can conceive that the 'course of nature might change' (Norton & Jacqueline, p. 215). Leaving us with no justified reasoning for our conclusions. This is where the wrong

standards view can look incomplete. Saying induction is valid by a different criterion might defend induction as useful, natural, or practically unavoidable – but Hume’s sceptical pressure is about *warrant*: what gives us any noncircular right to expect stability in the first place? The wooden bridge might be the only route forward, but Hume’s point is that we still can’t produce a certificate.

A further Hume-friendly point is that Hume doesn’t just raise sceptical doubts, he also gives what he calls a ‘sceptical solution’ (Hume, 1861, p. 31). Fogelin notes that section 4 of the *enquiry* is essentially negative: ‘no argument can justify inference from past to future experience’ (Norton & Jacqueline, p. 219). But section 5 explains why we still cross the bridge: ‘If the mind be not engaged by argument to make this step, it must be induced by some other principle’ (Norton & Jacqueline, p. 219). That principle is custom or habit, which lines up with Hume’s own claim that ‘custom...is the great guide of human life’ (Hume, 1861, p. 31). So, Hume isn’t just applying the wrong standard; he’s arguing that *no* purely rational certificate is available, even though human life continues.

Conclusion:

In conclusion, is the problem of induction just what occurs when we judge induction by deductive standards it was never meant to meet? Only partly. It’s true that if we demand a deductive steel certificate – a guarantee that the future must resemble the past – then induction will always look defective. That is why Strawson can say our reliance on induction is ‘forced upon us by nature’ (Strawson, p. 21): we are already the kinds of creatures who cross the bridge.

But Hume’s deeper challenge is not merely that induction isn’t deduction. It is the main assumption behind induction – that there will be no change in the course of nature – cannot be justified by any argument without either failing deductively or turning in a circle. That means the problem survives even after we relax our standards from certainty to reasonable support, because the worry is about *warrant*, not just certainty. The best answer, then, is

this: the problem is intensified by inappropriate deductive expectations, but it isn't created by them. Induction can be sensible, disciplined, and practically indispensable – yet Hume still shows why the bridge cannot come with a fully rational certificate. We cross anyway, guided by habit and refined by coherence – but never with the kind of proof philosophers sometimes hope for.

