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Epigenetics and Reliabilism

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ABSTRACT

Hume shows that reliabilism is circular. Reliabilism may tell us why a method will work, although it sanctions methods that use circular justification. “Most inductive inferences have been reliable so far, so induction itself is reliable.” Generally, philosophers take circular reasoning to be fallacious. Stathis Psillos, among others, has argued that rule circularity is benign. Some have gone further and have argued that Hume himself is a reliabilist. I am going to argue that Michael Ruse’s account of induction as a genetically encoded psychological propensity avoids pitfalls that befall reliabilists. I am not going to argue that the accounts are mutually exclusive, although the epigenetic account dovetails with Hume’s theory. Reliabilism repeats the reasoning Hume argues is fallacious in the *Enquiries*.



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INTRODUCTION

To show that the epigenetic account is superior to the reliabilist account, we need to be clear about four things: Hume's problem of induction, reliabilism, propensity theory, and the epigenetic account. A distinction made by Richard Braithwaite in his *Scientific Explanation* points out that an argument is *effectively circular* if its conclusion is contained among the premises, and *viciously circular* if it endorses the reliability of the inference rule by which it was attained. (1953, pp.277-280) My overall contention is that if we accept Hume's distinctions, his argument is sound. Using observational success as an example, I might say induction is, roughly, the rule that if most observed A's are B's, then most A's are B's. Most inductive inferences *have been* successful so far, most inductive inferences *are* successful. Hume argues connections between causes and effects (which advise these judgments) have a necessity informed only by custom or habit.¹ If the habit is all we have to go by, we can't be sure of the next instance. The same applies here: we'll never have enough information to say induction is successful with any degree of certainty. There is nothing in reason nor in perception that allows one to draw any further necessity. (Hume, 1900, p.43)

Is induction reliable? It could not be justified deductively on Hume's account because those inferences are not airtight to begin with. We cannot be certain the next raven we see will be black. "Beyond the constant conjunction of similar objects and the consequent inference from one to the other, we have no notion of any necessity or connexion." (Hume, 1900, p.85) Reliabilism is the thesis that if *S*'s belief in *p* is a product of a reliable "cognitive belief-forming process (or set of processes), then *S*'s belief in *p* is justified." (Goldman, 2008) Despite attempts to claim the contrary,² Hume never claims this thesis in his writings on induction. It is important to remember he is a skeptic: all we experience is a constant conjunction. The necessity of a connection between cause and effect is not out there in the world, but in our minds. Michael

¹ We then call the one object, Cause; the other, Effect. We suppose that there is some connexion between them; some power in the one, by which it infallibly produces the other, and operates with the greatest certainty and strongest necessity. David Hume, 1900, *An Enquiry Concerning Human Understanding*, Chicago: Open Court.

² Hsueh Qu offers compelling evidence to the contrary. One cannot be both a reliabilist and a sceptic about knowledge, however. Hsueh Qu, 2021, "Hume and Reliabilism" *Belgrade Philosophical Annual*. Retrieved from <https://scindeks-clanci.ceon.rs/data/pdf/0353-3891/2021/0353-38912134027Q.pdf>.

Ruse believes that we inherit this inferential tendency from our proto-human ancestors. (Ruse, 1998, p.162)

I. Hume and Reasoning from Cause and Effect

If the above is any indication, there is not a scant amount of material on this subject, by any means. Even John Stuart Mill, the great ethicist, claims inductions are mere “generalizations from experience.” (Mill, 1882, p. 223) He remarks: “if no result is reliable, then reliability must be assumed; thus, the circularity problem. The Uniformity Principle, that the future will resemble the past becomes the unspoken assumption.” (*Ibid.*, pp. 224-25) Hume intentionally points our attention to “reasonings which engage us to suppose the past resembles the future.” (Hume, 1990, p.40) One would think calling a method “reliable” is to say one thinks it will *work*, in normal contexts. This kneejerk reaction is apt, if we take Hume’s arguments in the *Enquires* and elsewhere seriously:

When a man says, I have found, in all past instances, such sensible qualities conjoined with such secret powers: And when he says, similar sensible qualities will always be conjoined with similar secret powers; he is not guilty of a tautology, nor are these propositions in any respect the same. You say that one proposition is an inference from the other. But you must confess, that the inference is not intuitive; neither is it demonstrative: Of what nature is it then? To say it is experimental is begging the question. For all inferences from experience suppose as their foundation, that the future will resemble the past, and that similar powers will be conjoined with similar sensible qualities . . . It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future since all these arguments are founded on the supposition of that resemblance. (Hume, 1900, p.37)

Distinctions are crucial to the argument. Hume’s argument demarcated between reasonings of matters of fact, and demonstrable (a-priori) reasoning. Induction can prove neither the uniformity principle nor a necessary connection between the relation of cause and effect, the necessity is an idea derived from an internal impression. Michael Ruse’s claim in *Taking Darwin Seriously* stresses that a justification out there in the world, such as the principle of uniformity of nature, is itself unnecessary. He writes:

The point is that causes are not things (over and above the physical world), like powers or invisible fluids or such phenomena – although we tend to think they are. Nor are there metaphysical hooks, or any such things, binding causes and effects. The world works a regular way. It is in our biological interests to take note of this, and so as an adaptive response, we tend to make something of the regularities than they are. Causes are projected into the world by us through our epigenetic rules.” (Ruse,1998, p.174)

Hume’s ultimate skeptical claim is that we have a psychological propensity to induce, Ruse says we have an innate genetic predisposition to do so. “The philosopher whose program is thus being carried forward by neo-Darwinian epistemology is David Hume. Like the Darwinian, Hume emphasized that our knowledge of the world is based on the propensities of the mind. This means that, with Hume, The Darwinian had to wrestle with the problem, of skepticism.” (Ruse, 1998, p.206). As we see, these needn’t be mutually exclusive claims at all. A psychological fact about our human psychology isn’t a claim about formal logic, and hence we avoid problems of circularity.

II. Reliabilism

Pitting Hume and Ruse against the reliabilists exposes a problem. “F.P. Ramsey (1931) is often credited with the first articulation of a reliabilist account of knowledge. He claimed that knowledge is true belief that is certain and obtained by a reliable process” (Becker, 2022) If we accept Hume’s argument against induction as sound, then reliabilism of any form will not fit the bill as a suitable epistemology. The thesis is that if a belief is formed via a reliable method, it is justified, but there isn’t a second step to Hume’s argument claiming inductions are reliable. If this were so, I have my doubts that his solution would have been considered a skeptical one. The propensity theory, in contrast, is the one he *does* advance in Book I. Part III.§XIV. of the *Treatise*: “Tis a common observation, that 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.” (Hume, 1896, p.165) An important consequence of his empiricism is that we can’t know a uniformity *out there*. Human beings just simply expect causes to follow from effects. What Michael Ruse adds to this notion is the idea that we are genetically preconditioned to do this. Hume writes in the *Enquiries*:

All inferences from experience suppose, as their foundation, that the future will resemble the past, and that similar powers will be conjoined with similar sensible qualities. If there is any suspicion that the course of nature may change, and that the past may be no rule for the future, all experience becomes useless and can give rise to no inference or conclusion. It is impossible, therefore, that any argument from experience can prove this resemblance of the past to the future since all these arguments are founded on the supposition of that resemblance. Let the course of things be allowed hitherto ever so regular; that alone, without some new argument or inference, proves not that, for the future, it will continue so. In vain do you pretend to have learned the nature of bodies from your experience? Their secret nature, and consequently all their effects and influence, may. (Hume, 1900, p.37)

John Stuart Mill phrased the problem correctly. Reliabilism draws upon our past observance that inductive inferences are (were) reliable. The new *rule* is that humans go with what is reliable. They just do. The newer argument endorsed by Psillos and co. is that reliabilism avoids a vicious circularity, so we are in the clear. In “the Scope and Limits of the No Miracles Argument”, Psillos breaks down an argument in favor of abductive logical inference. He writes that reliability is a good indicator that theoretical statements are approximately true, and later *concludes* that it is reasonable to believe abductive reasoning is reliable. (Psillos, 2011, pp.23-24) This should remind us of Hume’s original criticism of knowledge by enumeration. Circular reasoning, or circular argument, is a logical fallacy in which a person argues a conclusion with a conclusive item in one of the premises, the conclusive claim is used as evidence to show that the reasons for the conclusion are true. As Mill points out we need to assume something. In this case, “reliability”. (Mill, 1882, p.224-225)

What we are left with is a simple comparison and contrast between two claims about what induction is. Is induction *at base* a form of logic? Bayesians show at the very least it can be formalized. The problem is that Sir Francis Bacon’s simple enumerative inductive account is not airtight. It fails to come to grips with the demands of strict deductive validity. The use of a rule circularity would be a means to, in this context, rescue Bacon’s beliefs about inducement. Striking is the literature that shows the problems involved with circularity in inference. That induction is reliable is another inductive inference. Our alternative account does not suffer these drawbacks. Michael Ruse points out that “causes are projected into the world by us, through our

epigenetic rules. The human who believes in real connections has the biological edge over the human who sees only contingency.” (Ruse, 1998, p.174)

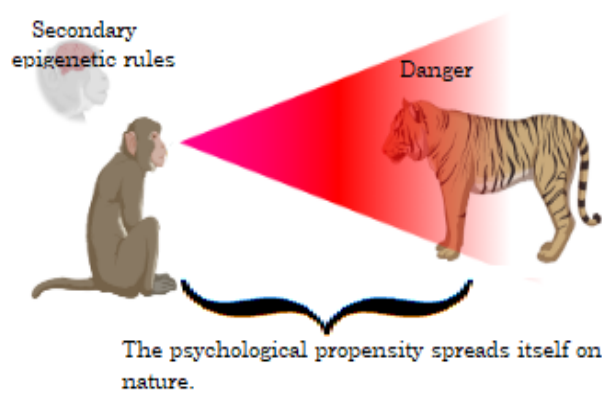


Fig.1 Ruse points out that behavior such as fleeing from predators may have allowed our ancestors to thrive more in the wild. This highly observational behavior was passed down genetically to subsequent generations.

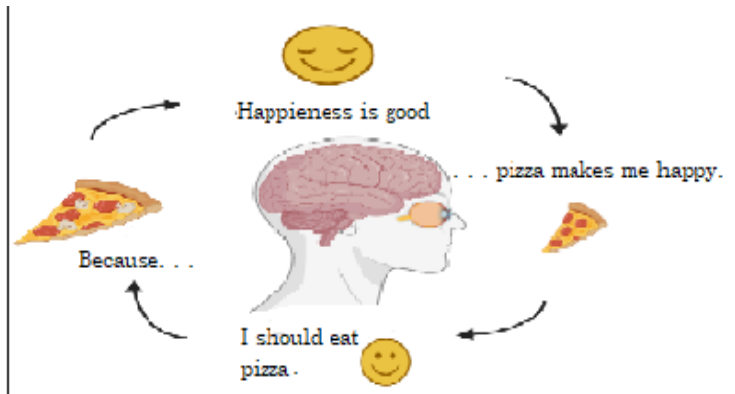


Fig. 2 Reliabilism about inductive reasoning involved a circularity, Hume showed. Some make a demarcation between rule and premise circularity, although it is usually considered fallacious reasoning.

III. Analysis of Data

To call induction a psychological propensity, and then give a genetic account of it, provides us a description of a capacity rather than of a logical method altogether. An epigenetic rule is “a constraint which obtains on some facet of human development having its origin in evolutionary needs and channeling how the growing or grown human thinks and acts.” (Ruse, 1998, p.143) The epigenetic account does not run counter to the psychological propensity account. It aids and buttresses it. “Hume’s propensities correspond precisely [. . .] to epigenetic rules.” (Ruse, 1998, p.184)

If one has been following me thus far, it isn’t hard to see the end analysis. On the one hand, we run into trouble. On the other, we learn something. Colin Howson, one of the most noteworthy voices of Bayesian reasoning out there, succinctly sounds the death knell for reliability justifications of induction:

[T]here is no justification for regarding what has been observed to happen in the past as any sort of reliable guide to the future [. . .] Nor can such an inference [from the observed to the as-yet unobserved] be justified, without circularity.... Since ‘the course of nature may change’, indeed proceed from here in a virtually uncountable number of different ways, the inference that the

future will proceed or even probably proceed in any one of them must beg the question. (Howson, 2000, p. 10).

In addition to the passages of Hume we have covered, along with our previous analysis, we see why the attempts by Psillos and others endorsing the project to absolve the reliabilism of a malignant circularity fail.

CONCLUSION

Reliabilism could indeed be tied into Michael Ruse's account. Why have we evolved beings that display inductive inferential behavior? There must be regularities that make inductive inferences reliable. There are hints of this in both Hume and Ruse. Some have even claimed that Hume himself is a reliabilist. (Qu, 2021) However, Hume cannot be both a reliabilist and a skeptic, according to Alvin Goldman's explication. The epigenetic theory goes further than a regularity theory, and a step further than the already problematic reliabilist thesis. One gains much from Ruse's epigenetic account.

Both Hume and Goodman show why reliabilism is problematic. Either one agrees with John Stuart Mill's assessment or not. Reliabilists simply seem to ignore the main thrust of Hume's argument. Is this account even descriptive? Wouldn't a judgment of the inferential pattern's reliability require a prior inductive inference? As an alternative, Ruse offers anthropologically behavioral epigenetics inductive reasoning rather than a logical account of his primate scenario. Contextually, the problem of induction appears to be originating from Sir Francis Bacon's initial attempt to codify the propensity into a form of logic, as Hume points out. Ruse sidesteps Hume's argument and supports the propensity theory. Even Bayesian theorists such as Colin Howson often describe their method as descriptive of some psychological fact about ourselves.

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