

The first objection has as a premise that it is part of the meaning of "explanation" that if one theory????? is more explanatory than another, the former must be more informative than the latter (see, e.g., van Fraassen 1983, Sect. 2). The alleged problem then is that it is "an elementary logical point that a more informative theory cannot be more likely to be true [and thus] attempts to describe inductive or evidential support through features that require information (such as 'Inference to the Best Explanation') must either contradict themselves or equivocate" (van Fraassen 1989, 192). Nevertheless, the said community might justify its use of IWE by dint of the following reasoning: "Scientific theories tend to be hugely unsuccessful. These theories were arrived at by application of IWE. That IWE is a reliable rule of inference—that is, a rule of inference mostly leading from true premises to true conclusions—is surely the worst explanation of the fact that our theories are so unsuccessful. Hence, by application of IWE, we may conclude that IWE is a reliable rule of inference." (It is to be noted that Lombrozo's experiments are directly concerned with some proposals that have been made for explicating abduction in a Bayesian framework; see Section 4.) However, the most pertinent remarks about the normative status of abduction are so far to be found in the philosophical literature. (See Koehler 1991, for a survey of some of these studies; see also Brem and Rips 2000.) More telling still, Lombrozo (2007) shows that, in some situations, people tend to grossly overrate the probability of simpler explanations compared to more complicated ones.

3.1 Criticisms

We have already encountered the so-called argument of the bad lot, which, we saw, is valid as a criticism of ABD1 but powerless against various (what we called) congruous rules of abduction.

The Status of Abduction

Even if it is true that we routinely rely on abductive reasoning, it may still be asked whether this practice is rational. While this would be an utterly absurd conclusion, the argument leading up to it cannot be convicted of being viciously circular anymore than Boyd's argument for the reliability of abduction can (if Psillos is right). Although these studies are not directly concerned with abduction in any of the forms discussed so far, they nevertheless suggest that taking into account explanatory considerations in one's reasoning may not always be for the better. This section discusses the main criticisms that have been levelled against abduction, as well as the strongest arguments that have been given in its defense. The first even purports to challenge the core idea underlying abduction; the second is not quite as general, but it is still meant to undermine a broad class of candidate explications of abduction.

The elementary logical point is supposed to be "most [obvious] ... in the paradigm case in which one theory is an extension of another: clearly the extension has more ways of being false" (van Fraassen 1985, 280). It is important to note, however, that in any other kind of case than the "paradigm" one, the putative elementary point is not obvious at all. For instance, experimental studies have shown that when people are able to think of an explanation for some possible event, they tend to overestimate the likelihood that this event will actually occur. It is fair to note that for Psillos, the fact that a rule-circular argument does not guarantee a positive conclusion about the rule at issue is not sufficient for such an argument to be valid. Both objections are due to Bas van Fraassen. We may safely assume that the use of this rule mostly would lead to the adoption of very unsuccessful theories. It would appear, then, that there must be something else amiss with rule-circularity. We here consider two objections that are meant to be more general.

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