An Inferentialist Account of Confirmation
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Imagine a scientist *S* who endorses a hypothesis *H* but is confronted with incontrovertible evidence *E* that contradicts *H*. Unless *S* is a defeatist, two main options seem available. *S* can attempt to either construct an entirely new hypothesis or modify the existing one.[1] Either way, if progress is to be made, *S* will have to ensure that the hypothesis endorsed stands in the right kind of inferential relations, ideally the entailment of true propositions, to the wayward and other established empirical results. A question that emerges at this point is whether *E* confirms the new hypothesis or the modified one regardless of how *S* went about making sure that *E* stands in the right kind of inferential relations to the chosen hypothesis. Those who answer this question in the affirmative endorse the view that standing in the right kind of inferential relations is sufficient for confirmation. Let us call this the 'inferentialist' view of confirmation. Various confirmation theorists nowadays consider this view false. Its falsity is patent, it is argued, to anyone who knows how cheaply the right kind of inferential relations can be acquired. The aim of this talk is to defend the inferentialist view from a challenge that originates in predictivism. It is argued that predictivism and its challenge fail because the non-inferential elements it introduces invariably lead to the issuing of contradictory confirmational judgments.

The view that inferentialism in confirmation is wrong is often motivated by the ease with which one can arrange a hypothesis to stand in the right kind of inferential relations to the evidence. Thus Worrall complains:

> *If* having the right empirical consequences is the only criterion [for confirmation], then since any core idea can be incorporated into a theoretical system that has the right consequences, there is no empirically-based rational preference for any such core idea over any other (2002, p. 193).

Echoing these complaints but targeting not just logical entailment but also probabilistic relations, Hitchcock and Sober note: "*Accommodation is easy*. It is always possible, after the fact, to come up with some hypothesis or other that accommodates a given body of data" (2004, p. 6) [original emphasis]. Because accommodation, either by logical entailment or by probabilistic inference of an appropriate strength, can be obtained relatively cheaply, various confirmation theorists agree that it cannot be the whole story about confirmation. Moreover, they agree that a big part of the story concerns what a theory of confirmation ought to say about post hocly constructed or modified hypotheses.

The requirement that, in addition to standing in the right kind of inferential relations to the evidence, hypotheses make predictions is a way to address the post hocness concern and, potentially, to complete the story about confirmation. According to predictivism, accommodated evidence and, for some of its theorists, even evidence that *could have been* accommodated, i.e. evidence that could have been used in post hoc constructions, is somehow inferior to predicted evidence, or, as such predictions are sometimes called, 'novel predictions'. One of the identifying marks of predictivism is thus the postulation of a condition whose satisfaction depends on specific contingent considerations, that is, considerations like whether or not a datum was known at the time a theory was formulated. Let us denote any such contingent condition with the letter 'X'. Beyond this condition, predictivists, like confirmation theorists more generally, require a condition whose satisfaction depends on specific inferential considerations, i.e. considerations like whether or

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[1] More subtle options become available if we take into account Duhem's thesis that hypotheses cannot be tested in isolation. For simplicity, I stick to the less subtle options in the abstract.

not a true proposition expressing a datum is logically entailed by a hypothesis. Let us denote any such inferential condition with the letter 'Y'. A version of predictivism then holds that a hypothesis is supported (or more supported) by a set of data if (and perhaps also only if) its specific construals of conditions X and Y are satisfied.

Here is a general counter-example to predictivism. Suppose that disjoint data sets O_1 and O_2 (expressed in propositional form) each satisfy condition Y_s by standing in certain inferential relations to a hypothesis H. To simplify things, take the inferential relation to be the entailment of true propositions, i.e. H entails O_1 and O_2 and both sets contain only true propositions. (NB: This is not an unreasonable assumption to make since if a specific Y is to be adequate, it must include the entailment of true propositions at least as a limit case). Suppose further that condition X_s *can be* satisfied by both sets. Moreover, suppose that we have two scientists, F and G, each of whom belongs to a distinct isolated scientific community but both of whom support the specific form of predictivism that emerges out of conditions X_s and Y_s. Finally, suppose that for scientist F condition X_s is satisfied by O_1 but not by O_2 but for scientist G condition X_s is satisfied by O_2 but not by O_1. F endorses the claim:

(C1): O_1 supports hypothesis H but not O_2 (or O_1 supports hypothesis H more than O_2).

Whereas G endorses the claim:

(C2): O_2 supports hypothesis H but not O_1 (or O_2 supports hypothesis H more than O_1).

The two claims are clearly inconsistent. The inconsistency arises as a result of the fact that condition X_s can be satisfied by either set. And since condition X (but also Y) can take any number of forms this makes the issuing of conflicting confirmational judgments a highly prevalent feature of predictivism. Why highly prevalent but not universal? Because there are two kinds of form condition X can take, as far as I can see the only two, which save incidental predictivism from the above objection. These are discussed and dismissed as inadequate in the talk. The upshot of the whole discussion is that non-inferential considerations cannot form part of the confirmational assessment of hypotheses for if they do they invariably lead to the issuing of contradictory confirmational judgments.

References:
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