Souvenir F: Getting Free of Popperian Constraints on Language

Popper allows that anyone who wants to define induction as the procedure of corroborating by severe testing is free to do so; and I do. Free of the bogeyman that induction must take the form of a probabilism, let's get rid of some linguistic peculiarities inherited by current-day Popperians (critical rationalists). They say things such as: it is *warranted* to infer (prefer or believe) H (because H has passed a severe test), but there is no *justification* for H (because "justifying" H would mean H was true or highly probable). In our language, if H passes a severe test, you can say it is warranted, corroborated, justified – along with whatever qualification is appropriate. I tend to use "warranted." The Popperian "hypothesis H is corroborated by data $\boldsymbol{x}$" is such a tidy abbreviation of "H has passed a severe test with $\boldsymbol{x}$" that we may use the two interchangeably. I've already co-opted Popper's description of science as *problem solving*. A hypothesis can be seen as a potential solution to

a problem (Laudan 1978). For example, the theory of protein folding purports to solve the problem of how pathological prions are transmitted. The problem might be to explain, to predict, to unify, to suggest new problems, etc. When we severely probe, it's not for falsity per se, but to investigate if a problem has been adequately solved by a model, method, or theory.

In rejecting probabilism, there is nothing to stop us from speaking of believing in *H*. It's not the direct output of a statistical inference. A post-statistical inference might be to believe a severely tested claim; disbelieve a falsified one. There are many different grounds for believing something. We may be tenacious in our beliefs in the face of given evidence; they may have other grounds, or be prudential. By the same token, talk of deciding to conclude, infer, prefer, or act can be fully epistemic in the sense of assessing evidence, warrant, and well-testedness. Popper, like Neyman and Pearson, employs such language because it allows talking about inference distinct from assigning probabilities to hypotheses. Failing to recognize this has created unnecessary combat.

[1] For example, astronomy, but not astrology, can reliably solve its Duhemian puzzles. Chapter 2, Mayo (1996), following my reading of Kuhn (1970) on "normal science."