

Paper Proposal for HOPOS 2010

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Whence the Uniformity Principle

Where did we get the idea that every induction includes some uniformity principle as a presumed premise? The idea is not in Socrates, Aristotle, or Cicero; it is not in medieval writings, Arabic or Latin; it is not in the Scholastics or the Renaissance Humanists; it is not in Francis Bacon, Isaac Newton, Thomas Reid, or William Whewell; in fact, it is not even *per se* in David Hume. It is definitely in John Stuart Mill, but Mill claims to have gotten it from someone else. It turns out we got the idea from Richard Whately (1787-1863), Oxford professor, author of *Elements of Logic* (1826), and later bishop of Dublin. This paper recounts the relevant background and then how the idea originated, spread, and became in the second half of the nineteenth century a canonical part of our understanding of induction.

The idea of induction, or *epagoge*, goes back to Aristotle—who said he got it from Socrates. Aristotle said it is a progression from particulars to a universal. But there is an ambiguity here. Did Aristotle mean progression from observation of particular things to cognition of a universal concept (as *Posterior Analytics* B 19, other passages, and the Socratic reference indicate) or as a progression from particular statements to a universal statement (as *Prior Analytics* B 23 seems to say)? Is induction fundamentally an aspect of concept-formation or fundamentally a kind of propositional inference? The first was assumed through nearly all of antiquity. But the Neoplatonic commentators introduced the second and and bequeathed the idea to both Latin and Arabic medieval traditions.

Accordingly, Scholastics tried to render induction (when valid) as a kind of syllogism by adding a presumed minor premise, a premise about complete enumeration. It became canonical that induction is an enthymeme in Barbara with the minor premise suppressed. Renaissance humanists and then especially Francis Bacon revived the ancient, Socratic view; it became standard again and remained so until the early nineteenth century.

Then, Richard Whately and his Oxford colleagues, unhappy with the dominance of Baconian induction, sought to revive Scholastic induction. They revived the notion that induction is a kind of propositional inference that can, if the inference is sound, be rendered as a syllogism. But, they claimed, the Scholastics had one bit wrong: It was the major not the minor premise that was suppressed. John Stuart Mill adopted this proposal and considered it the very “ground of induction.” Mill said Whately’s suppressed major was “the uniformity of the course of nature.”

Over the next fifty years, we can watch, step by step, the revival of induction as a kind of propositional inference and the replacement of the major for the minor as the suppressed premise. Though Alexander Bain still felt the need in 1870 to warn his students against conceiving of induction in the old, Baconian/Socratic way, by the turn of the century, Whately’s proposal was fully canonical, and the uniformity principle invariably attached to our conception of induction. The proposed paper will detail this transition.