

General Identification of the Argument in "On Methods of Inference"

Post by "Elayne" of October 28, 2020 at 10:32 PM

"As long as the differences are uniform" is a critical clause. A single exception can disprove a general hypothesis in some cases. It depends on the hypothesis, and on whether the exception is predictable/uniform. A single exception, if a clear mechanism can be found which has already been validated, could be called predictable.

For example, if the hypothesis is "Boeing jets never crash", one crash which can be clearly demonstrated by the black box to be owing to a mechanical failure known to reliably cause crashes, perhaps with evidence of a coverup, would be enough to disprove that general statement. We would have to change it to "they rarely crash."

The original hypothesis then must be modified to "x thing always happens except under y condition." Exceptions give us useful information, and they do require refinement of an initial "always" hypothesis.

If an exception is not predictable or explained yet, it can be held in reserve in case it isn't really an exception-- maybe something happened to make the original conditions different from the stated hypothesis, etc. An example would be if the black box can't be found or doesn't show an obvious problem, or it shows something that hasn't caused crashes before and investigators aren't sure if it crashed or was shot down, or maybe it was a counterfeit plane, etc.

*** One general rule being brought down by an exception does not mean all general rules will be-- only if exceptions were uniform would that be the case.

So far this looks to me like part of the history of science. Although reasoning by analogy was a stopping point then, continued observations of nature have taught us analogy is insufficient. It can generate hypotheses which then are tested. Testing of hypotheses-- making predictions based on a hypothesis and observing the results-- had not been discovered yet. Still, it's a direct descendant of the insistence Epicurus had on making observations directly, so I think it falls into the category of a detail that requires refinement but still consistent with the high level view.