Retroduction

...Retroduction, or that process whereby from a surprising array of facts we are led to a conjectural theory to account for them. Many logicians refuse to call this last ‘inference’, because its conclusion is so extremely problematical as to amount to little more than an interrogation. I am sure they are wrong, however: they have not possessed themselves of the true scientific definition of ‘inference’. The logical justification of a retroduction, of which the proper conclusion is that the conjectured state of things is “likely,” in the vague sense of tending to resemble the real state of things, consists in the two-fold truth that in case the conjectured state of things should closely resemble the real state of things, then the acceptance of the vague proper conclusion will prove of some considerable advantage in the conduct of further inquiry, even if not also (as usually will be the case,) in some future practical conduct; while, on the other hand, should the conjectured state of things be markedly in contrast to the real state of things, the acceptance of the same proper conclusion would bring comparatively little disadvantage.

References: MS 318:21-3
Date of Quote: 1907
Editorial Annotations: In a footnote, Peirce states that he has chosen to employ the term 'retroduction' instead of 'abduction' in order to avoid certain scholarly disputes regarding the Second Prior Analytics.