'Induction' (pub. 02.02.13-09:29). Quote in M. Bergman & S. Paavola (Eds.), *The Commens Dictionary: Peirce's Terms in His Own Words. New Edition*. Retrieved from http://www.commens.org/dictionary/entry/quote-smithsonian-institution-letters-1.

**Term:** Induction

**Quote:** Induction consists in taking samples of a genus and observing how many fall into a certain species, and thence concluding the probable and approximate value of the probability that in that genus any given individual will belong to that species. It supposes that there is a certain course of experience, and that the sample has been so drawn as to be governed by that same course of experience. Induction ascertains a probability and nothing more. We can calculate mathematically and therefore deductively *precisely* how often an induction conforming to certain conditions will give the true probability to a given degree of accuracy supposing that true probability to be known; and though not precisely, yet within certain limits, how often such an induction will give the probability within certain limits of accuracy even if the true probability is not given. Still, that leaves us entirely in the dark as to the probability that the ascertained probability in any particular case is within any named limits correct. Indeed, it is doubtful whether any meaning can be attached to such a question. All we have to do is to accept the result of induction provisionally, with a degree of confidence depending on the probable accuracy of the proceeding, without troubling our heads about the probability of the inferred ratio; and go ahead to get new observations to confirm or modify that ratio.

**Source:** Peirce, C. S. (1894-1911). *Smithsonian Institution letters*. L [R] 409.

**References:** HP 2:878

**Date of Quote:** 1900-05-20

**URL:** http://www.commens.org/dictionary/entry/quote-smithsonian-institution-letters-1