

'Science' (pub. 07.03.13-19:56). 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-logic-drawing-history-ancient-documents-especially-testimonies-logic-histo-13>.

Term: Science

Quote: I have said that in order to determine what the logic of the individual man should be, it would be necessary to consider what his purpose was. The same remark applies to the logic of science. It is easier to determine the purpose of science. It does not involve opening the question of ethics. Yet it is not a perfectly simple matter, either. Several definitions of the purpose of science that I have met with made it the business of science to ascertain that certain things were so, to reach foregone conclusions. Nothing could be more contrary to the spirit of science. Science seeks to discover whatever there may be that is true. I am inclined to think that even single perceptual facts are of intrinsic value in its eyes, although their value in themselves is so small that one cannot be quite sure that there is any. But every truth which will prevent a future fact of perception from surprising us, which will give the means of predicting it, or the means of conditionally predicting what would be perceived were anybody to be in a situation to perceive it, this it is, beyond doubt, that which science values. Although some will contradict me, I am bound to say that, as I conceive the matter, science will value these truths for themselves, and not merely as useful. Mathematics appears to me to be a science as much as any science, although it may not contain all the ingredients of the complete idea of a science. But it is a science, as far as it goes; the spirit and purpose of the mathematician are acknowledged by other scientific men to be substantially the same as their own. Yet the greater part of the propositions of mathematics do not correspond to any perceptual facts that are regarded as even being possible. The diagonal of the square is incommensurable with its side; but how could perception ever distinguish between the commensurable and the incommensurable? The mathematical interest of the imaginary inflections of plane curves is quite as great as that of the real inflections. Yet we cannot say that the scientific man's interest is in mere ideas, like a poet's or a musician's. Indeed, we may go so far as to say that he cares for nothing which could not conceivably come to have a bearing on some practical question. Whether a magnitude is commensurable or not has a practical bearing on the mathematician's action. On the other hand, it cannot be said that there is any kind of proportion between the scientific interest of a fact and its probability of becoming practically interesting. So far is that from being the case, that, although we are taught in many ways the lesson [of] the Petersburg problem, -

so stupidly obscured by the extraneous consideration of moral expectation, - the lesson that we utterly neglect minute probabilities, yet for all that, facts whose probabilities of ever becoming practical are next to nothing are still regarded with keen scientific interest, not only by scientific men, but even by a large public. Here, then, are the facts to be reconciled in order to determine what the purpose of science, what scientific interest, consists in. First, every truth which affords the means of predicting what would be perceived under any conceivable conditions is scientifically interesting; and nothing which has not conceivable bearing upon practice is so, unless it be the perceptual facts themselves. But, second, the scientific interest does not lie in the application of those truths for the sake of such predictions. Nor, thirdly, is it true that the scientific interest is a mere poetical interest in the ideas as images; but solid truth, or reality, is demanded, though not necessarily existential reality. Carefully comparing these three conditions, we find ourselves forced to conclude that scientific interest lies in finding what we roughly call generality or rationality or law to be true, independently of whether you and I and any generations of men think it to be so or not.

Source: Peirce, C. S. (1901). *On the Logic of Drawing History from Ancient Documents Especially from Testimonies (Logic of History)*. MS [R] 690.

References: CP 7.186

Date of 1901

Quote:

URL: <http://www.commens.org/dictionary/entry/quote-logic-drawing-history-ancient-documents-especially-testimonies-logic-histo-13>