
Cambridge Conferences

REVISED ANNOUNCEMENT

Mr. CHARLES SANDERS PEIRCE

of Milford, Pennsylvania

 ILL give a course of Eight Class Lectures on REASONING AND THE LOGIC OF THINGS, at the rooms of the CAMBRIDGE CONFERENCES, Studio House, 168 Brattle Street, on Monday and Thursday Evenings in February and March, 1898, at eight o'clock.



THE SPECIAL TOPICS AND DATES
WILL BE AS FOLLOWS

¹⁸⁹⁸
February 10. Philosophy and the Conduct of Life.
February 14. Types of Reasoning.
February 17. The Logic of Relatives.
February 21. The First Rule of Logic.
February 24. Training in Reasoning.
February 28. Causation and Force.
March 3. Habit.
March 7. The Logic of Continuity.



THE COURSE herein outlined will be of UNUSUAL INTEREST AND VALUE to students and teachers of Philosophy. It is hoped that many will avail themselves of the privilege of attending.

In order to render the Lectures available to all who may desire to hear them, the price of admission has been placed at less than the usual class rates :

COURSE TICKETS . . . One Dollar Fifty
SINGLE ADMISSION . . . Twenty-five Cents

Application for admission to the Class Lectures should be made to the Director of the *Conferences*, Dr. LEWIS G. JAMES, Studio House, 168 Brattle Street, Cambridge, Mass.



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Reasoning and the Logic of Things

*The Cambridge Conferences
Lectures of 1898*



Charles Sanders Peirce

Edited by
Kenneth Laine Ketner

With an Introduction by
Kenneth Laine Ketner and Hilary Putnam

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gives us no idea at all what the law prescribes the period of $\mathcal{A}$, $\mathfrak{h}_2$, and $\hat{\sigma}$ shall be. And I am sure I cannot guess. The numbers are

$\mathcal{A}$		
[♂ Mars]	687	
Ast[eroids]	1467	780
$\mathcal{A}$ [Jupiter]	4332 days	2865
$\mathfrak{h}_2$ [Saturn]	10760 days	6428
$\hat{\sigma}$ [Uranus]	30689 "	19929
Ψ [Neptune]	60188	29499

I am sure they are not in arithmetical progression. But as to Neptune whose period is 60188 he does tell us that $\mathfrak{h}_2$ $\hat{\sigma}$ Ψ are in arithmetical progression. I think he probably made some little slip, however, in saying that. After displaying this wonderful demonstration of the law, Dr. Carus [said] that instead of using the number 2, it would have been more exact to use 2.03. Now 2.03 is the square root of the cube of 1.61 which [is] $\frac{1}{2}(1 + \sqrt{5})$. The numbers are not quite right[;] 2.06 is the square root of the square of $\frac{1}{2}(1 + \sqrt{5})$. But this will do as a model of bad induction.

SIX

Causation and Force



Those who make causality one of the original *uralt* elements in the universe or one of the fundamental categories of thought, — of whom you will find that I am not one, — have one very awkward fact to explain away. It is that men's conceptions of a Cause are in different stages of scientific culture entirely different and inconsistent. The great principle of causation which we are told, it is absolutely impossible not to believe, has been one proposition at one period of history and an entirely disparate one [at] another and is still a third one for the modern physicist. The only thing about it which has stood, to use my friend Carus's word, a $\kappa\tau\eta\mu\alpha$ ἐς αἰῶ, — *semper eadem* [always the same], — is the *name* of it. As Aristotle remarks, what the Ionian philosophers were trying to find out as the principle of things was what they were made of. Aristotle himself, as I need not remind you, recognizes four distinct kinds of cause, which go to determining a fact, the *matter* to which it owes its existence, the *form* to which it owes its nature, the *efficient cause* which acts upon it from past time, and the *final cause* which acts upon it from future time. Oh, but it is commonly said, these are merely verbal distinctions. This to my apprehension is one of those superficial explanations, which pass current till men examine them, and serve, like the elegant banker's memorandum, *pour donner le change* to the unwary [to sidetrack the unwary]. They seem to me to mark different types of retroductively inferred facts, — facts which it was supposed furnished the universal process of Nature[,] the occasions from which different features of the [facts] were brought about. The conception is that Nature syllogizes from one grand major premise; and the causes are the different minor