

# À Posteriori Reasoning

1865 | Harvard Lectures on the Logic of Science. Lecture VIII: Forms of Induction and Hypothesis | W 1:266-267

*Hypothesis* is to be explained in a similar manner to induction. Hypothesis is quite a different thing from induction and is usually so considered although I have not found any definition given of it which brings out the difference distinctly. But it will be acknowledged that a hypothesis is a categorical assertion of something we have not experienced. Now in induction there is nothing of this sort. [—] Hypothesis is in fact the inference of a minor proposition as in the following examples respecting light.

We find that light gives certain peculiar fringes. Required an explanation of the fact. We reflect that ether waves would give the same fringes. We have therefore only to suppose that light is ether waves and the marvel is explained.

[—]

We have then three different kinds of inference. Deduction or inference *à priori*. Induction or inference *à particularis*, and Hypothesis or inference *a posteriori*.

1865 | Harvard Lectures on the Logic of Science. Lecture II, 1865 | W 1:180

There is a large class of reasonings which are neither deductive nor inductive. I mean the inference of a cause from its effect or reasoning to a physical hypothesis. I call this reasoning *à posteriori*. If I reason that certain conduct is wise because it has a character which belongs *only* to wise things, I reason *à priori*. If I think it is wise because it once turned out to be wise, that is if I infer that it is wise on this occasion because it was wise on that occasion, I reason inductively. But if I think it is wise because a wise man does it, I then make the pure hypothesis that he does it because he is wise, and I reason *à posteriori*. The form this reasoning assumes, is that of an inference of a minor premiss in any of the figures. The following is an example.

Light gives certain fringes		Ether waves give certain fringes
Ether waves give these fringes		Light is ether waves
∴ Light is ether waves		∴ Light gives these fringes.

[—]

The difference in their general character between the three kinds of reasoning is strongly marked. A consequent is inferred *à priori*, an antecedent *à posteriori*, and the nexus between them inductively.