

# Inference

1866 | Lowell Lectures on The Logic of Science; or Induction and Hypothesis: Lecture VI. Practical Maxims of Logic | W 1:441

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The inductive or hypothetic conclusion, therefore, stands to one of its premisses in the relation of a deductive or syllogistic premiss to its conclusion, the second premiss of the induction or hypothesis remaining a premiss in this explaining syllogism. It is in fact a sufficient definition of a scientific inference to say that it is the inference of one of the premisses of a syllogism from the other premiss and from the conclusion. In fact, every such inference is valid, that is to say, lends an additional probability to the proposition inferred, altho' the fact indicated by this proposition may still remain entirely unknown or even grossly improbable.

1868 | Some Consequences of Four Incapacities | W 2:237; CP 5.307

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The association of ideas is said to proceed according to three principles - those of resemblance, of contiguity, and of causality. But it would be equally true to say that signs denote what they do on the three principles of resemblance, contiguity, and causality. There can be no question that anything *is* a sign of whatever is associated with it by resemblance, by contiguity, or by causality: nor can there be any doubt that any sign recalls the thing signified. So, then, the association of ideas consists in this, that a judgment occasions another judgment, of which it is the sign. Now this is nothing less nor more than inference.

1880 | On the Algebra of Logic | W 4:164; CP 3.160

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A cerebral habit of the highest kind, which will determine what we do in fancy as well as what we do in action, is called a *belief*. The representation to ourselves that we have a specified habit of this kind is called a *judgment*. A belief-habit in its development begins by being vague, special, and meagre; it becomes more precise, general, and full, without limit. The process of this development, so far as it takes place in the imagination, is called *thought*. A judgment is formed; and under the influence of a belief-habit this gives rise to a new judgment, indicating an addition to belief. Such a process is called an *inference*; the antecedent judgment is called the *premise*; the consequent judgment, the *conclusion*; the habit of thought, which determined the passage from the one to the other (when formulated as a proposition), *the leading principle*.

1891 | Review of William James's "The Principles of Psychology" | CN 1:107; W 8:235; CP 8.63

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...unconscious inference differs essentially from inference in the narrow sense, all our control over which depends upon this, that it involves a conscious, though it may be an indistinct, reference to a

genus of arguments.

1893 [c.] | Grand Logic: Book I. Of Reasoning in General. Introduction. The Association of Ideas | CP 7.443-4

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When an idea bearing the stamp of experience suggests another, that other in many cases itself carries that same stamp, which is carried forward in suggestion and thus a derivative authority from experience is conferred upon an idea which may have neither the vividness nor the other marks of directer experience. This sort of suggestion is *inference*. The law of association will divide inference into inferences by contiguity and inferences by resemblance, meaning by these latter inference from the occult inward nature of ideas or of the soul.

All inferences are really performed under the influence of the law of association. But all psychical actions divide into two great classes, those which are performed under the *uncontrolled* governance of association and those in which by the "agency" of consciousness, - whatever that may mean, - the actions come under self-criticism and self-control. The latter class of actions may be pronounced good or bad; the former could not be otherwise than they were.

1893-1895 [c.] | Division III. Substantial Study of Logic. Chapter VI. The Essence of Reasoning | MS [R] 409:91-92; CP 4.53, 55

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An inference is a passage from one belief to another; but not every such passage is an inference. If noticing my ink is bluish, I cast my eye out of the window and my mind being awakened to color remark particularly a poppy, that is no inference. Or if without casting my eye out of the window, I call to mind the green tinge of Niagara or the blue of the Rhone, that is no inference. In inference one belief not only follows *after* another, but *follows* from it. [—]

If a belief is produced for the first time directly after a judgment or colligation of judgments and is suggested by them, then that belief must be considered as the result of and as following from those judgments. The idea which is the matter of the belief is suggested by the idea in those judgments according to some habit of association, and the peculiar character of believing the idea really *is* so, is derived from the same element in the judgments. Thus, inference has at least two elements: the one is the suggestion of one idea by another according to the law of association, while the other is the carrying forward of the *asserting* element of judgment, - the holding for true, - from the first judgment to the second. That these two things suffice to constitute inference I do not say.

1893-1895 [c.] | Division III. Substantial Study of Logic. Chapter VI. The Essence of Reasoning | CP 4.55

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1895 | Short Logic: Chapter I. Of Reasoning in General | EP 2:11-12

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*Reasoning* is the process by which we attain a belief which we regard as the result of previous knowledge. [—]

Again, a given belief may be regarded as the effect of another given belief, without our seeming to see clearly why or how. Such a process is usually called an *inference*; but it ought not to be called a *rational inference*, or *reasoning*. A blind force constrains us. [—]

The word *illation* signifies a process of inference. Reasoning, in general, is sometimes called *ratiocination*. *Argumentation* is the expression of a reasoning.

1895 | Short Logic: Chapter I. Of Reasoning in General | EP 2:22; CP 2.442

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...*inference*, or the conscious and controlled adoption of a belief as a consequence of other knowledge.

1901 | Hume's Argument against Miracles, and the Idea of Natural Law (Hume) | MS [R] 873:3 (var.); HP 2:912

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*Inference* is any act of deliberate assent, in any degree, however slight, which a man accords to a proposition because he thinks that assent warranted by his already accorded assent to another proposition or propositions, called the *premisses*.

1911 | A Logical Critique of Essential Articles of Religious Faith | MS [R] 852:2

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The word Reasoning may be used as the name either of a mental action or of a mental occupation. In the latter sense, it is that occupation of the mind in which one casts about for arguments, considers them, and draws a conclusion from them. In the former sense, it is a synonym of *inference*, or the passage from an argument to a conclusion.

1913 | An Essay toward Improving Our Reasoning in Security and in Uberty | EP 2:463

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When it happens that a new belief comes to one as consciously generated from a previous belief, - an event which can only occur in consequence of some third belief (stored away in some dark closet of the mind, as a habit of thought) being in a suitable relation to that second one, - I call the event and inference, or a reasoning.

nd | Fragments [R] | MS [R] 839

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An argumentation within one's own mind, by which the thinker is more or less inclined to believe something, or by which he sees that something must be true, is called an *inference*.