

88. Indicate the place occupied by Observation and Experiment respectively, in scientific pursuits, and lay down rules for their employment. (1894).

89. What is an Hypothesis? Show its importance in scientific investigation, and point out the conditions of its validity as an Hypothesis. (1899).

90. Distinguish hypothesis from theory. Explain the use of hypothesis in scientific procedure. Show, by a concrete example, how far the imagination, and how far the reason, has entered into the construction of a workable hypothesis. (London).

91. What do you understand by the *Inductio per enumerationem simplicem*? Can it ever yield sure conclusions? (1894).

92. Explain, illustrate, and estimate the value of Analogical Reasoning. (Glasgow).

93. Describe the logical characters of the following inferences, and discuss their validity :

(a) "Sir D. Brewster proved that the colors seen upon mother-of-pearl are not caused by the nature of the substance, but by the form of the surface. He took impressions of mother-of-pearl in wax, and found that, though the substance was entirely different, the colors were exactly the same." (Jevons).

(b) "A person is in sound health mentally and physically. The blocking of a minute blood-vessel in the brain causes a clot of blood there, which is followed immediately by unconsciousness, and soon after by death. Hence the existence of mind depends on the healthy functioning of the brain." (Mellone).

(c) "There are no great nations of antiquity but have fallen by the hand of time; and England must join them to complete the analogy of the ages." (Edinburgh).

94. What fallacy do you find in the following?

(a) In classifying all books into English, French, German and scientific.

(b) In trusting the predictions of a weather-prophet because several of his former predictions have been correct.

(c) In concluding that all *C* is *A* because you have found that all *A* is *B* and that all *C* is *B*.

(d) In reasoning from the premises :

"If the sun comes out the room will be light,
But the room has become light,"
to the conclusion :

"The sun has come out." (1901).