

P R E F A C E .

In complying with the request that I would allow the following Lecture, delivered before the Board of Arts and Manufactures for Lower Canada, to be printed for more general circulation, I have but to remark that it was prepared in answer to a call from the Society for a Lecture in Physical Science or Mechanics at a time when my professional duties left but small leisure at my command. If my object had been to prepare a treatise for publication the form would have been very different; but I have preferred printing the lecture, with but a few verbal alterations, as it was delivered, to making extensive changes either in arrangement or illustration.

It is almost superfluous to acknowledge obligations, both for argument and illustration, to "Whewell's History of the Inductive Sciences," "Herschel's Natural Philosophy," and other works of similar character; obligations, however, which I have endeavoured as far as possible to acknowledge in the marginal notes.

It will be observed, that, for the sake of simplicity, I have not thought it requisite to distinguish between "Theory" in the sense of a *proved hypothesis*, and "Theory" carried out into its inevitable consequences; and in a similar manner I have not always drawn a line of distinction between Practice, Experience, and the systematic experience (if one may be allowed the term) which we call Experiment.

Montreal, January 6th, 1859.