

cases we have collected of its occurrence, in order to satisfy ourselves that they are explicable by our cause, or fairly included in the expression of our law: and in case any exception occurs, it must be carefully noted and set aside for re-examination at a more advanced period, when, possibly, the cause of exception may appear, and the exception itself, by allowing for the effect of that cause, be brought over to the side of our induction; but should exceptions prove numerous and various in their features, our faith in the conclusion will be proportionally shaken, and at all events its importance lessened by the destruction of its universality.

(173.) In the conduct of this verification, we are to consider whether the cause or law to which we are conducted be one already known and recognized as a more general one, whose nature is well understood, and of which the phenomenon in question is but one more case in addition to those already known; or whether it be one less general, less known, or altogether new. In the latter case, our verification will suffice, if it merely shows that all the cases considered are plainly cases in point. But in the former, the process of verification is of a much more severe and definite kind. We must trace the action of our cause with distinctness and precision, as modified by all the circumstances of each case; we must estimate its effects, and show that nothing unexplained remains behind; at least, in so far as the presence of unknown modifying causes is not concerned.

(174.) Now, this is precisely the sort of process in which *residual phenomena* (such as spoken of in art. 158.) may be expected to occur. If our induction be really a valid and a comprehensive one, *whatever* remains unexplained in the comparison of its conclusion with particular cases, under all their circumstances, is such a phenomenon, and comes in its turn to be a subject of inductive reasoning to discover its cause or laws. It is thus that we may be said to witness facts with the eyes of reason; and it is thus that we are continually attaining a knowledge of new phenomena and new laws which lie beneath the surface of things, and give rise to the