

obvious, has proved a fertile source of physical discovery, and led us to the knowledge of an analogy and intimate connection of phenomena between which at first we should never have expected to find any.

(200.) For example, the transparency of gold leaf, which permits a bluish-green light to pass through it, is a frontier instance between the transparency of pellucid bodies and the opacity of metals, and it prevents a breach of the law of continuity between transparent and opaque bodies, by exhibiting a body of the class generally regarded the most opaque in nature, as still possessed of some slight degree of transparency. It thus proves that the quality of opacity is not a *contrary* or *antagonist* quality to that of transparency, but only its extreme lowest degree.

CHAP. VII.

OF THE HIGHER DEGREES OF INDUCTIVE GENERALIZATION, AND OF THE FORMATION AND VERIFICATION OF THEORIES.

(201.) As particular inductions and laws of the first degree of generality are obtained from the consideration of individual facts, so theories result from a consideration of these laws, and of the proximate causes brought into view in the previous process, regarded all together as constituting a new set of phenomena, the creatures of reason rather than of sense, and each representing under general language innumerable particular facts. In raising these higher inductions, therefore, more scope is given to the exercise of pure reason than in slowly groping out our first results. The mind is more disencumbered of matter, and moves as it were in its own element. What is now before it, it perceives more intimately, and less through the medium of sense, or at least not in