

doubtfully discerned. And again, when this step has been made by the principal discoverers, there may generally be observed another period, which we may call the *Sequel* of the Epoch, during which the discovery has acquired a more perfect certainty and a more complete development among the leaders of the advance; has been diffused to the wider throng of the secondary cultivators of such knowledge, and traced into its distant consequences. This is a work, always of time and labor, often of difficulty and conflict. To distribute the History of science into such Epochs, with their Preludes and Sequels, if successfully attempted, must needs make the series and connections of its occurrences more distinct and intelligible. Such periods form resting-places, where we pause till the dust of the confused march is laid, and the prospect of the path is clear.

*Inductive Charts.*⁵—Since the advance of science consists in collecting by induction true general laws from particular facts, and in combining several such laws into one higher generalization, in which they still retain their truth; we might form a Chart, or Table, of the progress of each science, by setting down the particular facts which have thus been combined, so as to form general truths, and by marking the further union of these general truths into others more comprehensive. The Table of the progress of any science would thus resemble the Map of a River, in which the waters from separate sources unite and make rivulets, which again meet with rivulets from other fountains, and thus go on forming by their junction trunks of a higher and higher order. The representation of the state of a science in this form, would necessarily exhibit all the principal doctrines of the science; for each general truth contains the particular truths from which it was derived, and may be followed backwards till we have these before us in their separate state. And the last and most advanced generalization would have, in such a scheme, its proper place and the evidence of its validity. Hence such an *Inductive Table* of each science would afford a criterion of the correctness of our distribution of the inductive Epochs, by its coincidence with the views of the best judges, as to the substantial contents of the science in question. By forming, therefore, such Inductive Tables of the principal sciences of which I have here to speak, and by regulating by these tables, my views of the history of the sciences, I conceive that I have secured the distribution of my his-

⁵ Inductive charts of the History of Astronomy and of Optics, such as are here referred to, are given in the *Philosophy*, book xi. ch. 6.