

imitation. In looking forward to what may hereafter be expected from this cause of improvement, we are not to forget the powerful effect which must in future be produced by the spread of elementary works and digests of what is actually known in each particular branch of science. Nothing can be more discouraging to one engaged in active research, than the impression that all he is doing may, very likely, be labor taken in vain; that it may, perhaps, have been already done, and much better done, than, with his opportunities, or his resources, he can hope to perform it; and, on the other hand, nothing can be more exciting than the contrary impression. Thus, by giving a connected view of what has been done, and what remains to be accomplished in every branch, those digests and bodies of science, which from time to time appear, have, in fact, a very important weight in determining its future progress, quite independent of the quantity of information they communicate. With respect to elementary treatises, it is needless to point out their utility, or to dwell on the influence which their actual abundance, contrasted with their past remarkable deficiency, is likely to exercise over the future. It is only by condensing, simplifying, and arranging, in the most lucid possible manner, the acquired knowledge of past generations, that those to come can be enabled to avail themselves to the full of the advanced point from which they will start.

(386.) One of the means by which an advanced state of physical science contributes greatly to accelerate and secure its further progress, is the exact knowledge acquired of physical data, or those normal quantities which we have more than once spoken of in the preceding pages (222.); a knowledge which enables us not only to appreciate the accuracy of experiments, but even to correct their results. As there is no surer criterion of the state of science in any age than the degree of care bestowed, and discernment exhibited, in the choice of such data, so as to afford the simplest possible grounds for the application of theories, and the degree of accuracy attained in their determination, so