

the base on which our laws of symbolical reasoning are founded, and thence to a total reconstruction of the whole system of abstract analysis. Pushed in various directions, it has resulted in a new geometry, through the quaternions of Sir William Hamilton; in a new and effective method of solving differential equations, in the hands of Professor Boole; and, still more strangely, in an application of analysis, by the same gentleman, to the formal laws of thought; while several different systems, suited to attacking particular physical problems, have been proposed by various analysts. So many and varied are the ways in which this most fertile principle appears capable of development, that at present the difficulty seems to consist in discovering which will be best to choose. It is perhaps not too much to say, that here the differential calculus has at length generated a successor more powerful than itself, and which will ultimately absorb it. Nor should we forget our acknowledgments to the late Duncan Gregory, who was, if not precisely the inventor, certainly the first to perceive the importance of this method. We venture also to think that Professor Forbes has done scant justice to the progress of analytical geometry; the school, of which Plücker may be considered the founder, constitutes as great an advance upon the geometry of Descartes as his was upon that of the ancients.

That this epoch has not been distinguished "by the full maturity of so many commanding minds" is compensated, and partly accounted for, by the very large increase in the number of cultivators of science. Contrasted with that dreary period in British science which intervened between the death of Newton and the rise of that illustrious band of which Sir J. Herschel may be taken as the type,* the present day presents itself under a most hopeful aspect; where we can count one British name that emerges above the level for that period, we may count a dozen now, and if their elevation appear less, it may be because the level has risen. In great part this is due to the exertions of those illustrious men above spoken of, whose claim is not only to have done so much themselves, but to have produced a generation worthy to succeed them, and whose glories they justly share; partly also is it due to the improvement in our national seminaries, and the early introduction in them of scientific training, and also partly to the increased demand for scientific qualifications by the advance of engineering and the kindred arts; but we would fain believe that there is also a real improvement in the average mathematical faculty of the age, and that

* Herschel, Airy, Peacock, Whewell, Babbage, Lubbock.