

heavens have been peopled by them with planets, with satellites, with unheard-of phenomena; they have counted, so to speak, the stars of the Milky Way: if chemistry has assumed a new aspect, the facts which they have furnished have mainly contributed to this change: inflammable air, pure air, phlogisticated air, are due to them; they have discovered how to decompose water; new metals in great number are the outcome of their analysis; the nature of the fixed alkalis has been demonstrated by none but them; mechanics at their call have worked miracles, and have placed their country above others in nearly every line of manufacture." Another foreigner, Professor Moll of Utrecht, remarked in his reply to Mr Babbage's pamphlet<sup>1</sup>: "If Mr Herschel and some of his friends

<sup>1</sup> The pamphlet was entitled 'On the alleged Decline of Science in England.' By a Foreigner. London, 1831. It was by Dr Moll of Utrecht, and was introduced by a few lines from Faraday, who, without taking any side in the question, remarked that "all must allow that it is an extraordinary circumstance for English character to be attacked by natives and defended by foreigners." In the discussion on the subject by this writer, as also by Babbage, Herschel, Playfair, Whewell—*pro* and *con.*—a good many points of importance are brought out: some of them are still interesting, others refer to defects which have since been remedied. I will mention a few of them. Playfair, in the 'Edinburgh Review' (vol. xxxi. p. 393, 1819), thinks that the "very extensive dissemination of general knowledge, which is so much the case over the whole of this kingdom," is against the advancement of the higher branches of mathe-

tics. This refers probably to the absence of periodicals devoted to special sciences, such as the 'Annales de Chimie et de Physique,' published by Arago and Gay-Lussac in France. In the absence of these special organs, memoirs of original value, which marked an era in special researches, were scattered in general literary reviews, as Young's on Light and Hieroglyphics in the 'Quarterly,' Herschel's and Airy's in the 'Encyclopædia Metropolitana'; and much good mathematics was buried in the 'Ladies' Diary' among poetry of the "worst taste" and "childish scraps of literature and philosophy" ('Edin. Rev.,' vol. ii. p. 282, 1808). Another point is that "the researches of English men of science have been too much insulated from each other and from what is doing in other countries" (Whewell to Vernon Harcourt, 1831; see Life by Todhunter, vol. ii. p. 126). The British Association, which was founded very much as a result of this agitation,