

deeper conviction that all mental work is living, individual, and of endless variety. To stimulate individual thought, to bring about life and change, is nowadays felt to be quite as necessary as to insist on method, system, and order. Prompted by this conviction, the last fifty years have done much to facilitate intellectual interchange, and to record the historical development of all branches of science.

This object has been promoted in three different ways. The French, who in the beginning of the period were the masters in science, led the way by founding a series of periodicals devoted to the development of separate sciences. Germany followed, and still later England.¹ A living

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¹ The oldest scientific periodical is the 'Journal des Savants,' which was started in 1665 in Paris; next to it comes probably Rozier's 'Observations sur la Physique' (1771), continued under the title 'Journal de Physique' (1778, continued with interruptions from 1794-95 till 1823). In opposition to this journal, which defended the older phlogistic theories in chemistry, the 'Annales de Chimie' were started in 1789 by Berthollet, Guyton de Morveau, and Fourcroy, as an organ of Lavoisier's ideas. In 1788 the Société Philomatique started its 'Bulletin,' and in 1795 the 'Journal de l'Ecole Polytechnique' started its influential career. No such periodicals existed for special sciences at that time in any other country, if we perhaps except the 'Transactions of the Royal Linnæan Society,' which started in 1791. 'Nicholson's Journal' started in 1797; the 'London, Edinburgh, and Dublin Philosophical Magazine and Journal of Sciences' had its origin in Tilloch's 'Philosophical Magazine'; but

the first journal devoted specially to mathematical sciences in England was probably the 'Cambridge Mathematical Journal,' started in 1839. In the meantime the number of scientific journals in France had grown enormously. In Germany we have Crell's 'Chemische Annalen' (1778), Gehlen's 'Allgemeines Journal für Chemie' (1803), Gren's 'Journal der Physik' (1790), Gilbert's 'Annalen der Physik' (1799), Zach's 'Monatliche Correspondenz' (1800), Crelle's 'Journal für die reine und angewandte Mathematik' (1826), and many others, all periodicals of the first importance. The 'Transactions of the Royal Society,' which of course contain many of the valuable scientific contributions of this country, can nevertheless hardly be looked upon as a repository of the work of English mathematicians and physicists of the period in question,—not even as much as the Memoirs of the Paris Academy in France. In Great Britain a new centre of scientific and literary work existed during the latter part of the last century