

were explicitly excluded: Electricity, Magnetism, Heat, Elliptic Functions, LaPlace's Co-efficients, Capillary Attraction, and the Figure of the Earth.

A system of examination which remained substantially unchanged during twenty-five years, may be supposed to have worked reasonably well; but in these days of incessant revolution, an institution which has endured for a quarter of a century is naturally exposed to the charge of being superannuated. Accordingly, another system was introduced in 1873: the examination now occupied *nine* days, and extended, with scarcely any exception, over the entire range of pure and mixed mathematics.

In a volume entitled, *The Conflict of Studies, and other Essays connected with Education*, published in 1873, I discussed the new system of examination just introduced, and passed a very unfavourable judgment on it. The force of the objections then urged has been fully justified by experience; the difficulty of conducting a competitive examination by written papers over such an enormous extent of subjects, soon became obvious, and such attempts as were made to overcome the difficulty proved to be quite inadequate.

Accordingly, a Committee, called in academical language a *Syndicate*, was appointed in May, 1877, to consider the higher Mathematical Studies and Examinations of the University. The Syndicate presented a report to the University on March 29, 1878; in this the difficulties which had been found to attend the working of the scheme commenced in 1873, were thus stated in moderate and cautious language:

"At present this examination is conducted in accordance with a scheme which, approved by the Senate on June 2, 1868, first came into operation in January, 1873. The principal changes introduced by that scheme

lay in a large addition to the subjects of examination and in the arrangement of the subjects in divisions, each division having a definite amount of credit, or marks assigned to it, made known approximately beforehand to the students. Although the experience of the working of that system is still a short one, the Syndicate believe that it is long enough to show that the system exercises an unfavourable influence on Mathematical study. By the extension of the range of subjects the severe strain of the competition has been intensified to an injurious extent; and, moreover, the hope expressed in the Report recommending the scheme, that Students would be encouraged by the new regulations to acquire an accurate and well-digested knowledge of a few subjects, instead of attempting imperfectly to master a great number, has not been realized. In the words of the Mathematical Board (Report, May 15th, 1875) it appears that the attention of the great majority has been spread over too wide a field for accurate or thorough knowledge to be attained in any division. The Syndicate are satisfied that under the present system a large number of Students are led, in the hope of gaining higher places in the Tripos, to attempt matter really beyond their grasp, to the neglect of that habit of thoroughness and precision in the less advanced subjects in which the educational value of the study in great degree subsists."

The Syndicate suggested a new scheme, which however was only partially accepted by the University; the principal novelty which it exhibited being rejected. The most advanced mathematical subjects were thrown into two groups, which were to be taken in *alternate years*, while the elementary subjects, and what we may call the *intermediate* subjects, were to be taken every year. One