remark which has been oftener than once repeated in the course of this work, “ That the thirty-ninth proposition of the first book of the *Principia* was the most important pro­position that had ever been exhibited to the physico-mathematical philosopher and he used always to illustrate to his more advanced scholars the superiority of the geometri­cal over the algebraic analysis, by comparing the solution given by Newton of the inverse problem of centripetal forces, in the forty-second proposition of that book, with the one given by John Bernoulli in the Memoirs of the Academy of Sciences at Paris for 1713. We have heard him say, that to his own knowledge Newton frequently in­vestigated his propositions in the symbolical way, and that it was owing chiefly to Dr. Halley that they did not finally appear in that dress. But if Dr. Simson was well informed, we think it a great argument in favour of the symbolical analysis, when this most successful practical artist (for so we must call Newton when engaged in a task of discovery) found it conducive either to dispatch or perhaps to his very progress.

Returning to his academical chair, Dr. Simson discharged the duties of a professor for more than fifty years, with great honour to the university and to himself.

It is almost needless to say, that in his prelections he fol­lowed strictly the Euclidian method in elementary geometry. He made use of Theodosius as an introduction to spherical trigonometry. In the higher geometry, he prelected from his own Conics, and he gave a small specimen of the linear problems of the ancients, by explaining the properties, some­times of the conchoid, sometimes of the cissoid, with their application to the solution of such problems. In the more advanced class, he was accustomed to give Napier’s mode of conceiving logarithms, that is, quantities as generated by motion, and Mr. Coats’s view of them, as the sums of ratiun­culae; and to demonstrate Newton’s lemmas concerning the limits of ratios, and then to give the elements of the fluxionary calculus ; and to finish his course with a select set of propositions in optics, gnomonics, and central forces. His method of teaching was simple and perspicuous, his elocu­tion clear, and his manner easy and impressive. He had the respect, and still more the affection, of his scholars.

With respect to his studies, we have already informed the reader that they got an early bias to pure geometry, and to the elegant but scrupulous methods of the ancients. We have heard Dr. Simson say, that it was in a great measure owing to Dr. Halley that he so early directed his efforts to the restoration of the ancient geometers. He had recom­mended this to him, as the most certain way for him, then a very young man, both to acquire reputation, and to im­prove his own knowledge and taste ; and he presented him with a copy of Pappus’s *Mathematical collections,* enriched with some of his own notes. The perspicuity of the ancient geometrical analysis, and a certain elegance in the nature of the solutions which it affords, especially by means of the local theorems, soon took firm hold of his fancy, and made him, with the sanguine expectation of a young man, direct his very first efforts to the recovery of this *in toto;* and the restoration of Euclid’s *Pοrisms* was the first task to which he set himself. The accomplished geometer knows what a desperate task this was, from the scanty and mutilated ac­count which we have of this work in a single passage of Pappus. It was an ambition which nothing but success could justify in so young an adventurer. He succeeded ; and as early as 1718, seemed to have been in complete pos­session of this method of investigation, which was considered by the eminent geometers of antiquity as their surest guide through the labyrinths of the higher geometry. Dr. Simson gave a specimen of his discovery in 1723, in the *Philoso­phical Transactions ;* and after this time he ceased not from his endeavours to recover that choice collection of Porisms which Euclid had collected, as of the most general use in the solution of difficult questions. What some of these must have been, was pointed out to Dr. Simson by the very nature of the general proposition of Pappus, which he has restored. Others were pointed out by the lemmas which Pappus has given as helps to the young mathematician towards their demonstration. And, being thus in possession of a conside­rable number, their mutual relations pointed out a sort of system, of which these made a part, and the blanks of which now remained to be filled up.

Dr. Simson, having thus gained his favourite point, had leisure to turn his attention to the other works of the ancient geometers ; and the porisms of Euclid now had only an oc­casional share. The *loci plani* of Apollonius was another task which he very early engaged in, and completed about the year 1738. But, after it was printed, he imagined that he had not given the *ipsissimæ propositiones* of Apollonius, and in the precise spirit and order of that author. The im­pression lay by him for some years ; and it was with great reluctance that he yielded to the entreaties of his mathema­tical friends, and published the work, in 1746, with some emendations, where he thought he had deviated farthest from his author. He quickly repented of this scanty con­cession, and recalled what he could of the small number of copies which he had given to the booksellers, and the im­pression again lay by him for years. He afterwards recor­rected the work, and still with some reluctance allowed it to come abroad as the *Restitution of Apollonius.* The pub­lic, however, had not been so fastidious as Dr. Simson, and the work had acquired great celebrity, and he was now con­sidered as one of the first and the most elegant geometers of the age ; for, in the meantime, he had published his *Conic Sections,* a work of uncommon merit, whether we consider it as equivalent to a complete restitution of the celebrated work of Apollonius Pergæus, or as an excellent system of this important part of mathematics. It is marked with the same features as the *loci plani,* the most anxious solicitude to exhibit the very text of Apollonius, even in the proposi­tions belonging to the books which had been completely lost. These could be recovered in no other way but by a thorough knowledge of the precise plan proposed by the author, and by taking it for granted that the author had ac­curately accomplished this plan. In this manner did Vi- viani proceed in the first attempt which was made to restore the conics of Apollonius; and he has given us a detail of the process of his conjectures, by which we may form an opinion of its justness, and of the probability how far he has attained the desired object. Dr. Simeon’s view in his per­formance was something different, deviating a little in this one case from his general track. He was not altogether pleased with the work of Viviani, even as augmented by the eighth book added by Halley, and his wish was to restore the ancient original. But, in the meantime, an academical text-book for conic sections was much wanted. He was much dissatisfied with those in common use ; and he was not insensible of the advantage resulting from the conside­rations of these sections, independent of the cone first intro­duced by Dr. Wallis. He therefore composed this excel­lent treatise as an elementary book, not to supersede, but to prepare for the study of Apollonius ; and accordingly he accommodates it to this purpose, and gives several important propositions in their proper places, expressly as restitutions of Apollonius, whom he keeps constantly in view through the whole work.

Much about this time, Dr. Simson seriously began to pre­pare a perfect edition of Euclid’s *Elements.* The intimate acquaintance which he had by this time acquired with all the original works of the ancient geometers, and their ancient commentators and critics, encouraged him to hope that he could restore to its original lustre this leader in mathemati­cal science ; and the errors which had crept into this cele­brated work, and which still remained in it, appeared of