had leisure to turn his attention to the other works oſ 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 *ipsissimae proposιtiones* 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 intreaties 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 re-corrected 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 mean time, 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 Viviani 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 be has attained the deſired object. Dr Simſon’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 mean time, 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 consideration 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 accommodates it to this purpoſe, and gives ſeveral important propoſi­tions in their proper places, express*ly 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 his 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 magnitude ſufficient to merit the moſt careful efforts for their removal. The data also, which were in like manner the intro­duction to the whole art of geometrical inveſtigation, ſeemed to call more loudly for his amending hand. For it appears that the Saracens, who have preſerved to us the writings of the ancients, have contented themſelves with admiring theſe celebrated works, and have availed themſelves of the knowledge which they contain ; but they have ſhown no inclination to add to the ſtock, or to promote the ſciences which they had received. They could not do any thing without the synthetical books of the geometers ; but, not meaning to go beyond the diſcoveries which they had made, they neglected all the books which related to the analytic art alone, and the greateſt part of them (about 25 out of 30) have irre­coverably perished. The data of Euclid have fortu­nately been preſerved, but the book was neglected, and the only ancient copies, which are but three or four, are miſerably erroneous and mutilated. Fortunately, it is no very arduous matter to reinſtate this work in its ori­ginal perfection. The plan is preciſe, both in its extent and its method. It had been reſtored, therefore, with ſucceſs by more than one author. But Dr Simſon’s comprehensive view of the whole analytical ſyſtem point­ed out to him many occaſions for amendment. He therefore made its inſtitution a joint taſk with that of the elements. All the lovers of true geometry will ac­knowledge their obligations to him for the edition of the Elements and data which he publiſhed about 1758. The text is corrected with the moſt judicious and ſcrupulous care, and the notes are ineſtimable, both for their information, and for the tendency which they muſt have to form the mind of the itudent to a true judgment and taſte in mathematical ſubjects. The more accompliſhed reader will perhaps be sometimes diſpoſed to ſmile at the axiom which ſeems to pervade the notes, “ that a work of Euclid muſt be ſuppoſed without er­ror or defect.” If this was not the caſe, Euclid has been obliged to his editor in more inſtances than one. Nor ſhould his greateſt admirers think it impoſſible that in the progreſs of human improvement; a geometrical truth ſhould occur to one of theſe latter days, which eſcaped the notice of even the Lincean Euclid. Such merit, however, Dr Simſon nowhere claims, but lays every blame of error, omiſſion, or obſcurity, to the charge of Proclus, Theon, and other editors and com­mentators of the renowned Grecian.

There is another work of Apollonius on which Dr Simſon has beſtowed great pains, and has reſtored, as we imagine, *omnibus numeris perfectum,* viz. the Sectio determinata ; one of thoſe performances which are of indiſpenſable uſe in the application of the ancient analyſis. This also ſeems to have been an early taſk, tho' we do not know the date of his labours on it. It did not appear till after his death, being then publiſhed along with the great work, the Poriſms of Euclid, at the expence of the late Earl Stanhope, a nobleman in­timately converſant with the ancient geometry, and zealous for its reception among the mathematicians of the preſent age. He had kept up a conſtant correſpondence with Dr Simſon on mathematical ſubjects ; and at his death in 1768, engaged Mr Clow professor of logic in the univerſity of Glaſgow, to whoſe care the Doctor had left all his valuable papers, to make a