

But, we ask, with the extension of mathematical knowledge will it not finally become impossible for the single investigator to embrace all departments of this knowledge? In answer let me point out how thoroughly it is ingrained in mathematical science that every real advance goes hand in hand with the invention of sharper tools and simpler methods which at the same time assist in understanding earlier theories and cast aside older more complicated developments. It is therefore possible for the individual investigator, when he makes these sharper tools and simpler methods his own, to find his way more easily in the various branches of mathematics than is possible in any other science.

The organic unity of mathematics is inherent in the nature of this science, for mathematics is the foundation of all exact knowledge of natural phenomena. That it may completely fulfil this high mission, may the new century bring it gifted masters and many zealous and enthusiastic disciples.

REPLY TO MR. J. L. COOLIDGE'S REVIEW OF HILL'S EUCLID.

I DESIRE to thank the editors of the BULLETIN for their courtesy in acceding to my request that they should insert a reply to the review of my edition of the fifth and sixth books of Euclid's Elements by Mr. Coolidge, published in the February number of the BULLETIN, as it contains statements which give an erroneous impression of the contents of the book.

The book differs from previous editions in two important particulars. These are :

1. The explanations of the fundamental definitions of the fifth book of Euclid.
2. The removal of the indirectness from Euclid's line of argument.

The second of these matters, though emphasized by italics on page viii of the preface, has been passed over without notice by the reviewer. The discovery of this indirectness and the possibility of removing it, were published by me in the *Cambridge Philosophical Transactions*, volume 16, part 4; and the importance of the work was recognized in the review of that paper in the *Jahrbuch über die Fortschritte der Mathematik*, volume 28 (1897), page 152.