YELDA NASIFOGLU, University of Oxford

The changing nature of mathematical diagrams in the seventeenth century

Euclid's Elements of Geometry is one of the few classical texts to have been handed down with diagrams. Rather than static illustrations, however, the diagrams were integral to the text and served as maps to the step-by-step construction of the propositions. In the classical mathematical tradition, one read geometry manually with compass and rule in hand. Although the iconography of the early modern period continued to suggest that reading, studying, and producing geometry were mediated through drawing, as the boundaries between theory and practice became blurred, the status of diagrams underwent significant changes. While they could serve heuristic purposes, diagrams were now mostly being treated as illustrations or representations that facilitated the reading of the mathematical text, which in turn became progressively more algebraic in nature. Indeed, towards the end of the seventeenth century, the diagrams would often be grouped into plates relegated to the back of the book. With analytical geometry, which had the advantage of accommodating the increasing demands for accuracy during this period, the idea of geometric construction would become more abstract, obviating the need for drawing.