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Eunsoo Lee* (eunsoo@stanford.edu), Stanford, CA 94305. *Diagrams for Dummies: Visual Auxiliaries in printed diagrams of Euclid's Elements.*

The printed Elements in the sixteenth century presented more concise and practical diagrams than those of previous manuscripts. While conventional diagrams were limited to implementing the description of the text, the new diagrams introduced more practical constructions absent from the text, deviating from the tradition and also from the text.

This change into more practical diagrams reflects the increased emphasis on the pedagogical value of the diagram. As is evident from the compass arcs upon the diagram, readers of the Elements were invited to draw their own diagrams. This backdrop of increased engagement with the diagram facilitated learning the Elements for mathematical novices (Matheseos tyrones). These tool-based diagrams were more effective for teaching beginners than the earlier, less-functional diagrams.

This paper traces a brief history of these tool-based diagrams, which I call Tyronian diagrams. Closer scrutiny is needed to determine when Tyronian diagrams first appeared and how it was circulated together with the formal version of the Elements. To this end, the paper investigates diagrams in early printed editions of the Elements in the sixteenth century. This investigation provides us with a snapshot of a key shift in diagram implementation in mathematics. (Received September 26, 2017)