1145-AI-699 **Paul Dawkins**, **Matthew Inglis** and **Nicholas Wasserman*** (wasserman@tc.columbia.edu).
The use(s) of 'is' in mathematics.

This paper analyzes some of the ambiguities that arise among statements with the copular verb 'is' in the mathematical language of textbooks as compared to day-to-day English language. We identify patterns in the construction and meaning of 'is' statements using randomly selected sample statements from corpora representing the two linguistic registers. In particular, for the grammatical form "[subject] is [noun]," we compare the relative frequencies of the subcategories of semantic relations conveyed by that construction. Specifically, we find that this construction – in different situations – conveys a symmetric relation, an asymmetric relation, or an existential relation. The intended logical relation can only sometimes be inferred from the grammar of the statement itself. We discuss the pedagogical significance of these patterns in mathematical language and consider some strategies for helping students interpret the intended meaning of the mathematical text they hear or read. (Received September 13, 2018)