1056-01-1156 **Dirk Schlimm*** (dirk.schlimm@mcgill.ca), McGill University, Department of Philosophy, 855 Sherbrooke St. W., Montreal, QC H3A 2T7, Canada. *Pasch and Klein on intuition and proofs.*

This paper presents some aspects of the views on mathematics of Moritz Pasch (1843–1930) and Felix Klein (1849–1925). Both made significant contributions to the development of geometry and while both agreed that mathematics should ultimately be grounded empirically, they disagreed on the role that intuition plays in mathematical proofs. Pasch gave the first rigorous axiomatization of projective geometry (1882), which paved the way for Hilbert's groundbreaking 'Foundations of Geometry' (1899), and he also demanded that diagrams and other appeals to intuition should play no role in deductions. Klein, who proposed a unified treatment of geometries in his famous 'Erlangen Program' (1872), is well-known for being one of the most forceful proponents of the use of intuition and model-based reasoning in mathematics. What has not received any attention in the history and philosophy of mathematics so far, is the debate between Pasch and Klein: they discussed their views in their correspondence, and Klein discussed Pasch's position in his lectures (1890, 1893), which Pasch commented in 1912. Finally, Klein added some reconciliatory remarks in his Collected Works (1922). In the present paper this debate between Pasch and Klein is presented in the context of their research styles. (Received September 21, 2009)