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Des limites de l'arithmétique de Peano à la pensée spéculative des objets relationnels¹

Abstract: This article studies a few key concepts in the thought of Peano, namely those which proved important for the formulation of the axioms. The presence of these concepts shows that the arithmetic uses other forms of abstraction in the very moment when the mathematician tries to construct its foundations. This process requires judgments which, by the way, are not mathematical operations. This limit is the result of the presence of relational objects: *equivalence, congruence, abstraction*. They reveal the presence of the speculative thinking in the work of the mathematician and they legitimize the transition to another language: the speculative.

Keywords : arithmétique, concept, limite, spéculation, objet relationnel

¹ Cet article est aussi un hommage aux logiciens et philosophes des sciences francophones dont tout particulièrement Louis Couturat (1868-1914) professeur aux universités de Toulouse puis de Caen et au Collège de France et Arnold Reymond (1874-1958) professeur aux universités de Neuchâtel puis de Lausanne.