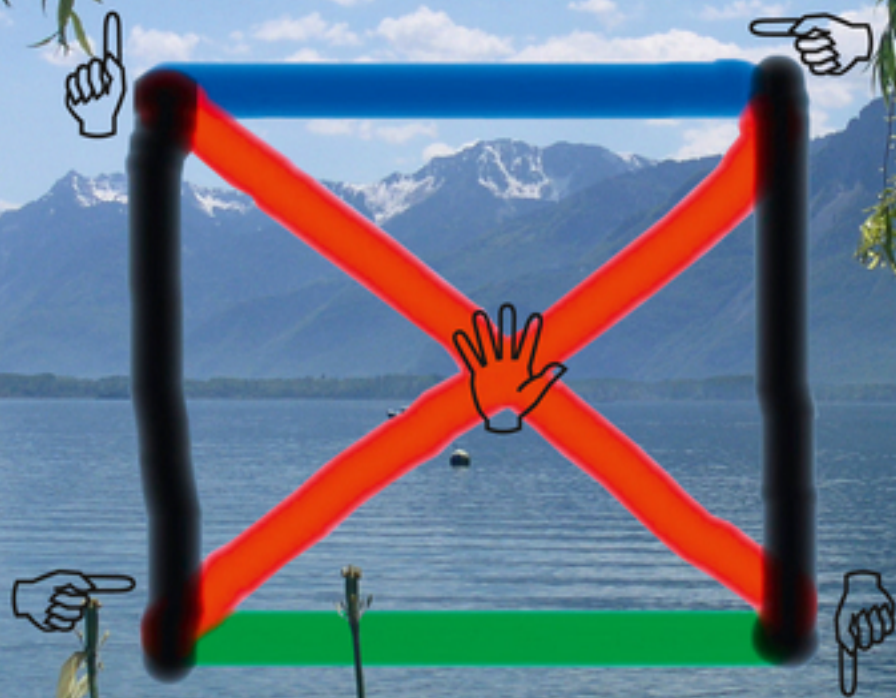


Jean-Yves Beziau and Gillman Payette (eds)

THE SQUARE OF OPPOSITION A GENERAL FRAMEWORK FOR COGNITION



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The Square of Opposition

This is a collection of new research papers concerning several contemporary avenues of research using the square, written by internationally recognized scholars from various fields. The papers have been selected from a larger number of contributions most of them based on talks presented at the First World Congress on the Square of Opposition organized in Montreux in June 2007.

The goal of this book is to revitalize both interest in the square of opposition for its own sake, and to make evident the square's relevance to new research projects. This volume will be of interest to advanced students, professors and researchers from many fields –it has an interdisciplinary perspective. We have grouped the essays into their general fields of study. Each essay is self contained and we give a brief idea about the topics covered in each paper below.

“Quantification Theory and the Square of Opposition” is a discussion of the early days of modern logic. Volker Peckhaus argues in his essay that quantification theory should not be used as a point of difference between the algebraic and mathematical approaches to logic as initiated by Boole and Frege, respectively. The reason being that although quantification theory isn't developed in Boole's account of the square of opposition, it is developed in the work of C. S. Peirce and taken up in the work of Schröder. The work of Peirce, however, was independent from that of Frege.

Yurii Khomskii's essay “William of Sherwood, Singular Propositions and the Hexagon of Opposition” argues a point of intellectual priority. In 1955 Tadeusz Czeżowski suggests a solution to providing an analysis of particular propositions like ‘Socrates is a man’ within a framework like the square. Czeżowski suggests augmenting the square to a hexagon. Khomskii argues that this augmentation existed already in the work of William of Sherwood in the thirteenth century.

John Martin's essay “Existential Commitment and the Cartesian Semantics of the Port Royal Logic” discusses how the semantics in Arnaud and Nicole's seventeenth century work *La logique, ou l'art de penser* maintains a correspondence theory of truth, even though it breaks from the medieval orthodoxy in which there must be a causal relationship between concepts and the world. The connection to the square of opposition in Martin's essay is that, contrary to another author, the Port-Royal semantics validates existential im-

port for the A and I positions in the square. This makes the semantics align with the Aristotelian doctrine of the square.

In “The Medieval Modal Octagon and The S5 Lewis Modal System” Juan Campos-Benítez looks at a medieval extension of the square to an octagon. The octagon was used to analyze propositions that combined the A, E, I, O propositions with modal propositions, resulting in propositions corresponding to sentences like: All A are Necessarily not B. Campos-Benítez uses modern formal techniques to analyze the structure of the positions that occur in the octagon, then investigates what is required of the modern modal systems to to prove the correspondences in the medieval octagon.