Hiponimia

Jerzy Pogonowski

Zakład Logiki Stosowanej UAM
www.logic.amu.edu.pl
pogon@amu.edu.pl

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This monograph presents a mathematical model of one of the most important semantic relations, viz. hyponymy (semantic subordination). We investigate the formal properties of lexical hyponymy (chapters 2-5) and hyponymy extended to syntactically complex expressions (chapter 6). Both notions are characterized in the axiomatic way, by suitable systems of postulates. On the basis of those axioms we are able to prove several theorems concerning hyponymy. Though they are not very sophisticated from the mathematical point of view, they nevertheless clarify, to a certain extent, proposals entrenched in the linguistic tradition and connected with semantic subordination.
A special emphasis is put on numerous hyponymically based similarity and opposition relations. Set-theoretical, algebraic and topological structures determined by those relations within the lexicon are investigated.

Chapter 6 contains an axiom system capable of describing semantically endocentric expressions. We define some syntactic notions in terms of extended hyponymy (e.g. hypotaxis, hypotactical ambiguity, etc.).