

A quantum holistic semantics for vagueness, ambiguity and contextuality

M. L. Dalla Chiara R. Giuntini R. Leporini G. Sergioli

Abstract

Contextual and holistic features play an important role in the semantics of natural languages and in the languages of art. At the same time the semantics of classical logic and of many alternative logics (intuitionistic logic, fuzzy logics,...) is strongly compositional: the meaning of a compound expression is represented as a function of the meanings of its parts. Quantum information has inspired the development of new forms of quantum logic, where the crucial notions of *superposition* and *entanglement* are used as a semantic resource. The *quantum computational semantics* provides a general abstract framework where contextuality-phenomena can be represented and investigated in a natural way.

References

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