

OPERATORS IN NON-MONOTONIC SYSTEMS

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ABSTRACT. In his book *A structuralist theory of logic* Arnold Koslow [2] introduced a local notion of logical operators. Based on a (implication) relation, which reflects some kind of reasoning and satisfies the usual tarskian conditions, he defines logical operators as elements which are standing in a certain relation with other elements. But, contrary to the usual account of logical operators, his notion is completely independent of any syntactical or semantical features of a given logical language. Koslow's notion is local in the sense that for example the conjunction need not to be defined for every two elements of the language. His account challenges our usual global understanding of operators whose most prominent advocate Lloyd Humberstone might be [1]. In this talk I'll try to argue that at least in the setting of non-monotonic reasoning a local notion of operators can lead to fruitful insights. To give a short example, it is well known that in some non-monotonic systems disjunction elimination is not generally valid any more [3]. With a local notion of operators it can be shown that a syntactical compound $A \vee B$ is not necessarily the disjunction of A and B , while another element, let's say C which is not equivalent to $A \vee B$ counts as disjunction of A and B .

REFERENCES

- [1] Lloyd Humberstone. *The Connectives*. MIT Press, 2011.
- [2] Arnold Koslow. *A structuralist theory of logic*. Cambridge University Press, 2005.
- [3] David Makinson. *Bridges from classical to nonmonotonic logic*. King's College, 2005.

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