

**Šefránek, Ján**

**Belief, knowledge, revisions, and a semantics of non-monotonic reasoning.** (English)

[Zbl 0951.03012](#)

Gelfond, Michael (ed.) et al., Logic programming and nonmonotonic reasoning. 5th international conference, LPNMR '99. El Paso, TX, USA, December 2-4, 1999. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 1730, 63-77 (1999).

In the paper, the autoepistemic logic of knowledge and belief (AELKB) (see *T. Przymusiński* [Artif. Intell. 95, 115-154 (1997; [Zbl 0894.68141](#))]), over a language with a finite set of propositional variables, is given a semantics in terms of dynamic Kripke structures (DKSs). Any DKS consists of a Kripke structure and a monoid of transformations on the set of possible worlds. These transformations correspond to insertions of formulas into and to revisions of AELKB theories. A procedure for computing static autoepistemic expansions of AELKB theories, based on an enhanced model-checking, is proposed. Also revisions are characterized by means of DKSs.

For the entire collection see [[Zbl 0931.00043](#)].

Reviewer: [Anna Gomolińska](#) (Białystok)

**MSC:**

[03B42](#) Logics of knowledge and belief (including belief change)

[03B60](#) Other nonclassical logic

[68T27](#) Logic in artificial intelligence

**Keywords:**

autoepistemic logic of knowledge and belief; dynamic Kripke structure; belief revision