ELECTRONIC NEWSLETTER ON REASONING ABOUT ACTIONS AND CHANGE

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Today

Today's issue contains Vladimir Lifschitz's answer to a question about his paper at the CommonSense workshop. (The fact that the answer appears here does not mean that the question wasn't answered at the workshop – it was, of course – but only that his answer wasn't reliably recorded in the notes taken at the workshop. Here we get his precise answer).

Discussions

Articles at Commonsense workshop

(An Action Language Based on Causal Explanation: Preliminary Report)

The action language C (as well as the McCain/Turner causal logic that it is closely related to) may be of interest because of the simplicity of its syntax and semantics. Although it has only two kinds of propositions – static and dynamic laws – the language is quite expressive, as the examples in the paper demonstrate. The semantics of these propositions is defined in terms of simple and well-understood objects–transition diagrams. And the definition of the semantics in terms of classical logic is just a half-page long.

Second, the view of inertia in C is different from what we see in most other work on representing actions. Actions take place against the backdrop of the course of nature. In the past, the focus on inertia has emphasized worlds in which the course of nature is static. Our pendulum example illustrates the fact that inertia-like laws can describe the dynamic course of nature, and they can be overriden by effects described in axioms about actions, just like inertia. In the language C, both inertia and the inertia-like pendulum law are treated syntactically in similar ways–as dynamic laws that do not include action names.

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