

FOIS 2008
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Reviewers' comments

Paper: 35

Title: Introducing Realist Ontology for the Representation of Adverse Events

----- review 1 -----

OVERALL RATING: 3 (strong accept)

How carefully did you read the paper?: 4 (I read the paper extremely carefully)

Relevance to FOIS: 5 (extremely relevant)

Scientific or technical quality: 4 (very good (upper 1/3))

Novelty or innovation: 3 (innovative)

Presentation (Organization, Language, Tables and Figures): 4 (excellent)

References: 3 (nothing important missing but irrelevant references present)

As the authors implicitly acknowledge, we cannot say that it is clear which events are adverse and the problem is just to tell what they are. The authors emphasize that 'a phenomenon which is considered to be an adverse event under one definition, is not an adverse event in terms of another definition' (4.2). The analysis of the many definitions taken into account is very good and shows the 'conceptual' usefulness of the adopted ontological framework.

This reviewer has only two main observations to do. The minor one concerns the requirement of generality formulated for the Reference Ontology. Indeed specific constants are used in science (and in medicine). The major one concerns the possibility of neglecting a normative aspect in accounting for the notion of an adverse event. The use of the word 'undesirable' in some definitions and, more importantly, the underlying idea that adverse events should be avoided as far as possible suggest that some value is attached to certain events (and to certain actions) even if all of them are natural phenomena. The agreement between different definitions (or their applications) might depend on the agreement between the related implicit value assignments. In this connection an analysis of the relation between the notion of adverse event and the notion of mistake might be useful.

----- review 2 -----

OVERALL RATING: 2 (accept)

How carefully did you read the paper?: 4 (I read the paper extremely carefully)

Relevance to FOIS: 4 (very relevant)

Scientific or technical quality: 4 (very good (upper 1/3))

Novelty or innovation: 3 (innovative)

Presentation (Organization, Language, Tables and Figures): 3 (good)

References: 4 (good)

I enjoyed this paper: it is unpretentious but provides a valuable formal analysis. It provides an account of the notion of "adverse event" in the medical arena, specifically in the area of managing Risks against Patient Safety (RAPS), and clearly justifies the authors approach that roots adverse events in a realist ontology, in which universals

and particulars are basic categories that exist because of reality, but also allows for defined classes (which are subsets of the extension of a universal with an additional property not defined for the universal), along with cognitive representations of reality (including observations, interpretations, i.e., epistemological issues), and concretizations or encodings of those cognitive representations.

----- review 3 -----

OVERALL RATING: 2 (accept)

How carefully did you read the paper?: 4 (I read the paper extremely carefully)

Relevance to FOIS: 3 (relevant)

Scientific or technical quality: 4 (very good (upper 1/3))

Novelty or innovation: 3 (innovative)

Presentation (Organization, Language, Tables and Figures): 3 (good)

References: 4 (good)

Table 3 in this paper presents the outline of a very good abstract ontology of care and harm, and this alone makes the paper worthy of acceptance. The other very good thing in this paper is the definition of "adverse event" at the top of page 10, which is an outstanding example of clarity and precision.

I had a more negative (or rather, irritated) reaction to the rest of the paper. The first part presents an ontology of ontologies, but it is just stipulated rather than argued for. Much of the text is just commentary on the tables and reads like rearguard actions against philosophical sniping from various directions. Much of the latter part of the paper involves the elimination of metonymy from informal ontologies; people have no difficulty with metonymy, but it is anathema to ontologists, and to computers. One is left wondering if any of this is of help to actual medical personnel, or is it merely a way for philosophers and knowledge representation researchers to lay claim to biomedical funding.

But all of this criticism has to be tempered by the excellence of Table 3 and the final definition of "adverse event". I recommend the paper be accepted.