Review of: "Creating ontological definitions for use in science"

Mauno Vihinen[1]

1 Lund University

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This is an interesting topic. The authors aim to provide guidelines for definitions in ontologies. This is an important area, there are already many ontologies and others under development. There has not been many instructions and guidelines for how to create ontologies in an efficient way and it is not too difficult to find examples on not that optimal terms and definitions.

The topic of the manuscript is very focused, probably too focused. The definitions in ontologies are the part that mainly shows for the users. However, they are based on many choices before the definitions were made. The logic and organization of ontology is the requisite for good and useful definitions. This aspect could not bee too much emphasized.

Specific comments of the recommendations:

1 and 2. I find this recommendation problematic. Ontologies are directed acyclic graphs, thus there can be more than one parent classes and naming them makes the definitions clumsy. Further, the definitions would need to be changed if the structure of the ontology is changed or a new parent class is introduced.

3. This is a very important issue. To keep in mind that definition is not a list of items that are annotated with the term.

5. Definitions should be self contained and self explanatory. There should not be other definitions, but it will not be possible to write definitions that would not need to explained by other terms. These terms must be included and have proper definitions in the ontology.

6 and 10. Agree on this. The ontology should contain information for synonyms of the included terms.

8. This is an important issue. Definitions describe the concepts. The terms are then used for annotations and ontology should not contain annotations.

The terms should be organized so that related aspects are listed in child classes. It is not uncommon that child classes are not exactly comparable. They are related to the parent class but related to each other. In such cases they have to be put under different child classes.