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

Robert Lew[1]

1 Adam Mickiewicz University of Poznan

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As someone working in the field of lexicography, I find it interesting to learn about your views on best defining practices for ontologies. You are absolutely right in pointing out that the format of the ontological and the lexicographic definitions should be different because the two perform different functions. However, in lexicography itself there has also been talk of different definitions for different functions and different audiences. For example, a definition that is meant to help someone use a word might want to include a typical pattern of use (incidentally, something you expressly forbid under point 12; this format came into wider use with the COBUILD dictionary in 1987[1], and John Sinclair and Patrick Hanks are the ones usually credited for the innovation[2]). By contrast, for a definition meant to merely explain or convey meaning there is less need to do that (see your “expectation” vs. “an expectation” example: it is important for language production to know whether the indefinite article should be used (thus, we are dealing with a countable use of a noun) or not, but it hardly ever matters for comprehension (unless there is an important difference in meaning that’s related to countability). Then there might be different definitions depending on the audience, such as experts in a certain field, native speakers, language learners, children, …

I suspect that a similar approach might turn out to be useful in ontology: you might first ask what exactly your definitions are supposed to do, i.e. their function(s); for example, is it meant to help a human reader (naïve or expert? native speaker of English or not?) to understand the concept behind it, or to locate it by searching for it, or is it for NLP (non-human) uses? Only once you are clear on the functions, can you derive from them motivated, principled recommendation on form. As it stands, your proposal does not make these important links explicit.

Further, ontological definitions appear bear a much closer similarity to terminological definitions than they do to lexicographic definitions: insistence on monosemy, stronger standardization, expert/scientific domains rather than everyday language. I would therefore suggest taking a look at what terminologists have written on defining.

Finally, it might be appropriate to point out that your proposal is not original and draws heavily on the so called genus-differentia format (here's basic information in Wikipedia) aka classical definition or Aristotelian definition.

For the syntax of definitions, you might take a look at Barnbrook (2002)[3].

References

1. ^*John Sinclair, Patrick Hanks et al.. (1987). Collins COBUILD English Dictionary for Advanced Learners. Collins.*
2. ^*John Sinclair. (1987). Looking up: An Account of the COBUILD Project in Lexical Computing and the Development of the Collins COBUILD English Language Dictionary. Collins ELT.*

3. ^*Geoff Barnbrook. (2002). Defining Language. doi:10.1075/scl.11.*