

Comments to reviewers of  
*Limbaugh D, Kasmir D, Ceusters W, Smith B.*  
**Warranted Diagnosis.**

International Conference on Biomedical Ontology, Buffalo NY, July 30 – Aug 2, 2019.

SCORE: 3 (strong accept)

----- TEXT:

This manuscript builds on some of the authors' prior work on defining 'diagnosis' and expands in the process the ontology of cognitive processes, information artifacts, and general medical science more generally beyond diagnosis. It also further develops the Referent Tracking paradigm to include warranted belief in existence and warranted belief in relevance.

The work is generally excellent and important. The manuscript is very well written and well organized.

Some minor issues:

1. Although the authors address the issue, the move from one RTB (a representation fused with a positive confidence value, and the authors only loosely explicate 'fusion' when it comes to cognitive representations) to both an RTB and a second order cognitive representation about that RTB, is still subtle and unclear.

a. Although the authors are at the page limit, they could list it as a minor limitation to address in future work.

b. For example, if someone has an RTB with a fused 0.6 confidence value vs. a second order cognitive representation that says "I believe the RTB with confidence of 0.6". When is it one RTB vs. RTB plus cognitive representation about the RTB?

*Added right before definition of 'confidence value' Here a second-order mental representation is an evaluation of the confidence value fused with a mental representation. We leave the full explication of this distinction for future work.*

2. The explanation of the photograph of the intruder when discussing original vs. derived aboutness is confusing.

a. Are you saying that there is no original aboutness relation that holds between the photo and the intruder until someone looks at the photo and determines that the photo is about the intruder? *Simplified this discussion put it off for later work: In the cases treated by Chisholm, original aboutness always precedes derived aboutness. We reserve for later a discussion of cases, like automated surveillance, where the temporal ordering is reversed.*

b. What do you mean by "baptize it as such" vs. "recognize it as such"? *baptize has been removed*

c. Is original aboutness only possible through biological cognition? *Added: We suspect there is no original aboutness outside of mental representations.*

3. How would you represent a cognitive representation (CR), the confidence value (CV) with which it is fused, and the resultant RTB in an RTS using RT tuples? What is the relation that holds between the CR and CV (fused-with?), the CR and the RTB (component of?), and the CV and the RTB? *This is a fair question but seems too much in the weeds for this paper considering the page limit.*