

Review of: "Why are there different versions of the COM-B model diagram?"

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In this paper the authors describe several articulations of the COM-B model of behavior change. This is a popular and compelling model and there is value in carefully defining its components and articulating how they are related. However, I thought this paper could be more impactful. Specific comments follow.

- 1. The difference between single and double headed arrows wasn't clear to me. I understand what they mean in path models, but in the context of this specific model, I wasn't sure. For instance, does behavior really covary (non-causally) with capabilities, opportunities, and motivations?
- 2. Why wouldn't the most general model be one in which there are simply double-headed arrows between all four components? Or single-headed arrows going both ways? The authors emphasize that one could articulate a wide range of possibilities but the original one is usually good enough. I could see how deviating from the original model would depend on the phenomenon being studied and the approach to studying it. But it wasn't clear why there should be a focus on the four models presented here.
- 3. In general, more empirical examples could enrich the paper.
- 4. The authors seem to conflate within and between-person processes. My understanding of the COM-B model is that it is about within-person influences, and that seems consistent with the table of definitions. But the empirical examples (e.g., of alcohol) is about between-person differences.

I hope these comments were helpful.

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