PERSONALITY Science

Open Peer-Review for "Computational Personality Assessment" (Stachl et al.)

Note: *3 reviewers were invited. 3 reviewers wished to remain anonymous. 1 reviewer wished to have their review openly published alongside the final article (though remaining anonymous). The authors of the article agreed to have any available pre-publication peer-reviews published.*

Anonymous #2:

This paper provides an excellent review of the literature on computational personality assessment, highlights innovative areas of research, and presents an interesting outlook on future work in this area. There is a lot to like about the paper: the writing flows, the review covers a lot of ground, and the take-home messages are clearly stated. I have few comments.

1. I don't agree with the authors' statement that there is a "general consensus that naturalistic observation of behavior should be considered the 'gold standard' of measurement in psychological science (Baumeister et al., 2007; Furr, 2009)". Several psychological phenomena are neither behavioral nor observable - motives, values, or self-conceptions are examples of psychological phenomena that may be better assessed through methods other than behavioral observation. I would argue that there is a general consensus that all methods are flawed and that it is generally advantageous to use multiple methods to assess psychological phenomena.

2. The definition of computational personality assessment as "a measurement process that involves the use of computational technology for data collection, processing, and decision-making based on personality-relevant information" is very (perhaps too) broad and would also include standard online questionnaires administered through e.g., Qualtrics.

3. I understand that the authors tried to come up with a definition of computational personality assessment that allowed them to include ESM. However, the inclusion of ESM seems problematic too given the differences in method and data collected through ESM, mobile sensing, and OSM. In fact, I would say that an argument could be made for ESM to be more similar to standard self-report questionnaires than non-intrusive mobile sensing or OSM approaches. Perhaps it would be helpful to discuss the different assessment tools in terms of quantitative (e.g., more or less objective) rather than qualitative / categorical differences.

4. The discussion has several sections that are difficult to understand and includes some inaccuracies. For example, it is not correct that in self-report questionnaires, people are only asked about their typical behavior – they are also asked about their thoughts, feelings, and strivings – phenomena that are more difficult to assess through OSM or mobile sensing tools. The authors touch upon these issues later in the discussion - however, I think these limitations of OSM and mobile sensing tools should be discussed more transparently throughout to provide a balanced perspective on the pros and cons of all available assessment tools.

5. I don't understand the section titled "longitudinal data". I agree that a more comprehensive assessment of multiple indicators is usually helpful to capture individual differences in personality. However, how is this related to longitudinal data and whole trait theory? This section needs more elaboration.