March XXth, 2024

Erin M. Buchanan, PhD

Harrisburg University of Science and Technology

Harrisburg, PA

Dora Matzke

University of Amsterdam

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Dear Drs. Buchanan and Matzke:

My colleagues and I are submitting our manuscript entitled “Affordance Norms for 2825 Concrete Nouns” for consideration as an original research article in *Behavior Research Methods*.

This paper presents a set of norms measuring affordances, which represent the interactive relations between actors and objects. Unlike existing measures of object interactivity (e.g., Body-Object Interaction; Pexman et al., 2019) in which participants provided quantitative ratings of perceived interactivity, our affordance norms utilized an open-ended response format. In doing so, this allowed us to capture important qualitative information regarding perceived object use, including the context in which actions may occur. As such, we present three affordance measures: Affordance Strength (AFS), Affordance Proportion (AFP), and Affordance Set Size (AFSS). First, AFS and AFP provide information regarding the probability of an object eliciting a specific action. Second, AFSS measures the total number of affordances associated with each object. A series of analyses demonstrated that our affordance measures were distinct from other measures of relatedness (e.g., cosine similarity and forward association strength). Based on these findings, we conclude that affordance properties likely reflect a separate construct. Finally, we have developed a corresponding *R Shiny* application which facilitates exploration of the final norm set and which ensures that these norms are freely accessible.

We believe this work makes substantive empirical and methodological contributions and provides an important measure which will be useful to future research investigating questions surrounding memory, language, and perception. This work is original and not under review elsewhere, and we disclose no conflicts of interest. We look forward to hearing about the suitability of our manuscript in *Behavior Research Methods*.

Sincerely,

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