

Peer Review

Review of: "The Uncanny Valley Phenomenon: Where Is the Categorical Boundary Between Categorization Difficulty and Categorization Failure?"

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This commentary critically examined the categorization failure hypothesis underlying the uncanny valley phenomenon proposed by Sasaki et al. (2025). In particular, it clarified the common and distinct aspects of this hypothesis in comparison to the categorization difficulty hypothesis. Additionally, it introduced an alternative account, the stranger-avoidance hypothesis, and provided future directions for studies explaining the uncanny valley phenomenon. Overall, this article is well-organized and contributes to expanding the previous work by Sasaki et al. (2025). To enhance clarity, I would like to suggest that the authors address the following points.

- The explanation of the categorization difficulty hypothesis seems to be more aligned with the stranger-avoidance hypothesis (p. 2). It seems unnecessary to link the categorization difficulty hypothesis with the stranger-avoidance hypothesis in the first point.
- Regarding the following sentence, “3. Priming operations increase processing fluency as long as categorization is executed, but if categorization fails (in the categorization failure hypothesis), there is no categorization processing to be facilitated, so they have no such effect” (p.4), the explanation is a bit hard to follow. This statement implies that priming enhances processing fluency only when categorization is successful. However, processing fluency, such as perceptual fluency, is generally enhanced by priming regardless of categorization. Notably, the term “processing fluency” is used differently within this statement: in the first part, it refers to general processing fluency, while in the latter part, it specifically means categorization processing fluency. To avoid confusion, it would be clearer to explicitly distinguish between these two meanings.

- The following sentence, “the critical question we the categorization-based accounts researchers should tackle together is what cognitive processes are engaged when categorization becomes difficult (p.6)”, needs clearer structure.

Declarations

Potential competing interests: No potential competing interests to declare.