

(Mis-)Interpreting the Vagueness of Psychological Concepts: Reply to Ng and Litson (2025)

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Abstract

In our recent paper, we argued that psychological concepts are inherently vague and that this vagueness cannot be circumvented. While the commentary by Ng and Litson (2025) raises important issues, it rests on a misinterpretation of our central claim. Here, we clarify our position by distinguishing vagueness from arbitrariness, imprecision, and ambiguity, and explain why there is no contradiction between accepting the vagueness of psychological concepts and striving for greater conceptual clarity.

Keywords: vagueness; psychological concepts; conceptual clarity; replication crisis; theory crisis; universality crisis

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It is certainly true that provocative claims often get rewarded in academic research and that this is a problem for our discipline (Hoekstra & Vazire, 2021). This is why we would find it deeply worrying if our paper (Huttmacher & Franz, 2025) could indeed be seen by the scientific community “as an illustrative example of how bold or exaggerated claims are incentivized,” as argued by Ng and Litson (2025, p. XX). We were not trying to be provocative; we were trying to make a point – namely, that there is an inherent vagueness to psychological concepts that cannot be circumvented.

In their commentary, Ng and Litson state that we “fail to explicitly define vague(ness)” (p. XX). This is puzzling, as they themselves cite our definition: As we write, psychological concepts are inherently vague “in the sense that their meanings (e.g., ‘What does ‘stress’ mean?’) and their rules for application (e.g., ‘Is X an instance of someone being stressed?’) are indeterminate” (Huttmacher & Franz, 2025, p. 222). When stating that psychological concepts are inherently vague in this sense, we did not mean to suggest that how a concept is defined and applied depends solely on personal choice and convention rather than principled criteria (*arbitrariness*), that there is no way of giving exact (operational) definitions of psychological concepts in a given context (*imprecision*), or that it is in principle impossible to disentangle the different meanings of psychological concepts (*ambiguity*). As we see it, the vagueness of psychological concepts stems from the fact that these concepts shift as contexts, languages, and social practices shift – making them *moving targets* (Hacking, 2007). Determining the degree to which specific psychological concepts fluctuate across time and contexts, and the conditions under which they remain (relatively) stable, is ultimately an empirical issue. Our main point was to explain why this kind of inherent vagueness exists in the first place.

Ng and Litson also see a contradiction between our view that concepts are inherently vague and our call for greater conceptual clarification. We see no such contradiction. We firmly believe that the practices of psychological science can be improved. We also believe that the

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clarity of psychological concepts can be improved, using tools ranging from ordinary-language analysis to modern computational and data-driven methods (e.g., Wulff & Mata, 2025). While this may help to (temporarily) reduce the indeterminacy of psychological concepts, however, it will not lead us to a point where we can determine, once and for all, what psychological concepts are – as these concepts will continue to be *on the move*. Hence, clarification is not about eliminating vagueness completely and permanently, but about making explicit the assumptions and boundaries relevant to a given theory or investigation in a particular setting at a particular point in time. Accepting this may require some tolerance of ambiguity, but it may at least spare us disappointment upon realizing fifty or one hundred years from now that still not all researchers agree on what exactly certain concepts mean and to which cases they apply.

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