

Target Article: Grounded procedures: A proximate mechanism for the psychology of cleansing and other physical actions

Target Article Authors: Spike W. S. Lee and Norbert Schwarz

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Commentary Title: Leveraging Individual Differences to Understand Grounded Procedures

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## **ABSTRACT**

We applaud the goals and execution of the target article, but note that individual differences do not receive much attention. This is a shortcoming because individual differences can play a vital role in theory testing. In our commentary, we describe programs of research of this type and also apply similar thinking to the mechanisms proposed in the target article.

Lee and Schwarz (2020) push the work on cleansing forward by providing a cohesive theoretical account of grounded procedures of separation (versus connection) that organizes the diversity of findings in this area while suggesting new directions for research. Linking cleansing to a broader class of separation procedures is a meaningful development, and is likely to propel this literature into a stronger theoretical context. Yet, issues of mechanism remain uncertain. This is in part due to the diversity of findings that exist (Lee & Schwarz, 2020, count some 500 effects focused on cleansing) and in part because a number of different processes could be responsible for the effects of an independent variable on a dependent variable, particularly in the domain of embodied cognition. In this context, individual differences have a great deal to offer in that they can target the mechanisms thought to be involved in a way that experiments cannot (Underwood, 1975). In our commentary, we highlight the value of individual difference approaches to grounded cognition while speaking to the mechanisms thought to be involved in cleansing phenomena.

Experimental methods – especially in social psychology, which favors the between-subjects design – can be finicky and unreliable, leading to replicability issues (Fetterman, 2016). Also, the results of these studies often have unknown external validity. One deceptively simple way of complementing the experimental approach, in embodiment research, is to turn the relevant behavior (or skill: Herbert & Pollatos, 2012) into an individual difference. If cleansing has psychological meaning, for example, individuals who clean themselves more often or who desire to clean themselves more often should differ in other ways that will allow us to understand the psychological functions of cleansing. Similar approaches have been taken with respect to other bodily gestures such as arm-crossing. Although some research had suggested that crossing one's arms might serve as a signal of pride, Fetterman et al. (2015) thought it more likely that arm-

crossing, like other “closed” postures, is allied with defensive forms of motivation. To test this idea, Fetterman et al. (2015) designed an arm-crossing questionnaire that simply asked individuals, in several ways, how often they cross their arms and feel like crossing their arms. As hypothesized, individuals who engaged in this gesture more frequently were socially submissive and averse to taking both social and physical risks. The correlates of cleansing frequency are relatively unknown, but relevant studies would provide important clues into why this behavior is performed as well as what psychological functions that it serves.

Individual differences can also provide key insights into the mechanisms involved in a particular experimental effect. To the extent that purity concerns motivate cleansing behavior, for example, individuals who value purity more – as a moral foundation (Graham et al., 2013) – should display the effect to a greater extent. Indeed, one might find that individuals low in purity concerns do not show the effect at all. It is difficult to overstate the explanatory value of such a pattern. First, it would establish moderator conditions for the phenomenon, which is an important next generation question in embodiment research (Meier et al., 2012), particularly given the heterogeneity in effect sizes documented by Lee and Schwarz (2020). Second, it would provide critical evidence for mechanism: If purity concerns are involved, as is proposed, then individuals who have such concerns to a greater extent *should* display the phenomenon to a greater extent. If they do not, one might need to rethink the mechanism that links the manipulation to the dependent measure (Underwood, 1975).

As an example of this type, consider Study 2 of Fetterman et al. (2016). Meier et al. (2004) had shown that negative words were evaluated more quickly when in a black font color and positive words were evaluated more quickly when in a white font color. Meier et al. (2004) proposed that the relevant mechanism was metaphoric cognition because darker colors are metaphorically bad

(e.g., “dark times”) and lighter colors are metaphorically good (e.g., “bright person”). If such effects are driven by metaphoric cognition, then people who use metaphors more often – in their everyday speech and thought – should be more susceptible to effects of this type. Fetterman et al. (2016) examined this hypothesis by creating a Metaphor Use Measure that asked individuals whether they would use literal (e.g., “I was very sad”) or metaphoric (“my heart was broken”) language to characterize a series of events and feelings. There were 30 of these pairs and individuals were consistent in their tendencies toward literal versus metaphoric conceptions. Of particular importance, Fetterman et al. (2016) found that assigning relatively neutral words to a lighter (versus darker) font color resulted in more positive evaluations, but *only* among individuals who tend to think, speak, and write metaphorically. These findings, which are displayed in Figure 1, confirm the relevance of metaphoric thinking to the phenomena identified by Meier et al. (2004).

[Figure 1 about here]

Figure 1. Word evaluations as a function of font color and Metaphor Usage ( $\pm 1 SD$ ), recreated from Fetterman et al. (2016).

The cleansing literature, we suggest, would benefit from similar analyses because a number of mechanisms have been proposed, but definitive individual difference studies have not been consistently carried out. If the phenomena previously identified (e.g., Schnall et al., 2008) co-opt the disgust system, the relevant effects should be more pronounced among disgust-sensitive individuals. If they involve embodiment or metaphor, they may be more pronounced among individuals who exhibit greater embodiment (Häfner, 2013) or who use metaphors more often (Fetterman et al., 2016). As described, the psychological causes of cleansing behavior seem to involve avoidance motivation and, if so, the relevant effects should interact with avoidance

motivation rather than approach motivation (Carver, 2006). On the other hand, the consequences of cleansing may involve mechanisms (like psychological separation) that are more difficult to characterize and an individual difference approach could help in clarifying these processes. In general, then, we suggest that individual differences can play a key role in theorizing and mechanism evaluation within the cleansing literature specifically and embodied literature more broadly.

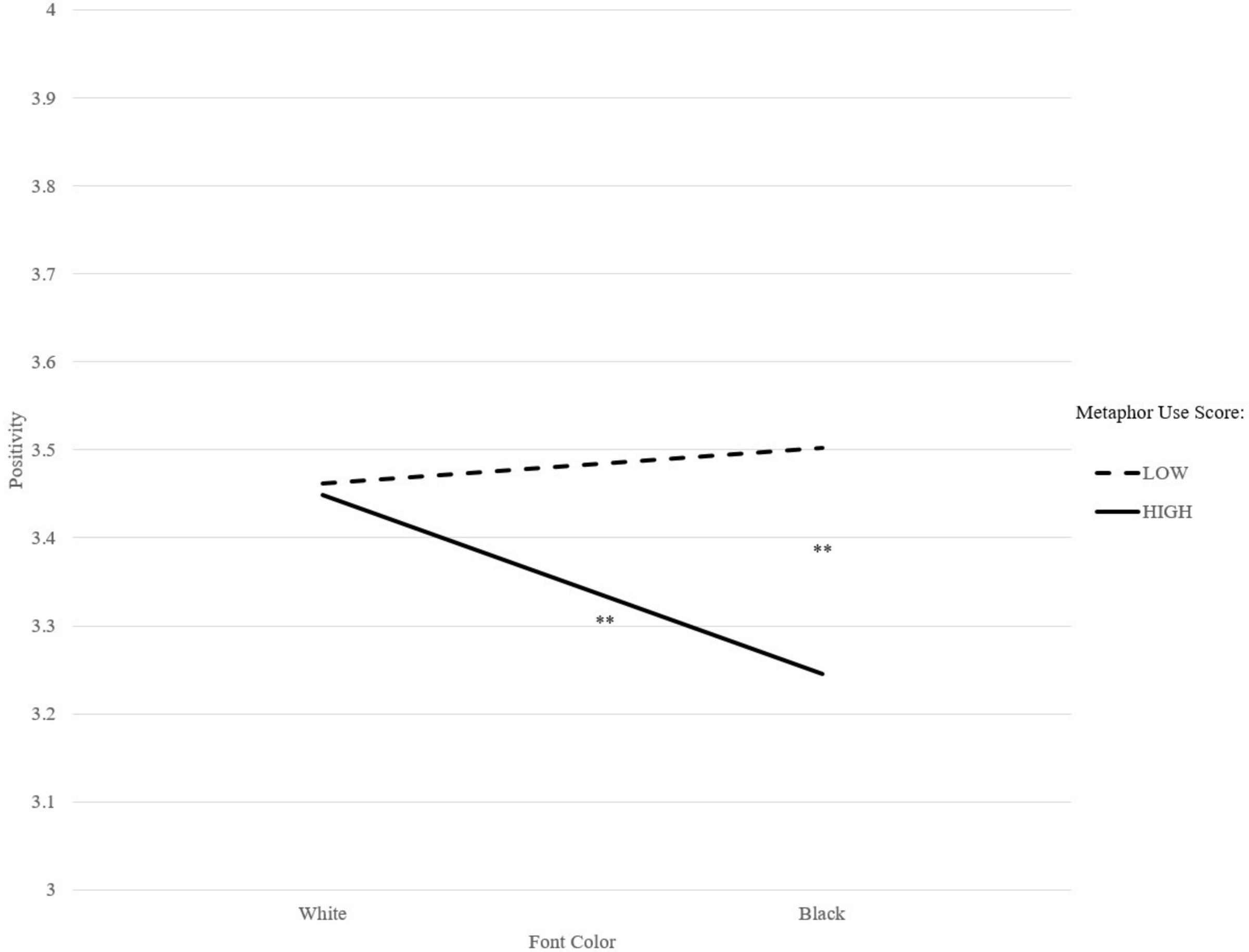
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Note: \*\* =  $p < .01$  for simple slopes test