Title: Does Meditation Alter Awareness of Body Space?

Presenting Author: Emily Bloesch

Author(s): Nathan R. Houle, Central Michigan University, Darwin J. M. Jacobs, Central Michigan University, Jacob S. Aday, Central Michigan University, Romualdo R. Ancog, Central Michigan University, Alexander L. Kahmark, Central Michigan University, Melanie J. Piedra, Central Michigan University, Katarina L. Woodman, Central Michigan University, Abigail M. Shepard, Central Michigan University, Christopher C. Davoli, Central Michigan University, Emily K. Bloesch, Central Michigan University

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Individuals often report a sense of “boundlessness” while meditating – as if they have lost the distinction between their bodies and the external environment. One boundary our brain constructs that is integral to our sense of bodily self is peripersonal space (PPS), which is the near-body space with which one can immediately interact. PPS’s physical extent has been shown to be flexibly adaptive in response to mental imagery and imagined distortions in body schema. Given that many guided meditations utilize body-based mental imagery, we hypothesized that alterations in the extent of PPS may underlie perceived changes in personal boundaries during meditation. To test this, we recruited novice meditators who were assigned to either one of two visualization meditation conditions or one of three control conditions (progressive muscle relaxation, mind-wandering, or a sham meditation). Both before and after meditating, participants completed a spatial language task that has been shown to reflect PPS boundaries via the demonstratives used to describe objects’ relative position in space (i.e., “this” vs. “that”). Our results help to explain the underlying role of implicit and explicit mechanisms of PPS in giving rise to meditation-induced “boundlessness.” We also consider our findings from the viewpoint of task-specific demands of meditation, such as reduced visual and proprioceptive input, and the relative contribution of subjective factors like the perceived impact of the meditation session. Implications for understanding and treating disturbances in spatial judgments relative to oneself in the context of psychological disorders and aging will be discussed.