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Corrigendum

Corrigendum: Investigation of advanced mindfulness meditation cessation experiences using EEG spectral analysis in an intensively sampled case study. [Neuropsychologia (2023) 190, 108694]

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The authors wish to provide additional discussion to the article mentioned above to enhance understanding of the generalizability of the reported results:

Additional Discussion:

We would like to acknowledge critiques by Anālayo (2020, 2021) regarding the meditation practice of Daniel Ingram (DI), a co-author and the participant in the published case study. Specifically, a key criticism by Anālayo (2020, 2021) is that DI tends to conflate subjective experiences from daily life with profound "insight knowledge", thereby departing from the established framework (namely the *Visudddhimagga*) of describing these states as emerging only during deep insight meditation. The point is relevant to our article as we report results related to "cessation" experiences by DI, and these experiences are considered to be the outcome of meditative progress through the stages of insight meditation. Hence, a potential matter of contention is whether cessation experiences in our case study accurately reflect the experience described in historical/Buddhist frameworks. This consideration also relates to the validity of our EEG results and the potential of our study to establish a foundation for future research on advanced meditation.

The participant in the case study (DI) was selected based on the self-reported ability to incline towards "cessations" as the target of meditation. This claim was based on the participant's 26 years of meditation experience in a variety of meditative traditions – including insight meditation. The participant also graded the phenomenological quality of experienced and identified "cessations" in the study, using a grading system that parallels canonical descriptions of these events (Ñāṇamoli, 2010). These measures rely on the accuracy of the participant's self-report. In general, any study on expert meditators must rely on self-reported experience of the meditator (Davidson and Kaszniak, 2015). This makes a neurophenomenological study like ours especially important – as these types of studies can provide empirical evidence to either substantiate or falsify the association between self-reported experiences and neural measures. In the published study, we found a statistically reliable association between self-reports of cessation and neural activity – identifying a potential neural correlate of the phenomenon. Importantly, the articles by Anālayo (2020, 2021) also do not directly object to the criteria used to grade the cessation phenomenology. There is disagreement about the nature of cessations and how they might occur and future research should further evaluate these possibilities (Sayadaw, 1991). Additionally, although whether daily life experiences can or should be compared to deep insight knowledge is a topic of debate (and has been since ancient times), the comparison itself does not render the practice of insight meditation by DI invalid.

The reader of our article may also benefit from noting several points that we have underscored in the *Limitations* section of our article. Firstly, we emphasized that "*we rely on the phenomenology reports of a single participant from a specific tradition of meditation practice, to define the quality of cessations, and as with all subjective reports, these reports may suffer from response biases. Future studies with multiple participants of varying tradition and proficiency in levels of meditation practice will allow for the examination of the broader validity of the current findings.*" We also mention that "*Despite this case-study design being a major strength of the current study, such a protocol simultaneously reduces the generalizability of the current results, that is, it may be that the alpha suppression effect observed may be idiosyncratic to the participant.*". We hope that the study's results will inspire further work on "cessations" and other forms of advanced meditation, and that advanced meditation can be researched in large enough groups of participants to enable group-level statistics.

Finally, we welcome Bhikkhu Anālayo, the author of the critique articles (Anālayo, 2020, 2021) and a scholar and teacher of Buddhist meditation practice, to participate in our research. Our ongoing work aims to inform the science of advanced meditation, and the present discussion further highlights the need for replication of our results with meditation practitioners from various disciplines and traditions.

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