The brain on silent: mind wandering, mindful awareness, and states of mental tranquility

Log in for access to journal content if you are an NYAS member.
Note: you will be redirected to www.nyas.org for access.


ANNUAL REVIEWS SERIES

TRANSACTIONS OF THE NEW YORK ACADEMY OF SCIENCES
Mindfulness is simply a clear, non-judgmental awareness of your inner and outer worlds. In particular, it's an awareness of the flow of experience in your inner world – an alert observing of your thoughts, emotions, body sensations, desires, memories, images, personality dynamics, attitudes, etc. Then those states of mind are what is present in awareness, and you can be mindful of that. It is alright to have a gentle quality of investigation, of curiosity, but this is not the time to psychoanalyze yourself – you can get caught up in investigation just like any other mental content. The faculty of voluntarily bringing back a wandering attention, over and over again, is the very root of judgment, character, and will. No one is compos sui [master of himself] if he have it not. Mind wandering and mindfulness are often described as divergent mental states with opposing effects on cognitive performance and mental health. Spontaneous mind wandering is typically associated with self-reflective states that contribute to negative processing of the past, worrying/fantasizing about the future, and disruption of primary task performance. In one physiological study, mind-wandering, and mindfulness are reported to differ even when the brain remains “silent” [7]. Another showed that crossing the hands over the midline impairs the ability to judge the order of a pair of tactile stimuli correctly when they are delivered in rapid succession to each hand. A “mind-wander” rest state was the baseline state in this case, and comparisons were made also between the adepts and a group of novices who had brief instructions how to perform each meditative practice. As seen below, Experienced meditators demonstrate decreased DMN activation during meditation. Brain activation in meditators > controls is shown, collapsed across all meditations (relative to baseline). (A and B) BOLD activations were found to be greater in the left mPFC and PCC for adepts. There is some evidence that mind wandering is adaptive. One study (for example) by Jonathan Schooler and colleagues demonstrates that increased mind wandering during a boring task increased creativity.