Implications of Absent-minded Scrolling as a Potential Form of Source-Error Confabulation

Sanjana Iyer

University of Toronto

COG250: Introduction to Cognitive Science

Mark D. Miller

24th February, 2025

Essay Proposal

Absent-minded scrolling is likened to a sort of extended mind-wandering (Christoff & Irving, 2016) due to their common aspects of lacking strong task-related attentional cues and lack of top-down attentional constraints. I aim to show that absent-minded scrolling as extended mind-wandering is a form of maladaptive source-error confabulation, and discuss its implications towards the internalization of increasingly polarising content.

Firstly, I refer to Dayer's (2024) paper to draw distinctions between absent-minded scrolling and doomscrolling in that the latter necessitates a resultant state of emotional distress and general anxiety at the end of the session whereas absent-minded scrolling is usually just a neutral-valanced coping mechanism to deal with low arousal and proneness to boredom (Lukoff, 2018; Ottaviani, 2015).

Then, I use arguments from Clark and Chalmers' (1998) definition as well as Heersmink et al.'s (2015) ideas of first and second wave extended cognition to expose absent-minded scrolling as a kind of extended mind-wandering, including studies from Bruineberg and Fabry (2021/2022) on the same. Thus, I suggest that it can be reasonably inferred that extended mind-wandering through incessant gadget-use implies the reliability of the source and trust in the information gathered as one trusts a bio-organ, based on the definition of the extended mind.

The crux of my argument lies in juxtaposing this subconsciously internalised information derived from extended mind-wandering with a specific form of confabulation, viz. source-error or source-monitoring error (SE/SME), presumed to be caused by lesions to the frontal and medial-temporal lobes of the brain (Johnson and Raye, 1998) using evidence from Baddeley's memory model.

I conclude that absent-minded scrolling tricks the brain into believing that the beliefs / ideas perceived externally, are actually endogenously generated thoughts. Lastly, I discuss the implications of such type of false endogenous attribution on the implicit internalisation of radicalised / polarised content one is exposed to in online short form content.

References

Bruineberg, J., & Fabry, R. (2022). Extended mind-wandering. *Philosophy and the Mind Sciences*, *3*. https://doi.org/10.33735/phimisci.2022.9190

Christoff, K., Irving, Z. C., Fox, K. C. R., Spreng, R. N., & Andrews-Hanna, J. R. (2016). Mind-wandering as spontaneous thought: A dynamic framework. *Nature Reviews Neuroscience*, *17*(11), 718–731. https://doi.org/10.1038/nrn.2016.113

Clark, A., & Chalmers', D. (n.d.). *The Extended Mind*.

Dayer, A. (n.d.). *Cognitive and Information Sciences*.

Heersmink, R. (2015). Dimensions of integration in embedded and extended cognitive systems. *Phenomenology and the Cognitive Sciences*, *14*(3), 577–598. https://doi.org/10.1007/s11097-014-9355-1

Johnson, M. K., & Raye, C. L. (1998). False memories and confabulation. *Trends in Cognitive Sciences*, *2*(4).

Lukoff, K., Yu, C., Kientz, J., & Hiniker, A. (2018). What Makes Smartphone Use Meaningful or Meaningless? *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, *2*(1), 1–26. https://doi.org/10.1145/3191754

Ottaviani, C., Shahabi, L., Tarvainen, M., Cook, I., Abrams, M., & Shapiro, D. (2015). Cognitive, behavioral, and autonomic correlates of mind wandering and perseverative cognition in major depression. *Frontiers in Neuroscience*, *8*. https://doi.org/10.3389/fnins.2014.00433