The Paradox of Boredom Economy

Abstract

Today, the boredom economy is the marketplace for cognitive transactions, in which attentional engagement is the currency exchanged. Grounded in both philosophical and recent empirical studies, this paper, by channeling boredom's function through theories of attentional biases, introduces the paradox of why people pay attention to social media despite knowing it is boring. To demonstrate how social media exploits the paradox for profit, I offer two attempts to dissolve the paradox and conclude that it is better to accept that we do, in fact, knowingly indulge in boredom.

Introduction

Today, the boredom economy is the marketplace for cognitive transactions where attentional engagement is the currency exchanged. Social media has commodified boredom by creating endless content to manipulate users and capture an increasing share of the global attention market. Our phones have become our first resort whenever boredom hits; in particular, social media platforms such as TikTok and Instagram are the go-to for many. People spend hours scrolling, watching what seems like an endless stream of AI- or human-generated videos. As Tam and Inzlicht report, more than "5 billion people worldwide are using social media in 2024, spending an average of 151 minutes per day on it—up from 40 minutes in 2015" (Tam and Inzlicht, 2024). The emergence of AI-generated content—AI slop—intensifies this condition. The proliferation of AI-generated "industrial slop farms" across TikTok, YouTube, Meta, and X further accelerates a collapse in epistemic trust.

Over the past decade, cognitive models have highlighted attentional difficulties in boredom, including poor attentional control and difficulty sustaining attention (Eastwood et al., 2012; Tam et al., 2021). In recent years, a functional account of boredom has gained interest in analyzing boredom as a regulatory mechanism (Elpidorou, 2014; 2018; 2021; Bench and Lench, 2013); Danckert, 2019). According to Danckert and Elpidorou (2023), "boredom has an important informational function insofar as it indicates a mismatch between desired and experienced cognitive engagement" (Danckert and Elpidorou, 2023, 494). This mismatch

consequently motivates actions that escape from boredom. Can current theories of boredom explain prolonged periods of scrolling? In theory, shouldn't boredom stop us from watching meaningless AI slop? Are there difficulties of attentional control and sustaining attention involved? The role of attention in boredom does not fit into the traditional top-down and bottom-up dichotomy. Both processes would suggest that the subject reallocate attention to escape from boredom. In fact, recent work has shown that the dichotomy is not empirically credible (Awh et al, 2012; Shomstein et al., 2022; Todd and Manaligod, 2018)

In this paper, I argue that the scrolling experience is paradoxical in theories of attention and boredom. In Section 1, I set the stage by analyzing the cognitive function of boredom. In Section 2, Following Wu (2025), I introduce the idea of historical bias to illustrate boredom's automaticity, including the habitual bias and learned reward bias. In Section 3, I lay out the paradox and assess three possible solutions.

1. The Cognitive Function of Boredom

Elpidorou characterizes boredom as follows:

> "Boredom is characterized by attentional difficulties, a perceived dissatisfaction with our current situation, and a felt desire to change our situation. It typically arises in situations that are perceived to be monotonous or lacking in novelty or meaning, that fail to engage sufficiently or optimally our cognitive resources, or that are low in perceived autonomy" (Elpidorou, 2023, 961).

Boredom's cognitive profile is commonly associated with attentional difficulties, such as difficulty sustaining attention (Eastwood et al., 2012; Harris, 2000; Wallace et al., 2003; Westgate and Wilson, 2018), as studies have shown that the experience of boredom can be affected by manipulating attention (Damrad-Frye and Laird, 1989). The dissatisfaction of boredom produces a desire to escape, and the volitional structure includes "a strong desire to alleviate one's experience of boredom by engaging in an alternative task or situation" (Elpidorou, 2023, 964; see also Van Tilburg and Igou, 2012, 2016, 2017b; Van Tilburg et al., 2013). The motivation to escape can take at least two forms: (i) a desire to reestablish meaningfulness, and

(ii) a desire to alleviate aversion by shifting attention away from high opportunity-cost tasks (Kurzban et al., 2013; Boylan et al., 2021; Wolff et al., 2020). Here, "opportunity costs" refer to the fact that attention could be better spent elsewhere. This is supported by Struk et al. (2020), who show that "rich environments" with more alternatives can paradoxically produce more boredom than constrained ones, because opportunity costs rise when alternatives are available. Under the functional theory, boredom is a regulatory mechanism: it signals that one's cognitive engagement is suboptimal and motivates corrective action (Danckert et al., 2018a, 2018b; Elpidorou, 2014, 2018a, 2018b; Van Tilburg and Igou, 2011, 2012; Wolff and Martarelli, 2020). The core concept is satisfactory cognitive engagement: a match between (a) direct engagement and (b) acceptable cognitive costs. Failure to match produces boredom and motivates restoring engagement either by changing activities or by re-evaluating and re-engaging. The function, in short, is to "alter the opportunity costs associated with the task in hand" (Elpidorou, 2023, 964).

2. Boredom, Automaticity, and Attention

With boredom's cognitive function in mind, why do people turn their attention to start scrolling in the first place? In this section, I focus on the theory of attentional biases to elucidate the selection problem in boredom. Boredom's attentional profile does not neatly fit the top-down/ bottom-up dichotomy. Top-down attention is goal-directed; bottom-up attention is stimulus-driven. Boredom seems to involve agency and evaluation without a determinate goal: the aim is simply to alleviate boredom itself. A growing body of empirical studies has shown that prior experience interferes with current selection (Awh et al., 2012; Shomstein et al., 2022; Todd and Manaligod, 2018). Following Awh et al. (2012) and Wu (2025), a third mechanism is introduced: historical bias. Historical biases include priming, reward, desire, long-term memory, and habitual tendencies. Importantly, historical bias is automatic while integrated with intentional action (Wu, 2025, 248). Habit formation and reward learning are especially relevant. Habits require attention; they can become automatic while still "integrated with intentional control in action." Reward-based bias further intensifies this, since learned rewards can continue to shape selection long after the reward becomes irrelevant (as in Anderson et al.(2011) and Anderson and Yantis (2013)'s reward-learning experiments). This suggests that social media is a learned reward that is

immediately available with minimal effort. When bored, the historical bias directs attention toward scrolling, often as the most cognitively efficient escape. Yet this only explains the initial choice, not the prolonged duration.

3. The Paradox

The paradox can now be stated. A bored subject turns to social media to restore satisfactory cognitive engagement. Social media is selected because it appears to minimize cognitive effort while maximizing immediate reward. But if the dominant content is AI-slop—meaningless and boredom-inducing—then boredom should reappear quickly and prompt disengagement. Yet disengagement does not occur.
So, three points generate the paradox:

(a) Social media content is boring; therefore, subjects should be bored.
(b) Boredom should lead to disengagement.
(c) Subjects do not disengage.

Why pay attention to something boring for prolonged periods as an escape from boredom? Three responses follow:

(1) Reject the claim that social media is boring.
(2) Reject the claim that boredom motivates disengagement.
(3) Accept the paradox: boredom generally impels disengagement, but we do not disengage from boring social media.

The first solution fails because even though valuable content exists, it is comparatively rare and washed away by algorithmic amplification of AI slop, optimized for engagement rather than meaning. Further, empirical work suggests social media intensifies boredom over time (Tam and Inzlicht, 2024). The second solution fails because boredom is closely tied to negative appraisal and attentional difficulties: dissatisfaction leads to disengagement and vice versa. If boredom is present, it should undermine stable attention. Thus, the third solution becomes most

plausible. We accept that boredom and sustained scrolling can co-exist. The key is that scrolling itself is an attentional activity: a deliberate search for meaning, rather than engagement with any single piece of content. In addition, opportunity cost calculations become distorted: leaving social media may feel even more costly, uncertain, or effortful than staying. It becomes safer and easier"to re-evaluate social media and lower one's desired level of engagement than to risk another activity that may disappoint.

Conclusion

The boredom economy describes social media companies exploiting this paradox for profit. Social media's commodification of boredom manipulates attentional selection and generates a causal route to the paradoxical scrolling experience. Grounded in philosophical discourse and empirical studies, this paper frames boredom as a cognitive transaction driven by attentional trade-offs. By channeling boredom's function through theories of attentional biases, I presented the paradox of sustained attention toward boring content and assessed three responses. Rejecting the first two solutions supports a third: we do, in fact, knowingly indulge in boredom. Future inquiry into this paradox may clarify procrastination, weakened free will, and wishful thinking in platform-mediated life.

References

Anderson, B. A. (2016). The attention habit: How reward learning shapes attentional selection. Annals of the New York Academy of Sciences, 1369(1), 24-39.

Awh, E., Belopolsky, A. V., & Theeuwes, J. (2012). Top-down versus bottom-up attentional control: a failed theoretical dichotomy. *Trends in Cognitive Sciences*, 16(8), pp.437–443.

Bench, S.W. and Lench, H.C. (2013). On the function of boredom. *Behav. Sci*. 3, 459–472

Barkley, J. E. & Lepp, A. The effects of smartphone facilitated social media use, treadmill walking, and schoolwork on boredom in college students: Results of a within subjects, controlled experiment. Comput. Hum. Behav. 114, 106555 (2021).

Bai, J. et al. (2021). The relationship between the use of mobile social media and subjective well-being: The mediating effect of boredom proneness. Front. Psychol. 11, 568492

Barkley, J. E., & Lepp, A. (2021). The effects of smartphone facilitated social media use, treadmill walking, and schoolwork on boredom in college students: Results of a within subjects, controlled experiment. Computers in Human Behavior, 114, 106555.

Bickel, L. (2024). Why the performance of habit requires attention. Mind & Language, 39(2), 260-270.

Boylan, J., P. Seli, A.A. Scholer, and J. Danckert. (2021). Boredom in the COVID-19 pandemic: Trait boredom proneness, the desire to act, and rule-breaking. Personality and Individual Differences 171: 110387.

Catedrilla, J. et al. (2020). Loneliness, boredom and information anxiety on problematic use of social media during the COVID-19 pandemic. In Proc. of the 28th international conference on computers in education 52–60

Danckert, J. (2019). Boredom: Managing the delicate balance between exploration and exploitation. In Boredom Is in Your Mind: A Shared Psychological-Philosophical Approach (Velasco, J., ed.), pp. 37–53, Springer.

Danckert, J., T. Hammerschmidt, J. Marty-Dugas, and D. Smilek. (2018a). Boredom: Underaroused and restless. Consciousness and Cognition 61: 24–37.

Danckert, J., J. Mugon, A. Struk, and J. Eastwood. (2018b). Boredom: What is it good for? In The function of emotions, ed. H. Lench, 93–119. Cham, Switzerland: Springer.

Danckert, J., & Elpidorou, A. (2023). In search of boredom: beyond a functional account. Trends in Cognitive Sciences, 27(5), 494-507.

Damrad-Frye, R., and J.D. Laird. (1989). The experience of boredom: The role of the self-perception of attention. Journal of Personality and Social Psychology 57: 315–320.

Donati, M. A., Beccari, C. & Primi, C. (2022). Boredom and problematic Facebook use in adolescents: What is the relationship considering trait or state boredom? Addict. Behav. 125, 107132.

Eastwood, J.D. et al. (2012). The unengaged mind: defining boredom in terms of attention. *Perspect. Psychol.* Sci. 7, 482–495

Elpidorou, A. (2021). Is boredom one or many? A functional solution to the problem of heterogeneity. *Mind Lang.* 36, 491–511

Elpidorou, A. (2023). Boredom and Cognitive Engagement: A Functional Theory of Boredom. *Rev.Phil.Psych*. 14, 959–988.

Elpidorou, A. (2014). The bright side of boredom. *Front. Psychol*. 5, 1245

Elpidorou, A. (2018a). The good of boredom. Philosophical Psychology 31 (3): 323–351.

Elpidorou, A. (2018b). The bored mind is a guiding mind: Toward a regulatory theory of boredom. Phenomenology and the Cognitive Sciences 17 (3): 455–484.

Geana, A., R. Wilson, N. Daw, and J. D. Cohen. (2016). Boredom, information-seeking and exploration. In Proceedings of the 38th Annual Meeting of the Cognitive Science Society (Vol. 1),ed. A. Papafragou, D. Mirman, D. Grodner, & J. Trueswell, 1751–1756. Austin, TX: Cognitive Science Society

Harris, M.B. (2000). Correlates and characteristics of boredom proneness and boredom. Journal of Applied Social Psychology 30: 576–598.

Iannattone, S., Mezzalira, S., Bottesi, G., Gatta, M. & Miscioscia, M. (2024). Emotion dysregulation and psychopathological symptoms in non-clinical adolescents: The mediating role of boredom and social media use. Child Adolesc. Psychiatry Ment. Health 18, 5.

Kurzban, R., A. Duckworth, J.W. Kable, and J. Myers. 2013. An opportunity cost model of subjective effort and task performance. Behavioral and Brain Sciences 36 (6): 661–679.

Leventhal, A. M., Martin, R. L., Seals, R. W., Tapia, E., & Rehm, L. P. Investigating the dynamics of affect: Psychological mechanisms of affective habituation to pleasurable stimuli. Motiv. Emot. 31, 145–157 (2007).

Luo, Y., Zhang, X., Jiang, H. & Chen, X. (2022)The neural habituation to hedonic and eudaimonic rewards: Evidence from reward positivity. Psychophysiology 59, e13977.

Malik, L. et al. (2023). Mediating roles of fear of missing out and boredom proneness on psychological distress and social media addiction among Indian adolescents. J. Technol. Behav. Sci. 9, 224–234.

Madsen, D. Ø., & Puyt, R. W. (2025). The 7Vs of AI Slop: A Typology of Generative Waste. Available at SSRN 5558018.

O'Brien, W. (2014). Boredom. Analysis 74: 236–244.

Seger, C. A. (2018). Corticostriatal foundations of habits. Current Opinion in Behavioral Sciences, 20, 153-160.

Shomstein, S., Zhang, X., & Dubbelde, D. (2022). Attention and platypuses. *Wiley Interdisciplinary Reviews: Cognitive Science.*

Struk, A. A., Scholer, A. A., Danckert, J. & Seli, P. (2020). Rich environments, dull experiences: how environment can exacerbate the effect of constraint on the experience of boredom. Cogn. Emot. 34, 1517–1523.

Tam, K.Y. et al. (2021). Attention drifting in and out: the boredom feedback model. *Pers. Soc. Psychol*. Rev. 25, 251–272

Tam, K. Y., & Inzlicht, M. (2024). People are increasingly bored in our digital age. Communications psychology, 2(1), 106.

Todd, R. M., Cunningham, W. A., Anderson, A. K., & Thompson, E. (2012). Affect-biased attention as emotion regulation. Trends in cognitive sciences, 16(7), 365-372.

Todd, R. M., & Manaligod, M. G. M. (2018). Implicit guidance of attention: The priority state space framework. *Cortex*, 102, pp. 121–138.

Tam, K. Y. Y. & Inzlicht, M. Fast-forward to boredom: How switching behavior on digital media makes people more bored. J. Exp. Psychol. Gen. https://doi.org/10.1037/xge0001639 (2024).

Tang, J., & Wikstrom, P. (2024). Side job, self-employed, high-paid: Behind the AI slop flooding TikTok and Facebook. The Conversation.

Van Tilburg, W.A., and E.R. Igou. (2011). On boredom and social identity: A pragmatic meaning-regulation approach. Personality and Social Psychology Bulletin 37: 1679–1691.

Van Tilburg, W.A., and E.R. Igou. (2012). On boredom: Lack of challenge and meaning as distinct boredom experiences. Motivation and Emotion 36 (2): 181–194.

Van Tilburg, W.A., and E.R. Igou. (2016). Going to political extremes in response to boredom. European Journal of Social Psychology 46 (6): 687–699.

Van Tilburg, W.A., and E.R. Igou. (2017a). Boredom begs to differ: Differentiation from other negative emotions. Emotion 17 (2): 309–322.

Van Tilburg, W.A., and E.R. Igou. (2017b). Can boredom help? Increased prosocial intentions in response to boredom. Self and Identity 16 (1): 82–96.

Van Tilburg, W.A., E.R. Igou, and C. Sedikides. (2013). In search of meaningfulness: Nostalgia as an antidote to boredom. Emotion 13 (3): 450–461.

Wallace, J.C., S.J. Vodanovich, and B.M. Restino. (2003). Predicting cognitive failures from boredom proneness and daytime sleepiness scores: An investigation within military and undergraduate samples. Personality and Individual Differences 34 (4): 635–644.

Westgate, E.C., and T.D. Wilson. (2018). Boring thoughts and bored minds: The MAC model of boredom and cognitive engagement. Psychological Review 125 (5): 689–713.

Wolff, W., C.S. Martarelli, J. Schüler, and M. Bieleke. (2020). High boredom proneness and low trait self-control impair adherence to social distancing guidelines during the COVID-19 pandemic. International Journal of Environmental Research and Public Health 17 (15): 5420.

Wu, W. (2025). Attention. 2nd Edition. Routledge.

Wu, W. (2023). On attention and norms: An opinionated review of recent work. *Analysis* (Oxford).