POLITECNICO DI TORINO
Repository ISTITUZIONALE

Am I in Control? How the Design of the TikTok Feed Shapes Users' Sense of Agency

Original
Am I in Control? How the Design of the TikTok Feed Shapes Users' Sense of Agency / Monge Roffarello, A., De Luca, A.. - STAMPA. - (2026), pp. 1-5. (CHI '26: CHI Conference on Human Factors in Computing Systems Barcelona (ESP) 13–17 April, 2026) [10.1145/3772363.3798790].

Availability:
This version is available at: 11583/3008098 since: 2026-04-17T12:58:35Z

Publisher:
Association for Computing Machinery

Published
DOI:10.1145/3772363.3798790

Terms of use:

This article is made available under terms and conditions as specified in the corresponding bibliographic description in the repository

Publisher copyright

(Article begins on next page)

25 November 2026

Am I in Control? How the Design of the TikTok Feed Shapes Users' Sense of Agency

Alberto Monge Roffarello
Dipartimento di Automatica e Informatica
Politecnico di Torino
Torino, Italy
alberto.monge@polito.it

Andrea De Luca
Dipartimento di Automatica e Informatica
Politecnico di Torino
Torino, Italy
s323990@studenti.polito.it

Abstract

Social media platforms increasingly rely on Attention-Capture Damaging Patterns (ACDPs) optimized to maximize user engagement, often at the expense of users' Sense of Agency (SoA) and perceived control. This paper preliminarily investigates how two core ACDPs in TikTok—namely infinite scroll and content autoplay—shape users' SoA at both reflective and experiential levels. By manipulating these patterns and replacing them with small design changes, we conducted a controlled laboratory study in which agency was assessed through self-report measures, interaction logs, and temporal estimation tasks as a proxy for experiential agency. Results indicate that replacing autoplay with explicit playback significantly increases perceived agency and reduces time distortion. In contrast, paginated scrolling produced more subtle quantitative effects, but emerged as the solution most favored by participants. Together, these findings suggest that small feed-level design changes can meaningfully support users' SoA, while also revealing a tension between intervention effectiveness and perceived intrusiveness.

CCS Concepts

• **Human-centered computing** → **Empirical studies in collaborative and social computing**; **Social media**.

Keywords

sense of agency, digital wellbeing, TikTok, attention-capture design

ACM Reference Format:
Alberto Monge Roffarello and Andrea De Luca. 2026. Am I in Control? How the Design of the TikTok Feed Shapes Users' Sense of Agency. In *Extended Abstracts of the 2026 CHI Conference on Human Factors in Computing Systems (CHI EA '26), April 13–17, 2026, Barcelona, Spain.* ACM, New York, NY, USA, 5 pages. https://doi.org/10.1145/3772363.3798790

1 Introduction

Social media platforms operate within an attention economy in which interface design decisions are optimized to maximize time-on-platform and interaction frequency, often at the expense of users' ability to disengage when they intend to do so [17, 18]. Prior work has framed these design decisions through the lens of dark patterns [10], identifying Attention-Capture Damaging Patterns (ACDPs)—such as infinite scroll and content autoplay—that transform social media feeds into "always-on" consumption loops that undermine users' digital wellbeing [18].

Despite growing concern around these patterns, much public and academic discussions of problematic social media use still frequently default to a single, simple target: *reducing screen time*. However, the HCI community increasingly recognizes that the core question is not simply how long people use social media, but what happens to them while they use it, and how specific design decisions shape those experiences [7, 13]. Within this shift, Sense of Agency (SoA)—the feeling of control over one's actions and their outcomes—has emerged as a promising lens for understanding digital wellbeing [3]. However, while prior work has begun to empirically examine how specific social media design mechanisms relate to users' sense of control and agency [2, 14], evidence on how these designs shape the in-the-moment experiential dimension of SoA remains limited.

This work takes a first step toward addressing this gap by experimentally examining how small changes to social media feed design affect users' SoA at both reflective and experiential levels. Using TikTok as a case study, we developed a browser extension that enables controlled modifications of two foundational ACDPs embedded in the "For You" feed: infinite scroll and content autoplay. We conducted a controlled laboratory study using a 2×2 within-subjects design, manipulating (1) Scrolling Mode (Infinite Scroll vs. Paginated Scroll) and (2) Playback Mode (Autoplay vs. Explicit Play). To capture different facets of agency, we combined self-report measures, interaction logs, and temporal estimation tasks.

Our findings provide initial evidence that feed-level design changes targeting common ACDPs are associated with measurable differences in users' perceived SoA. Replacing autoplay with explicit play led to a significant increase in self-reported agency, while replacing infinite scroll with paginated scroll produced more subtle effects: while participants reported increased control, these effects were not statistically robust in our laboratory setting. At an experiential level, users consistently overestimated how long they had been scrolling in the baseline TikTok condition, whereas this temporal distortion was attenuated when ACDPs were replaced with alternative designs. Together, these results suggest that feed-level design patterns shape not only how long users engage, but how much control they feel while doing so. Interestingly, participants described paginated scroll as a gentler and more acceptable intervention than explicit play, highlighting a practical tension between effectiveness and perceived intrusiveness. We conclude by outlining how this preliminary work contributes early empirical evidence on how feed-level design patterns relate to agency-related outcomes,



This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.
CHI EA '26, Barcelona, Spain
© 2026 Copyright held by the owner/author(s).
ACM ISBN 979-8-4007-2281-3/26/04
https://doi.org/10.1145/3772363.3798790

while motivating future in-the-wild studies aimed at disentangling pattern-specific effects from interaction friction and context.

2 Related Work

A dominant framing in both academic discourse and industry practice has equated digital wellbeing on social media with reduced screen time [12]. In response, a wide range of digital self-control tools have been proposed [16], including operating-system-level features such as Apple's Screen Time [1] and Google's Digital Wellbeing [9]. These tools primarily rely on monitoring and limiting time spent on social media, often through usage timers or locks [16].

Despite its popularity, this time-based approach has been increasingly criticized. Researchers now argue that screen-time metrics fail to capture the qualitative dimensions of social media use [13], overlook the deeper psychosocial mechanisms underlying problematic engagement [8], and ignore contexts in which engagement is intentional and valuable [15].

In response, recent research has proposed Sense of Agency (SoA)—the subjective experience of being in control of one's actions and their outcomes [3]—as a more appropriate lens for understanding digital wellbeing than screen time alone [13, 14], arguing that agency more directly captures users' lived experience during interaction.

In parallel, the HCI community has increasingly emphasized the role of interface design in shaping problematic patterns of engagement [11], extending earlier discussions of dark patterns and manipulative design [10] to the context of social media. Monge Roffarello et al. [20] introduced the concept of Attention-Capture Damaging Patterns (ACDPs), providing a taxonomy of recurring design strategies that exploit psychological vulnerabilities to prolong engagement on social media. Similarly, Mildner et al. [17] identified unethical design practices in social networks that aim to keep users continuously engaged ("engaging strategies") while subtly shaping their decision-making ("governing strategies"). Among these design strategies, two of them are particularly relevant for social media newsfeeds: infinite scroll and content autoplay. Infinite scroll removes natural stopping cues by continuously loading new content, reducing opportunities for reflection [20]. Content autoplay, instead, further reduces friction by automatically advancing content without requiring explicit user input [20].

While there is growing agreement that ACDPs can undermine users' SoA [14, 21], much of this evidence is grounded in *reflective judgments* [13], relying on post-hoc self-reports. Psychological research, however, suggests that reflective judgments do not always align with in-the-moment *experiential feelings* [22]. The present study examines both reflective and experiential aspects of agency on social media, investigating how small design changes on TikTok shape these experiences.

3 TikTok Research Panel

To study how feed-level design changes targeting ACDP-related interaction mechanics shape users' SoA on TikTok, we developed a Google Chrome extension named *TikTok Research Panel* (Figure 1). We focused on the web version of TikTok, as directly modifying native mobile applications poses substantial technical barriers and is often impractical in research contexts [18]. Using the web version allowed participants to log in with their personal accounts and thus experience their usual recommendation ecosystem during the study.

The extension currently targets two of the most prominent ACDPs embedded in the TikTok feed—namely *content autoplay* and *infinite scroll*—by allowing them to be replaced with two alternative design choices that have been previously associated with improved digital wellbeing: *click-to-play* [21] and *load more* [19], respectively.

When *click-to-play* is active, TikTok reels are paused by default and require an explicit user action to begin playback (Figure 1B). When *load more* is active, the feed is interrupted after a fixed number of videos and requires an explicit decision to continue scrolling (Figure 1C).

Through its graphical control panel (Figure 1A), the extension allows the researcher to selectively activate the two design alternatives, start and stop logging TikTok usage data, and export interaction logs at the end of each experimental session. The source code of the TikTok Research Panel is publicly available at: *https://git.elite.polito.it/public-projects/tiktok_agency*.

4 Experiment Methodology

Leveraging TikTok Research Panel, we conducted a controlled laboratory study involving 20 participants.

4.1 Metrics

In line with SoA research work in other domains [6], we aimed to capture both participants' reflective judgments of agency and their pre-reflective experiential feelings.

To assess *judgments of agency*, we used the Sense of Agency Scale (SoAS) [24], an 11-item self-report questionnaire measuring both positive and negative agency. To approximate *feelings of agency*, we relied on a measure of *temporal distortion*, defined as the difference between the duration of a usage session perceived by the user and its actual duration. Temporal distortion has been consistently associated with reduced in-the-moment awareness and diminished experiential agency during interaction [4].

Beyond agency-related subjective measures, we used the logging features of the TikTok Research Panel to record the mean interval between scrolls (in seconds), which we treat as an objective indicator of *interaction rhythm*.

4.2 Procedure

The experiment was conducted using the web version of TikTok on a tablet device to approximate the mobile-oriented experience of TikTok consumption. Each session lasted approximately 45–60 minutes in total and was structured as follows.

Upon arrival, participants signed an informed consent form approved by the Institutional Review Board of our university. Then, they logged into their TikTok account on the tablet device used for the study and completed four experimental conditions in a fully counterbalanced order: (a) baseline (standard TikTok interface with *infinite scroll* and *autoplay*); (b) paginated scrolling (*infinite scroll* is replaced by *load more*); (c) explicit playback (*autoplay* is replaced by *click-to-play*); and (d) full control (both *load more* and *click-to-play* are active).

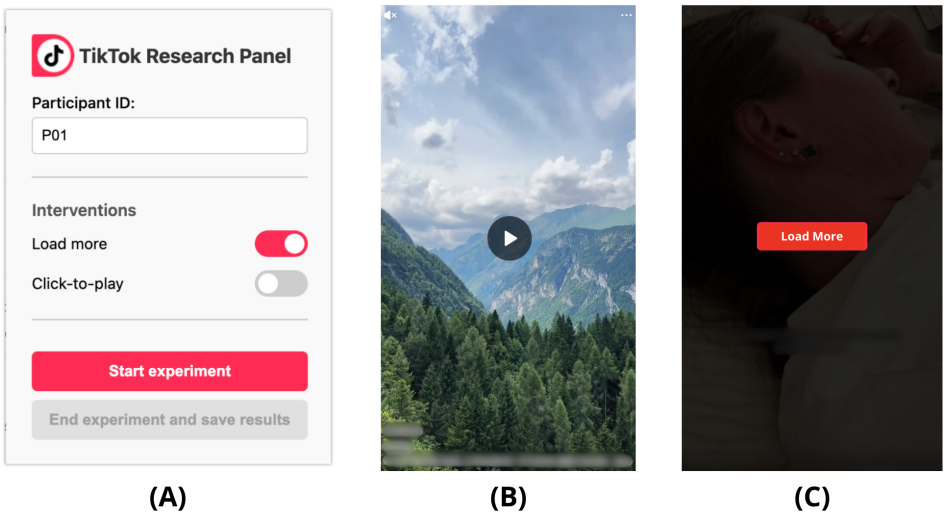

Figure 1: Implementation of the TikTok Research Panel Chrome extension. Through a control panel (A), the extension allows the researcher to replace *content autoplay* with *click-to-play* (B) and infinite scroll with *load more* (C).

For each condition, participants freely navigated their TikTok feed, and were interrupted by the researcher after a randomized duration between 4 and 12 minutes. At the end of each session, participants estimated the duration of the session, and completed a post-condition questionnaire with the SoAS.

After completing all four conditions, participants took part in a debriefing session during which the full purpose of the study was explained, and they were asked about their overall impressions of and preferences among the tested TikTok versions.

4.3 Participants

Participants were recruited through an online screening questionnaire distributed via university-related messaging groups (e.g., Telegram, WhatsApp) and through a snowball sampling process. Participants were required to *(a)* be at least 18 years old; *(b)* own a personal TikTok account; *(c)* have been registered on TikTok for more than three months; *(d)* report a period of regular TikTok use of at least 3–4 months (defined as at least a few times per week); and *(e)* either currently use TikTok or have stopped using it within the previous six months.

Overall, 20 participants took part in the laboratory study. The final sample was balanced by gender (10 women, 10 men) and had a mean age of 24.4 years (SD = 1.9, range = 21–28). Fifteen participants (75%) were active TikTok users at the time of the study, while the remaining 5 (25%) had stopped using the platform within the previous six months, still satisfying the inclusion criteria. The inclusion of recent former users was intentional, as individuals who discontinued TikTok use may have done so due to perceived loss of control, making their perspective particularly relevant for investigating the impact of design patterns on SoA.

5 Results

Table 1 summarizes our results in terms of reflective judgments of agency (SoAS), experiential feelings of agency (temporal distortion), and interaction rhythm.

At the reflective level, participants reported higher perceived SoA when using redesigned versions of the TikTok feed, although effects varied in statistical significance. In the baseline condition, the average SoA score was $M = 4.56$ ($SD = 0.99$). Paginated scrolling led to a small increase in SoA ($M = 4.75$, $SD = 0.94$), but this difference was not statistically significant (paired t-test, $p = .222$). In contrast, SoA was significantly higher than baseline when autoplay was replaced with click-to-play (explicit playback, $M = 5.25$, $SD = 0.81$, $p < .001$) and when both load more and click-to-play were enabled (full control, $M = 5.20$, $SD = 1.01$, $p < .01$).

At the experiential level, the collected data were highly skewed, although some clear high-level patterns emerged. In particular, temporal distortion decreased relative to the baseline condition ($M = 270.70\,s$, $SD = 259.58\,s$) when autoplay was replaced with click-to-play (explicit playback, $M = 199.65\,s$, $SD = 338.75\,s$) and when both interventions were active (full control, $M = 187.10\,s$, $SD = 179.89\,s$). In contrast, no comparable reduction was observed in the paginated scrolling condition. Notably, temporal distortion remained positive both at the individual level and on average across all conditions, indicating that participants consistently overestimated the duration of their TikTok usage sessions.

Beyond agency, the analysis of interaction rhythm revealed a slight increase in the mean scrolling interval from the baseline condition ($M = 15.39\,s$, $SD = 7.07\,s$) to full control ($M = 17.87\,s$, $SD = 8.89\,s$), suggesting that, in the absence of ACDPs, participants scrolled more slowly. However, a series of paired t-tests did not reveal statistically significant differences.

After experiencing all four interface versions, participants expressed clear preferences in the debriefing and offered explanations that shed light on the practical viability of the implemented design

Table 1: Summary of experimental results in terms of reflective judgments of agency (measured using the SoAS), experiential feelings of agency (approximated via temporal distortion), and interaction rhythm (mean interval between scrolls).

Condition	SoAS	Temporal distortion (s)	Interaction rhythm (s)
(a) baseline	4.56 (SD = 0.99)	270.70 (SD = 259.58)	15.39 (SD = 7.07)
(b) paginated scrolling	↑ 4.75 (SD = 0.94)	276.85 (SD = 283.32)	↓ 17.10 (SD = 11.00)
(c) explicit play	↑ 5.25 (SD = 0.81)	↓ 199.65 (SD = 338.75)	↓ 17.20 (SD = 8.03)
(d) full control	↑ 5.20 (SD = 1.01)	↓ 187.10 (SD = 179.89)	↓ 17.87 (SD = 8.89)

changes. We found that the most effective design for increasing control (explicit play) was not the most preferred, whereas a less disruptive design (paginated scrolling) was widely liked despite its weaker quantitative impact. Specifically, participants pointed out that becoming absorbed in TikTok is sometimes precisely their goal; consequently, requiring an explicit tap to play each reel would significantly disrupt their flow. As one participant (P8) explained: "When I enter the platform, I do so to let myself be carried along. A heavy friction like disabling autoplay would make it more frustrating. Pagination, on the other hand, is not very annoying but slightly increases awareness of the time spent." This highlights an important tension between convenience and user experience over user empowerment.

6 Discussions and Future Works

Our preliminary study provides initial evidence that relatively small changes to the TikTok newsfeed can influence users' SOA at both reflective and experiential levels. At the same time, it highlights open challenges that are guiding our plans to extend this line of work.

First, our results do not allow us to isolate the specific contribution of individual ACDPs to the effects measured in the study. Although the replacement of autoplay with explicit play appeared to yield stronger effects than the replacement of infinite scrolling with paginated scrolling, this difference should be interpreted with caution due to the small, homogeneous sample size. Furthermore, rather than reflecting the intrinsic impact of a specific pattern, our results may be mediated by the amount and nature of friction introduced by the alternative design. Further studies with larger and more diverse populations are therefore needed to disentangle the relative roles of pattern type, interaction friction, and contextual factors in shaping users' sense of agency and time awareness.

This limitation is closely related to the challenge of operationalizing agency in highly continuous interaction contexts such as social media feeds. Implicit measures such as temporal binding [5], which assess the perceived temporal compression between an intentional action and its outcome, have been widely used to capture feelings of agency in tightly controlled action–outcome paradigms [6]. However, social media consumption is characterized by continuous interaction and algorithmic mediation, making it difficult to isolate discrete action–outcome pairs. As a result, we employed a temporal estimation task. Although distortions in perceived duration have been associated with phenomena such as normative dissociation [4], in which deep absorption is accompanied by reduced experiential agency, perceived time distortion should be interpreted as an approximation of the experiential dimension of agency rather than as a direct measure of action–outcome binding. Our future work will extend the study presented here by incorporating additional analytical lenses, including validated measures of normative dissociation [2], to further clarify how agency is shaped within the continuous interaction dynamics of social media newsfeeds.

Interpreting temporal distortion in this context also requires situating our findings within the broader literature on flow and time perception. Flow research typically shows that enjoyable, highly engaging tasks lead to an underestimation of duration [23], framing temporal distortion as the experience of "time flying by" due to deep absorption. Consistent with recent findings on TikTok use [25], however, our participants tended to overestimate session duration. This pattern suggests that short-form video consumption may be less characterized by a state of flow and more by a cognitively busy or fragmented experience, likely driven by the rapid succession of heterogeneous content, with users exposed to dozens of videos on unrelated topics within a single session. Notably, some design interventions—particularly the requirement for explicit play—showed promise in mitigating this upward time distortion.

Finally, it is important to note that reduced agency is not inherently problematic. In moderate forms and in specific contexts, users might even seek out a dissociative experience as a form of relaxation or escape. This complicates the design challenge: while reduced agency entails potential regret later, in the moment it might be exactly what the user desires. Our preliminary findings therefore point toward the importance of designing for *low-cost agency*—interventions that subtly support user control and awareness without introducing excessive friction—highlighting opportunities for rethinking social media newsfeeds in ways that respect both user experience and autonomy.

7 Conclusions

This work suggests that restoring user agency on social media may not require radical redesigns, but carefully calibrated shifts in feed-level interaction mechanics.Participants' preference for less intrusive design changes points toward interventions that subtly reintroduce moments of reflection without fully disrupting absorption, acknowledging that agency is not universally desired at all times. Future research should therefore extend this work by disentangling pattern-specific effects from interaction friction and contextual factors. Doing so would enable a move beyond one-size-fits-all solutions toward adaptive interfaces that dynamically balance user control and convenience.

References

[1] Apple Inc. 2024. Use Screen Time on your iPhone or iPad. https://support.apple.

com/en-us/108806. Accessed: 2025-09-01.

[2] Amanda Baughan, Mingrui Ray Zhang, Raveena Rao, Kai Lukoff, Anastasia Schaadhardt, Lisa D. Butler, and Alexis Hiniker. 2022. "I Don't Even Remember What I Read": How Design Influences Dissociation on Social Media. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (New Orleans, LA, USA) *(CHI '22)*. Association for Computing Machinery, New York, NY, USA, Article 18, 13 pages. doi:10.1145/3491102.3501899

[3] Khatereh Borhani, Brianna Beck, and Patrick Haggard. 2017. Choosing, Doing, and Controlling: Implicit Sense of Agency Over Somatosensory Events. *Psychological Science* 28, 7 (2017), 882–893. doi:10.1177/0956797617697693 Epub 2017 May 10.

[4] Lisa D. Butler. 2006. Normative Dissociation. *Psychiatric Clinics of North America* 29, 1 (2006), 45–62. doi:10.1016/j.psc.2005.10.004 Dissociative Disorders: An Expanding Window into the Psychobiology of the Mind.

[5] David Coyle, James Moore, Per Ola Kristensson, Paul Fletcher, and Alan Blackwell. 2012. I Did That! Measuring Users' Experience of Agency in Their Own Actions. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Austin, Texas, USA) *(CHI '12)*. Association for Computing Machinery, New York, NY, USA, 2025–2034. doi:10.1145/2207676.2208350

[6] Johanna K. Didion, Krzysztof Wolski, Dennis Wittchen, David Coyle, Thomas Leimkühler, and Paul Strohmeier. 2024. Who did it? How User Agency is influenced by Visual Properties of Generated Images. In *Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology* (Pittsburgh, PA, USA) *(UIST '24)*. Association for Computing Machinery, New York, NY, USA, Article 94, 17 pages. doi:10.1145/3654777.3676335

[7] Niall Docherty. 2021. Digital self-control and the neoliberalization of social media well-being. *International Journal of Communication* 15 (2021), 3827–3846. https://ijoc.org/index.php/ijoc/article/view/17721 Open Access.

[8] Niall Docherty and Asia J. Biega. 2022. (Re)Politicizing Digital Well-Being: Beyond User Engagements. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (New Orleans, LA, USA) *(CHI '22)*. Association for Computing Machinery, New York, NY, USA, Article 573, 13 pages. doi:10.1145/3491102.3501857

[9] Google. 2018. Our commitment to Digital Wellbeing. https://wellbeing.google/ vAccessed: 2025-09-01.

[10] Colin M. Gray, Yubo Kou, Bryan Battles, Joseph Hoggatt, and Austin L. Toombs. 2018. The Dark (Patterns) Side of UX Design. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (Montreal QC, Canada) *(CHI '18)*. Association for Computing Machinery, New York, NY, USA, 1–14. doi:10.1145/3173574.3174108

[11] Longjie Guo, Yue Fu, Xiran Lin, Xuhai Xu, Yung-Ju Chang, and Alexis Hiniker. 2025. What Social Media Use Do People Regret? An Analysis of 34K Smartphone Screenshots with Multimodal LLM. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI '25)*. Association for Computing Machinery, New York, NY, USA, Article 972, 23 pages. doi:10.1145/3706598.3713724

[12] Simone Lanette, Phoebe K. Chua, Gillian Hayes, and Melissa Mazmanian. 2018. How Much is 'Too Much'? The Role of a Smartphone Addiction Narrative in Individuals' Experience of Use. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW, Article 101 (Nov. 2018), 22 pages. doi:10.1145/3274370

[13] Kai Lukoff. 2022. *Designing to Support Sense of Agency for Time Spent on Digital Interfaces.* Ph. D. Dissertation. University of Washington. http://hdl.handle.net/1773/49196

[14] Kai Lukoff, Ulrik Lyngs, Himanshu Zade, J. Vera Liao, James Choi, Kaiyue Fan, Sean A. Munson, and Alexis Hiniker. 2021. How the Design of YouTube Influences User Sense of Agency. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (Yokohama, Japan) *(CHI '21)*. Association for Computing Machinery, New York, NY, USA, Article 368, 17 pages. doi:10.1145/3411764.3445467

[15] Kai Lukoff, Cissy Yu, Julie Kientz, and Alexis Hiniker. 2018. What Makes Smartphone Use Meaningful or Meaningless? *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 2, 1, Article 22 (March 2018), 26 pages. doi:10.1145/3191754

[16] Ulrik Lyngs, Kai Lukoff, Petr Slovak, Reuben Binns, Adam Slack, Michael Inzlicht, Max Van Kleek, and Nigel Shadbolt. 2019. Self-Control in Cyberspace: Applying Dual Systems Theory to a Review of Digital Self-Control Tools. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (Glasgow, Scotland Uk) *(CHI '19)*. Association for Computing Machinery, New York, NY, USA, 1–18. doi:10.1145/3290605.3300361

[17] Thomas Mildner, Gian-Luca Savino, Philip R. Doyle, Benjamin R. Cowan, and Rainer Malaka. 2023. About Engaging and Governing Strategies: A Thematic Analysis of Dark Patterns in Social Networking Services. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (Hamburg, Germany) *(CHI '23)*. Association for Computing Machinery, New York, NY, USA, Article 192, 15 pages. doi:10.1145/3544548.3580695

[18] Alberto Monge Roffarello and Luigi De Russis. 2023. Achieving Digital Wellbeing Through Digital Self-control Tools: A Systematic Review and Meta-analysis. *ACM Trans. Comput.-Hum. Interact.* 30, 4, Article 53 (Sept. 2023), 66 pages. doi:10.1145/3571810

[19] Alberto Monge Roffarello, Luigi De Russis, and Kai Lukoff. 2025. The Digital Attention Heuristics: Supporting the User's Attention by Design. *ACM Trans. Comput.-Hum. Interact.* 32, 4, Article 38 (Aug. 2025), 41 pages. doi:10.1145/3725215

[20] Alberto Monge Roffarello, Kai Lukoff, and Luigi De Russis. 2023. Defining and Identifying Attention Capture Deceptive Designs in Digital Interfaces. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (Hamburg, Germany) *(CHI '23)*. Association for Computing Machinery, New York, NY, USA, Article 194, 19 pages. doi:10.1145/3544548.3580729

[21] Brennan Schaffner, Yaretzi Ulloa, Riya Sahni, Jiatong Li, Ava Kim Cohen, Natasha Messier, Lan Gao, and Marshini Chetty. 2025. An Experimental Study Of Netflix Use and the Effects of Autoplay on Watching Behaviors. *Proc. ACM Hum.-Comput. Interact.* 9, 2, Article CSCW030 (May 2025), 22 pages. doi:10.1145/3710928

[22] Matthis Synofzik, Gottfried Vosgerau, and Albert Newen. 2008. Beyond the comparator model: A multifactorial two-step account of agency. *Consciousness and Cognition* 17, 1 (2008), 219–239. doi:10.1016/j.concog.2007.03.010

[23] Wee-Kheng Tan, Po-Wei Lee, and Che-Wei Hsu. 2015. Investigation of temporal dissociation and focused immersion as moderators of satisfaction–continuance intention relationship: Smartphone as an example. *Telematics and Informatics* 32, 4 (2015), 745–754. doi:10.1016/j.tele.2015.03.007

[24] Adam Tapal, Ela Oren, Reuven Dar, and Baruch Eitam. 2017. The Sense of Agency Scale: A Measure of Consciously Perceived Control over One's Mind, Body, and the Immediate Environment. *Frontiers in Psychology* Volume 8 - 2017 (2017). doi:10.3389/fpsyg.2017.01552

[25] Yi Yang, Ru-De Liu, Yi Ding, Jingmin Lin, Zien Ding, and Xiantong Yang. 2024. Time distortion for short-form video users. *Computers in Human Behavior* 151 (2024), 108009. doi:10.1016/j.chb.2023.108009