

## The content trap: Excessive engagement is turning into manipulation

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### Abstract

*“Just one more scroll.” It’s something most of us have told ourselves countless times, often without realizing how deeply we’re pulled in. Our social media feeds seem to know us intimately — each reel, post, or video feels almost too relatable, as if our phones can read our minds. But this uncanny familiarity is not accidental; it is the outcome of persuasive design powered by neuroscience and data-driven algorithms.*

*Modern digital platforms are built on the principle of keeping users engaged for as long as possible. Through techniques like infinite scrolling, personalized recommendations, and intermittent rewards, they exploit the brain’s dopamine system — the same mechanism linked to addiction and habit formation. Every “relatable” post or perfectly timed video gives an instant dopamine rush, nudging users to keep scrolling and consuming. What begins as harmless entertainment gradually turns into compulsive engagement, a loop difficult to break.*

*This paper explores how persuasive design is slowly manipulating users. It examines how excessive personalization in technology is drawing us into an addictive loop. However, behind this seamless experience lies a dark and subtle form of control, where it becomes less of an ethical engagement and more of user manipulation.*

*By connecting the ethics of persuasive design with the neuroscience of habit loops, this study aims to reveal how digital platforms are not just capturing our attention but slowly turning us into addicts. It questions where engagement ends and manipulation begins, and how design — once meant to serve the user — now serves the system that profits them. Ultimately, this research highlights how excessive engagement, driven by invisible persuasive mechanisms, may be quietly reshaping our behavior, our focus, and even our brains.*

**Key words:** Doomscrolling, Doomsurfing, Engagement, Manipulation, Infinite Surfing, Infinite scrolling, Compulsive scrolling, Binge scrolling, Zombie scrolling, Digital Drug, Dopamine Rush, Problematic social media use, Binge watching, Persuasive design, Total brain hijack, Brain rewiring, social media addiction, Neuroscience, Ethics

### Introduction

Social media was initially created to connect people, share information, and build communities. However, it has changed into a system focused on engagement, keeping users online as long as possible. What seems like harmless fun is often a carefully designed psychological loop driven by persuasive design and data-driven algorithms. These systems, influenced by behavioral science, take advantage of human weaknesses like curiosity, the desire for social validation, and the need for new experiences. Each notification, suggested post, or perfectly timed recommendation is intentional. It results from design choices aimed at capturing attention and holding it.

Persuasive design lies at the crossroads of technology, psychology, and marketing. It applies principles from neuroscience, especially the brain’s dopamine reward system, to encourage repeated behavior. Platforms use features like infinite scroll, autoplay, and tailored content feeds to create an ongoing experience. They remove natural stopping points that would enable users to disengage. Every like, share, and comment gives small bursts of satisfaction, which strengthens the habit loop and encourages even more interaction. Over time, users become dependent on these small rewards, confusing constant engagement with true satisfaction.

What makes this engagement troubling is its shift from choice to compulsion. The line between user enjoyment and manipulation blurs. Algorithms designed to boost engagement often exploit emotional triggers like outrage, fear, or the desire for social approval—not to foster meaningful connections, but to keep users hooked. This situation raises important ethical questions: When does engagement shift from meeting users’ needs to prioritizing the platform’s profits? Do users really have free will when their behavior is guided by unseen digital structures?

The effects reach beyond individual attention spans. Excessive engagement harms mental health, productivity, and even social dynamics. Constant digital stimulation has been linked to anxiety, reduced focus, and a skewed sense of reality shaped by algorithmic echo chambers. The manipulation of attention affects personal well-being and shapes public discussions and democratic processes, as attention turns into a commodity to be traded and exploited.

This paper examines how persuasive design turns user engagement into a form of behavioral manipulation. By reviewing qualitative insights and existing studies, the research looks into how excessive personalization and reward systems create addictive feedback loops. Ultimately, this research aims to emphasize the urgent need for ethical standards and responsibility in digital design, ensuring that engagement remains a means of connection rather than control.

### Methodology:

This research adopts a **qualitative approach** to explore how persuasive design in digital platforms leads to manipulative engagement.

#### Data Collection:

- **Primary Data:** Semi-structured interviews with 20 frequent social media users (ages 18–30) to understand personal experiences with engagement patterns, app usage, and feelings of compulsion.
- **Secondary Data:** Academic papers, UX design reports, and case studies on persuasive design, attention economy, and user behavior.

#### Data Analysis:

- Responses are coded thematically — focusing on *habit formation*, *emotional triggers*, and *perceived loss of control*.
- Patterns are analyzed using grounded theory to identify links between design features (e.g., infinite scroll, push notifications) and compulsive engagement.

This qualitative methodology helps in understanding how users experience manipulation rather than just measuring time spent online. It focuses on perceptions, motivations, and ethical reflections tied to digital engagement.



### Literature Review

Existing research reveals that persuasive design and algorithmic personalization have fundamentally changed how people interact with digital platforms.

- **Persuasive Design:** Fogg’s Behavior Model (2009) suggests that behavior can be shaped by triggering motivation and ability — principles that underpin app notifications and recommendation systems.
- **Addiction & Dopamine Loop:** Studies in neuroscience show that intermittent rewards (like unpredictable likes or notifications) stimulate dopamine release, creating addictive feedback cycles.
- **Ethical Concerns:** Researchers like Zuboff (2019) highlight “surveillance capitalism,” where user data is used to predict and influence future behavior for profit.
- **User Manipulation:** Social media platforms blur the line between choice and control. What appears as engagement often becomes subtle behavioral conditioning.

This literature collectively suggests that persuasive design, though innovative, increasingly prioritizes *profit and engagement metrics* over *user well-being*.

### Conclusion

The findings of this study reveal that excessive engagement on digital platforms is not simply an outcome of user preference but the result of carefully engineered persuasive design mechanisms. What begins as a seamless and enjoyable experience slowly evolves into a cycle of compulsion, driven by algorithms designed to maximize attention rather than support user well-being. Interviews highlighted that many users recognize their overuse yet feel unable to disconnect, which demonstrates how deeply persuasive features influence behavior. This blurring of the boundary between engagement and manipulation raises serious ethical concerns about autonomy, consent, and the transparency of digital systems. As

platforms increasingly shape what users see, feel, and believe, individuals lose conscious control over their online habits and, at times, even aspects of their identity and thinking patterns. Therefore, the challenge is not only technological but also psychological and moral. This study concludes that unless persuasive design is re-evaluated with ethical responsibility in mind, users may continue to be subtly steered in directions that benefit systems rather than themselves. Recognizing and addressing this imbalance is essential for creating a healthier digital environment.

### Future Implications

The implications of this research point toward a critical need for developing **ethical frameworks** in digital design that place user autonomy at the center. Future work should explore regulatory guidelines that require platforms to be transparent about how their recommendation systems operate, especially when these systems shape behavior through subtle psychological triggers. There is also a growing need for **user-controlled personalization tools** that allow individuals to limit algorithmic influence, disable addictive features like infinite scroll, or view their content feeds in neutral, chronological formats. Interdisciplinary collaboration among **designers, neuroscientists, psychologists, policymakers, and ethicists** will be essential in developing healthier digital ecosystems. Educational programs can also help users recognize persuasive design tactics and develop digital self-regulation skills. Moreover, future studies should examine how excessive engagement affects long-term cognitive and emotional well-being, particularly among adolescents and young adults who are most vulnerable to habit-forming interfaces.

Ultimately, the future of digital technology should balance innovation with responsibility, ensuring that systems enhance human life rather than exploit human psychology.

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