Review

Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry 2026; 18(3):837-847

doi: 10.18863/pgy.1730698

Algorithmic Alienation: A Theoretical Examination of the Digital Self

Algoritmik Yabancılaşma: Dijital Benlik Üzerine Kuramsal Bir İnceleme

Yalçın Kanbay[1], Aysun Akçam[2], Burcu Arkan[3]

[1]Artvin Çoruh University, Artvin
[2]Necmettin Erbakan University, Konya
[3]Bursa Uludağ University, Bursa

ABSTRACT

With the pervasive integration of digital technologies into all aspects of life, profound transformations have occurred in core psychological processes such as decision-making, identity construction, and self-perception. These transformations are multilayered and cannot be solely explained by the frequency of technology use; instead, they are closely related to how algorithms shape individuals' digital behaviors. This paper presents a theoretical framework for algorithmic alienation, which has not yet been sufficiently defined in the literature. This study aims to explain how algorithms shape individuals' experiences in digital environments and how this process leads to alienation regarding selfhood, freedom, and decision-making mechanisms. The concept was initially introduced in a qualitative study by Kanbay et al., and it is developed here with its theoretical foundations. Algorithmic alienation is discussed across four key dimensions: the weakening of the perception of freedom, identity ambiguity, the erosion of decision-making mechanisms, and emotional alienation. This review distinguishes algorithmic alienation from similar concepts such as digital addiction, burnout, and surveillance capitalism and analyzes its psychological, cognitive, and social effects in a multidimensional manner. In conclusion, algorithmic alienation is proposed as a unique and holistic theoretical construct that explains how individuals in the digital age become alienated from themselves, their choices, and their sense of self.

Keywords: Algorithmic alienation, digital self, decision-making mechanisms

ÖZ

Dijital teknolojilerin yaşamın her alanına nüfuz etmesiyle birlikte, bireylerin karar verme, kimlik inşası ve benlik algısı gibi temel psikolojik süreçlerinde derin dönüşümler yaşanmaktadır. Bu dönüşümler, yalnızca teknoloji kullanım sıklığıyla açıklanamayacak kadar çok katmanlı olup, özellikle algoritmaların bireyin dijital davranışlarını yönlendirme biçimiyle yakından ilişkilidir. Bu bağlamda çalışmada, literatürde henüz yeterince tanımlanmamış olan algoritmik yabancılaşma kavramı kuramsal bir çerçeveyle ele alınmaktadır. Çalışmanın amacı, bireylerin dijital ortamdaki deneyimlerinin algoritmalar tarafından nasıl şekillendirildiğini ve bunun sonucunda benlik, özgürlük ve karar verme yapılarında nasıl bir yabancılaşma yaşandığını açıklamaktır. Kavram ilk olarak Kanbay ve arkadaşları tarafından gerçekleştirilen nitel bir çalışmada önerilmiş ve bu çalışmada kuramsal temelleriyle geliştirilmiştir. Kavram dört temel boyutta ele alınmaktadır: özgürlük algısının zayıflaması, kimlik bulanıklığı, karar verme mekanizmalarının aşınması ve duygusal yabancılaşma. Bu derlemede algoritmik yabancılaşma, dijital bağımlılık, tükenmişlik ve gözetim kapitalizmi gibi benzer kavramlardan ayrıştırılmış; psikolojik, bilişsel ve toplumsal etkileri çok boyutlu olarak analiz edilmiştir. Sonuç olarak algoritmik yabancılaşma, dijital çağda bireyin kendisine, seçimlerine ve benliğine yabancılaşmasını açıklayan özgün ve bütüncül bir kuramsal öneri olarak literatüre sunulmuştur.

Anahtar sözcükler: Algoritmik yabancılaşma, dijital benlik, karar verme mekanizmaları

Address for Correspondence: Burcu Arkan, Bursa Uludağ University Faculty of Health Sciences Department of Psychiatric Nursing, Bursa, Türkiye
e-mail: arkanburcu@yahoo.com
Received: 30.06.5025 | **Accepted:** 29.09.2025

Introduction

Digitalization transforms individuals' daily lives and radically restructures how they think, feel, and make decisions (Turkle 2011, Zuboff 2019). Today, individuals increasingly refrain from questioning their actions in digital environments, decisions regarding what they watch, consume, and even think are often shaped by invisible algorithmic systems (Gillespie 2014, Bucher 2018). This structure directly influences the individual's digital experience and their perceptions of self, freedom, and identity.

In technological evolution, algorithms have become tools that analyze, predict, and guide users' digital behaviors (Eslami et al. 2015, Sundar 2020). Every click, view, or moment of hesitation constructs a personalized digital universe, while simultaneously exposing the individual to the risk of losing their uniqueness without being aware of it (Pariser 2011, Sunstein 2017). This indicates that individuals are confronted not only with external manipulation but also with an internal transformation. Over time, users begin to identify with the content provided by digital platforms, redefining their values, interests, and choices within the framework imposed by these invisible structures (Couldry and Mejias 2019, Zuboff 2019).

Within this context, the literature has introduced concepts such as digital addiction (Kuss et al. 2013), social media fatigue (Syvertsen 2020), online identity fragmentation (Marwick and Boyd 2011), and algorithmic surveillance (Pasquale 2015). However, these concepts remain insufficient to account for the multidimensional effects of algorithms on individuals' inner experiences. In particular, there is a lack of a comprehensive theoretical framework addressing processes such as the lack of choice in digital environments, the externality of decisions, identity ambiguity, and emotional detachment.

Building on this gap, the concept of "Algorithmic Alienation" was introduced by Kanbay et al. (2025) as the result of a qualitative study based on focus group interviews conducted to explore individuals' experiences of alienation in digital environments shaped by algorithm-driven content, preferences, and decision-making processes. This study revealed that individuals who consume digital content questioned whether such content truly reflected their own choices, gradually perceived themselves as inhabiting a "self constructed by someone else," recognizing that their decisions were formed through algorithmic guidance, and experienced a sense of emotional emptiness. The "Algorithmic Alienation," developed in light of these findings, refers to a structure in which individuals' digital experiences generate alienation at cognitive, emotional, and identity levels.

The concept of algorithmic alienation draws upon two primary theoretical sources in the literature. First, alienation is grounded in Marx's (2023) theoretical framework, which conceptualizes alienation through production processes and describes the individual's estrangement from their labor, themselves, and society. This approach was subsequently enriched by Fromm's (1955) psychological interpretation, which focused on the loss of individuality as individuals strive to conform to social expectations, and by Seeman's (1959) work identifying dimensions such as meaninglessness, normlessness, distrust, powerlessness, and self-estrangement. Second, the concept of the algorithmic structure refers to the process by which individuals' behaviors in the digital world are guided, categorized, and shaped through mathematical formulas (Bucher 2018). When these two theoretical axes converge, algorithmic alienation emerges as a new form of psychological transformation in which individuals simultaneously experience a weakening sense of freedom in digital environments, identity ambiguity and self-distancing, erosion of decision-making mechanisms, and emotional disconnection. Thus, the concept aims to explain manipulation by digital content and account for the structural ruptures such content creates within individuals' inner worlds.

The purpose of this review study is to elaborate on algorithmic alienation within its theoretical foundations, clarify its relationship to and distinctions from related concepts in the literature, examine its multifaceted effects on individuals, and provide a theoretical basis for future empirical research. Furthermore, this study aims to discuss algorithmic alienation's psychological and social consequences to contribute to a more holistic understanding of the human–technology relationship.

Theoretical Background: Between Alienation and Algorithmic Guidance

Theoretical Foundations of the Concept of Alienation

The concept of alienation was first introduced in Karl Marx's Economic and Philosophic Manuscripts (2023), where it was defined through the disruption of the individual's relationship with their own labor and the process of production. According to Marx, within capitalist relations of production, individuals begin to experience self-alienation once a distance emerges between themselves and the products they create. Fromm (1955) approached alienation as a psychological process, interpreting it as the loss of individuality that occurs when individuals attempt to conform to social expectations. Seeman (1959), on the other hand, conceptualized alienation in five dimensions: meaninglessness, normlessness, distrust, powerlessness, and self-estrangement.

While these classical theories center on the individual's relationship with the social or economic order, the realities of the digital age reveal novel forms of alienation: a new structure characterized by psychosocial processes such as the weakening of the perception of freedom, externality in self-construction, automatization in decision-making mechanisms, and emotional detachment.

Algorithmic Structures and the Fragmentation of Subjectivity

In contemporary contexts, individuals select content they believe to be of their own choosing, yet in reality, these choices are constrained within a narrow framework shaped by algorithms. This phenomenon corresponds to the "illusion of choice" (Pariser 2011). According to Gillespie (2014), algorithms are not merely systems that sort data but also normative instruments that structure social reality. Bucher (2018) describes these algorithmic systems as a "form of invisible power," asserting that they shape individuals' perceptions of their own life practices. Within this framework, while individuals may believe they are making autonomous decisions, they are being directed by the contents provided by an external system (Couldry and Mejias 2019, Zuboff 2019).

Algorithmic Effects on Identity and Selfhood

Erikson's (1968) theory of identity defines identity as a process in which individuals construct their sense of self within a social context. However, in the digital age, this process is increasingly directed by algorithms, leading individuals to internalize not their own values, but rather the elements privileged by the "economy of visibility" (Marwick and Boyd 2011). Turkle (2011) argues that in digital environments, individuals are left "alone together," wherein experiences of self become detached from authentic contexts and transform into a performative identity constructed through "digital masks." This process unfolds as algorithms reshape individuals' interests, guide their emotional responses, and rewrite components of their identities. As a result, individuals struggle to maintain a connection with their preferences, values, and desires over time, culminating in identity ambiguity and internal disconnection.

Conceptual Framework: The Process of Algorithmic Alienation

The conceptual framework below presents the process of algorithmic alienation in a holistic manner, grounded in its theoretical foundations. This structure illustrates how individuals' behaviors in digital environments progressively transform into a layered internal rupture. This is a technological outcome and a psychological and social fracture. The stages of the algorithmic alienation process are illustrated in Figure 1.

Theoretical Structure of Algorithmic Alienation

The theoretical structure of algorithmic alienation represents a multilayered framework that influences individuals' experiences across different dimensions. At the epistemological level, individuals lose their connection with reality, under the guidance of algorithms in accessing information, the boundaries

between objective reality and subjective perception become blurred. At the psychological level, individuals' capacity to control their own behaviors and choices weakens, as Bandura (1997) notes, the sense of self-efficacy gradually erodes, and the individual's perception of internal control is replaced by external guidance. At the social level, individuals lose their sense of belonging, as emphasized by Bauman (2007), becoming increasingly isolated in their relationships with communities and experiencing social disintegration. At the digital culture level, algorithms' guiding power reduces the individual to a "consumer subject," within the framework of surveillance capitalism described by Zuboff (2019). The individual's identity is reconstructed mainly through market values and the logic of consumption.

These four dimensions demonstrate that algorithmic alienation is not merely an individual psychological rupture, instead, it produces effects across a broad spectrum—from modes of accessing knowledge to social bonds, from cultural representations to the subjective perception of self. Thus, the concept offers a holistic framework for understanding the transformations induced by modern digital culture at both individual and societal levels.

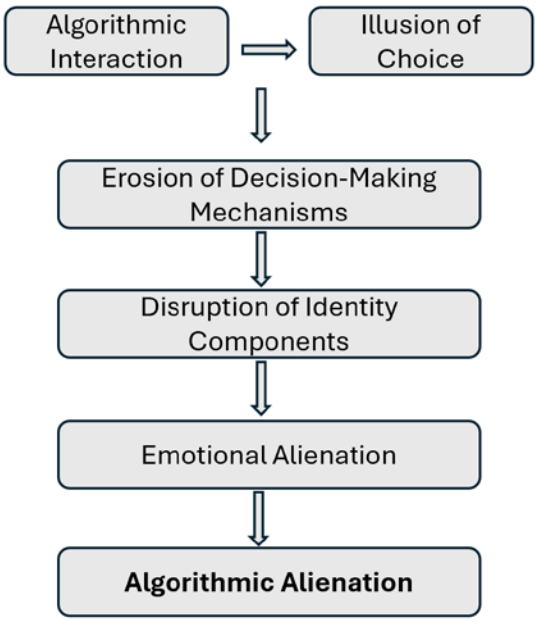

Figure 1. Process of algorithmic alienation

Concept and Dimensions of Algorithmic Alienation

The concept of algorithmic alienation should be considered not only as a theoretical proposition but also as a multidimensional phenomenon informed by individuals' concrete experiences in digital environments. For a more comprehensive understanding of this concept, it is essential to articulate a clear conceptual definition and identify the dimensions through which it manifests in individuals' lives. In this section, algorithmic alienation is first defined, followed by examining its four fundamental dimensions: the weakening of the perception of freedom, identity ambiguity and self-distancing, the erosion of decision-making mechanisms, and emotional alienation. In doing so, the effects of the concept are discussed holistically at both individual and societal levels.

Definition of the Concept

The concept of "Algorithmic Alienation" was proposed in light of findings from the qualitative field research conducted by Kanbay et al. (2025). This concept refers to the process by which individuals, through their interactions with algorithm-driven content flows in digital environments, become estranged from their authentic selves, their choices, and the components of their identities. Participants' views were frequently expressed through probing statements such as: "Did I really choose this?", "Why does this content feel so

familiar to me?", and "I no longer even know what I want to watch." Individuals increasingly recognized that their choices were shaped by algorithmic guidance, yet they struggled to resist such influences. In this context, algorithmic alienation is proposed in the literature as a multidimensional phenomenon that conceptualizes the digital age's invisible psychological and identity-related effects on individuals.

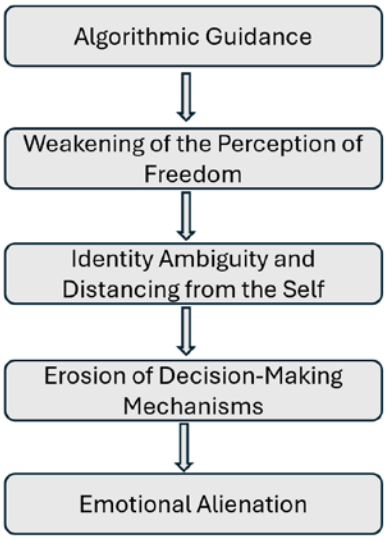

Figure 2. Conceptual framework: interrelation of dimensions

Fundamental Dimensions of Algorithmic Alienation

Algorithmic alienation is a phenomenon that relates individuals' digital experiences not merely to surface-level preferences or usage habits, but to deeper psychological and social processes. Within this framework, four fundamental dimensions emerge to concretize its theoretical structure. These dimensions—the weakening of the perception of freedom, identity ambiguity and self-distancing, the erosion of decision-making mechanisms, and emotional alienation—make it possible to understand the multifaceted effects of algorithms on individuals.

Weakening of the Perception of Freedom

Although individuals believe they are making choices on digital platforms, most of these choices occur within a limited set of content presented by algorithms. This undermines the perception of free will, turning the decision-making process into an "illusion of freedom" (Pariser 2011, Bucher 2018,). Such a process erodes the individual's sense of control over their own life and triggers the feeling of being guided by an external structure.

Identity Ambiguity and Self-Distancing

Algorithms systematically reshape individuals' interests, values, and identity components (Turkle 2011, Zuboff 2019). As a result, individuals experience a sense of dissonance between their perceived personal content preferences and the identities shaped by digital environments. This rupture is often internalized in the thought: "This is not me."

Erosion of Decision-Making Mechanisms

Constant exposure to algorithmic recommendations reinforces reflexive, automatic, and unreflective behavioral patterns in individuals' decision-making processes. This leads to mental automatization, where individuals "surrender to what is offered rather than making a decision" (Syvertsen 2020).

Emotional Alienation and Discomfort

Individuals consuming content under algorithmic guidance gradually feel emotional discomfort with these experiences. Upon recognizing their lack of control over their choices, they experience unease, guilt, and

indifference. This process fosters emotional alienation toward the self in digital environments (Zuboff 2019, Syvertsen 2020). The layered deepening of algorithmic influence, transforming into psychological alienation, is illustrated in Figure 2.

Differentiation from Related Concepts

To demonstrate the originality of algorithmic alienation, it is important to clarify its boundaries in relation to similar notions frequently discussed in the literature. Phenomena such as digital addiction, digital fatigue, algorithmic surveillance, filter bubbles, echo chambers, social media anxiety, and FOMO attempt to explain individuals' relationships with digital environments but do not fully capture the essence of algorithmic alienation. While each concept sheds light on particular aspects of digital experience, algorithmic alienation focuses on the multidimensional ruptures in individuals' sense of self, perception of freedom, decision-making processes, and emotional world.

Concept	Focus	Difference from Algorithmic Alienation
Digital Addiction	Frequency / Loss of Control	Behavioral level, no internal transformation
Digital Burnout	Emotional Fatigue / Withdrawal	Excessive exposure exists but no emotional bond with content
Surveillance Capitalism	Data Control / Economic Structure	Does not encompass the individual self-process
Filter Bubble / Echo Chamber	Loss of Information Diversity	Even if guidance is noticed, no subjective detachment
Sosyal Medya Anksiyetesi	Fear of Missing Out / Exclusion	Focused on social visibility, no identity transformation

Figure 3. Distinction of algorithmic alienation from other concepts

Digital Addiction

Digital addiction refers to the loss of control over the use of the internet, social media, games, or digital devices, to the extent that such use begins to affect daily life negatively (Kuss et al. 2015). Studies on digital addiction generally focus on the behavioral dimension, evaluating how much time is spent online and how such usage impairs individual functioning. In contrast, algorithmic alienation does not concern the frequency of digital use. Instead, it focuses on how individuals' sense of self, decision-making structures, and emotional integrity are disrupted through digital content. Signs of addiction may not necessarily be present, even when individuals use platforms in a controlled manner, their identities may still be shaped by algorithmically guided content flows.

Digital Fatigue

Digital fatigue is the gradual loss of interest in digital content and screen exposure, accompanied by mental exhaustion and sensory overload (Syvertsen 2020). Individuals may withdraw physically or emotionally from digital interactions. Algorithmic alienation, however, can occur through excessive exposure and limited yet directive exposure. The issue here is not the quantity of content but rather its guiding influence on subjective reality. Whereas digital fatigue involves withdrawal from content, algorithmic alienation is characterized by a false intimacy with content and an inner contradiction.

Algorithmic Surveillance / Surveillance Capitalism

Surveillance capitalism (Zuboff 2019) refers to how individuals' digital behaviors are analyzed and transformed into economic value, whereby data flows are controlled beyond the users' consent. This approach primarily focuses on systemic manipulations at the macro level. Algorithmic alienation, in

contrast, describes an internal transformation experienced by individuals at the micro level. While surveillance capitalism constitutes an external structure of domination, algorithmic alienation refers to a dissolution of the self within the individual's inner world.

Filter Bubbles and Echo Chambers

The filter bubble concept refers to the loss of informational diversity when digital platforms display only content similar to a user's prior preferences (Pariser 2011). Echo chambers describe digital environments where only similar views are repeated. While these structures explain the unidimensionality of content, algorithmic alienation concerns individuals' responses to such content. A person may remain unaware of being within a filter bubble, yet over time, they may feel that their interests have changed and that they have become estranged from their former selves. Thus, it refers to the transformation of the individual as a result of such structures.

Social Media Anxiety and FOMO

Social media anxiety and FOMO (Fear of Missing Out) describe the fear of being insufficiently visible on digital platforms, missing out on something, or being excluded from social interactions (Przybylski et al. 2013). These conditions are related to the pressure of digital presence. Algorithmic alienation, however, concerns who we become within the digital environment. An individual may feel compelled to share constantly, but at some point realizes that such posts no longer reflect their authentic self.

Possible Consequences of Algorithmic Alienation

Algorithmic alienation is a phenomenon that multidimensionally affects individuals' experiences in digital environments, with consequences that manifest at the individual level and in social, cultural, and political domains. The invisible guidance of algorithms weakens individuals' sense of self, disrupts emotional balance, erodes cognitive functions, and fosters processes of homogenization that threaten social diversity. Therefore, algorithmic alienation's potential psychological, emotional, sociological, cognitive, cultural, and political outcomes should be systematically addressed. At the same time, it should not be overlooked that algorithms can also serve positive functions, such as facilitating learning, health, or everyday life.

Psychological Effects: Fragmentation of Self-Integrity

Algorithmic alienation leads to self-integrity fragmentation as individuals lose awareness of their authentic selves and their decision-making processes become increasingly automated. Turkle (2011) emphasizes that digital environments erode individuals' capacity for being "alone with themselves." In this context, when individuals realize that their desires and decisions do not originate internally but rather from external systems, they experience internal conflicts. The dissonance between the authentic self and the digital identity may give rise to psychological consequences such as self-estrangement, identity ambiguity, and diminished self-worth.

Emotional Consequences: Restlessness, Guilt, and Exhaustion

Constant exposure to directed content produces indecisiveness, emotional fatigue, and discomfort in individuals. When users recognize algorithmic guidance yet cannot resist it, this triggers cognitive dissonance. Over time, this results in guilt, emptiness, and sensory numbness. Unlike social media fatigue, this process involves boredom with platforms and a more profound alienation from one's digital behaviors.

Sociological Consequences: Homogenization of Social Representation

Algorithms expose individuals to similar content, fostering cultural homogenization (Bozdağ 2013, Sunstein 2017). This process erodes individual and societal diversity, resulting in cultural uniformity and symbolic

violence. At the societal level, differences are blurred, individuality is suppressed, and a "world of standardized identities" shaped by digital systems emerges.

Cognitive Consequences: Decision Fatigue and Automatization of Choice

The continuous suspension of decision-making mechanisms by algorithms leads to decision fatigue. Individuals increasingly make choices without reflection, as thinking becomes "unnecessary." This automatization dulls cognitive functions, over time, individuals may lose the capacity for critical thinking, generating alternatives, and discerning their desires.

Cultural and Political Implications: Colonization of Subjectivity

As Zuboff (2019) argues, algorithmic systems extend to knowledge and the human psyche. This amounts to the digital colonization of subjectivity. Increasingly, algorithms determine what individuals think, feel, and even believe. At the political level, this transformation risks reducing individuals from autonomous citizens to directed consumer entities (Couldry and Mejias 2019).

Layered Nature of Effects

Although algorithmic alienation produces adverse effects such as weakening the perception of freedom, identity ambiguity, and the erosion of decision-making mechanisms, the positive functions of algorithms must also be recognized. In learning processes, personalized content recommendations may facilitate faster and more effective access to knowledge while supporting the development of innovative educational techniques. In daily life, user-friendly designs and recommendations tailored to personal interests and needs may allow individuals to manage their time more efficiently, thereby simplifying life. In domains such as health, transportation, and education, algorithmic systems can serve as guiding tools, demonstrating that technology carries alienating, supportive, and empowering potential. Therefore, algorithmic alienation should not be evaluated solely through its negative consequences but rather as reflecting the dual and contradictory nature of the human–technology relationship. The possible outcomes of algorithmic alienation are presented in Figure 4.

Figure 4. Effects of algorithmic alienation

Recommendations and Future Research

Although algorithmic alienation is a new and multidimensional concept that explains the effects of the digital age on individuals, interventions and future research in this field are crucial for enhancing its understanding. In this regard, it is important to draw attention to the risks individuals face in digital environments and to develop educational, psychological, and social strategies to mitigate these risks. Moreover, supporting the theoretical foundations of the concept with empirical findings and examining it across different age groups and from interdisciplinary perspectives provides a wide research agenda. This section addresses recommendations such as strengthening digital awareness and literacy, enhancing psychological resilience, ensuring transparency and ethical regulation in digital platforms, guiding future experimental and applied research, and fostering multidisciplinary approaches.

Strengthening Digital Awareness and Literacy

Algorithmic systems can exert influence even when individuals believe they are making their own choices. Therefore, digital literacy should not be limited to the technical use of tools, it must also include understanding the nature, boundaries, and manipulative capacity of algorithmic systems (Gillespie 2014, Bucher 2018). From early stages of education, critical digital awareness should be instilled, enabling individuals to become conscious of the "illusion of choice."

Enhancing Psychological Resilience and the Perception of Freedom

Recognizing the digital impact on selfhood requires cognitive awareness and psychological resilience. The effects of algorithmic guidance on identity formation are particularly profound in individuals undergoing identity development (Turkle 2011). Therefore, psychoeducational programs should be developed to strengthen individuals' perceptions of freedom and help them recognize their capacity for internal choice.

Transparency and Ethical Regulations for Digital Platforms

To mitigate the effects of algorithmic systems on individuals, transparency at the platform level must be ensured. Users should be informed about how recommendation systems function and provided with tools to control their content flows. Furthermore, algorithm designs that safeguard user autonomy should be encouraged within ethical frameworks (Pasquale 2015, Zuboff 2019).

Conceptual and Applied Directions for Future Research

Algorithmic alienation is a multilayered concept defined in the literature based on qualitative research. To further deepen the concept, the following research directions are proposed:

1. Experimental Studies: Psychological and behavioral responses of individuals exposed to algorithmic guidance should be measured.
2. Cross-Age Comparisons: Algorithmic alienation may manifest differently across youth, adults, and older individuals.
3. Interdisciplinary Approaches: Psychology, sociology, media studies, computer science, and ethics should jointly explore the multifaceted dimensions of the concept.

Developing Digital Therapy and Intervention Programs

Specialized intervention programs may be designed for individuals experiencing algorithmic alienation in clinical psychology. Symptoms such as identity fragmentation, choice-related anxiety, and emotional collapse should be addressed in therapeutic processes, complemented with modules on digital awareness.

Multidisciplinary Approach

Algorithmic alienation has practical implications not only at the theoretical level but also in everyday life

and education. In domains such as social media, news, and online shopping, individuals may unknowingly be guided toward limited options offered by algorithms, weakening their perception of freedom and reducing life satisfaction. Thus, fostering digital awareness in daily life and encouraging recourse to alternative sources of information are vital. Integrating algorithmic literacy programs into curricula is essential for strengthening students' critical thinking and autonomy. In addition, adopting an interdisciplinary approach—combining psychology, sociology, education, ethics, law, and computer science—can yield a deeper understanding of the concept's multidimensional nature. From a neuroscientific perspective, algorithmic guidance activates the dopamine-based reward system, automating individual choices while weakening the prefrontal cortex mechanisms responsible for critical thinking and self-regulation. In this sense, algorithmic alienation should be considered a psychosocial rupture and a neurobiological one, warranting further research through neuroimaging methods to examine its implications in decision-making processes.

Conclusion

This review study has addressed the concept of algorithmic alienation and proposed to explain the psychosocial effects of the digital age on individuals at both theoretical and conceptual levels. The literature review has linked the concept to classical theories of alienation while drawing attention to ruptures in the individual's relationship with the self, decisions, and emotions within digital culture.

Algorithmic alienation is a multidimensional concept that seeks to explain the surface-level effects of digital content on individuals and the more profound transformations occurring in self-perception, decision-making processes, and emotional structures. Unlike phenomena such as digital addiction, digital fatigue, surveillance capitalism, and social media anxiety, this concept emphasizes individuals' internal psychological experiences and the construction of subjectivity.

The four dimensions identified throughout this study—weakening of the perception of freedom, identity ambiguity and self-distancing, erosion of decision-making mechanisms, and emotional alienation—offer a holistic explanation of the layered dissolution occurring within individuals' digital experiences. These dimensions highlight the powerful structural effects that may lead to the loss of self-integrity at the individual level and to cultural homogenization and the colonization of subjectivity at the societal level.

In this regard, algorithmic alienation defines a process in which individuals face increasing externality in what they watch, believe, or feel—an externality that operates as an internalized form of guidance. Over time, individuals transform not into who they truly are, but into what is presented to them. Thus, the promise of freedom in the digital age is replaced by a directed construction of selfhood.

In conclusion, there is a pressing need for a conceptual framework that interrogates not only individuals' access to technology but also their relationship with it, not only what they do but also who they become. The concept of algorithmic alienation responds to this need, offering a multidimensional proposal with psychological and sociological depth to the literature.

References

Bandura A (1997) Self-efficacy: The Exercise of Control. New York, W H Freeman.

Bauman Z (2007) Liquid Times: Living in an Age of Uncertainty. Cambridge, Polity Press.

Bozdag E (2013) Bias in algorithmic filtering and personalization. Ethics Inf Technol, 15:209-227.

Bucher T (2018) If... Then: Algorithmic Power and Politics. Oxford, Oxford Univ Press.

Couldry N, Mejias UA (2019) The Costs of Connection: How Data is Colonizing Human Life and Appropriating It for Capitalism. Redwood City, CA, Stanford University Press.

Erikson EH (1968) Identity: Youth and Crisis. New York, W W Norton.

Eslami M, Rickman A, Vaccaro K, Aleyasen A, Vuong A, Karahalios K et al. (2015) "I always assumed that I wasn't really that close to [her]": Reasoning about invisible algorithms in news feeds. CHI '15: Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, 33:153-162.

Fromm E (1955) The Sane Society. New York, RinehartandCo.

Gillespie T (2014) The relevance of algorithms. In Media Technologies: Essays on Communication, Materiality, and Society (Eds Gillespie T, Boczkowski PJ, Foot KA): 167-194. Cambridge, MIT Press.

Kanbay Y, Akçam A, Arkan B. (2025) Algoritmalardan benliğe: Algoritmik yabancılaşma üzerine nitel bir inceleme. 16. Uluslararası Bilimsel Çalışmalar Kongresi, 29-30 Mayıs Türkiye.

Kuss DJ, van Rooij AJ, Shorter GW, Griffiths MD, van de Mheen D (2013). Internet addiction in adolescents: Prevalence and risk factors. Comput Human Behav, 29:1987-1996.

Marwick AE, Boyd D (2011) I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. New Media Soc, 13:114-133.

Marx K (2023) Economic and philosophic manuscripts of 1844. In Social Theory Re-Wired, (Eds C Reitz):142-147. London, Routledge

Pariser E (2011) The Filter Bubble: What the Internet Is Hiding from You. New York, Penguin Press.

Pasquale F (2015) The Black Box Society: The Secret Algorithms That Control Money and Information. Cambridge, MA, Harvard University Press.

Przybylski AK, Murayama K, DeHaan CR, Gladwell V (2013) Motivational, emotional, and behavioral correlates of fear of missing out. Comput Human Behav, 29:1841-1848.

Seeman M (1959) On the meaning of alienation. Am Sociol Rev, 24:783-791.

Sundar SS (2020) Rise of machine agency: A framework for studying the psychology of human-AI interaction (HAII). J Comput Mediat Commun, 25:74-88.

Sunstein CR (2017) Republic: Divided Democracy in the Age of Social Media. Princeton, NJ, Princeton Univ Press.

Syvertsen T (2020) Digital Detox: The Politics of Disconnecting. Bingley, UK, Emerald Publishing.

Turkle S (2011) Alone Together: Why We Expect More from Technology and Less from Each Other, New York, Basic Books.

Zuboff S (2019) The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. New York, PublicAffairs.

Authors Contributions: The author(s) have declared that they have made a significant scientific contribution to the study and have assisted in the preparation or revision of the manuscript
Peer-review: Externally peer-reviewed.
Ethical Approval: This review study does not require ethical clearance.
Conflict of Interest: No conflict of interest was declared.
Financial Disclosure: No financial support was declared for this study..