



Academic Work and Alienation in the Automatic University: A Marxian Critical Essay

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ABSTRACT

This article examines contemporary academic work through a Marxian analysis of alienation in the context of digital capitalism and artificial intelligence (AI). The study aims to conceptualise how AI systems and platform infrastructures intensify existing forms of alienated labour and reshape higher education into what is described as the automatic university. Using a conceptual and critical methodology, the analysis synthesises key contributions from Marxian theory, critical political economy, and scholarship on digital labour and AI in education. The findings show that academic work is increasingly organised through automated governance that restructures time, evaluation, and judgement, leading to the dehumanisation of educational practices. The article concludes that educational resistance must be understood as a collective and institutional project, and that an ethics of academic work requires reclaiming judgement, authorship, and epistemic responsibility within increasingly automated universities.

INTRODUCTION

Today, academic work unfolds within an ongoing tension between compliance and resistance. On one hand, universities expect academics to align with institutional priorities: performance indicators, output benchmarks, branding initiatives, and managerial reforms meant to enhance competitiveness in a global marketplace. Yet many academics experience their work as far more than a set of measurable outputs. They see teaching, research, and collegial relationships as practices grounded in commitments to truth, justice, and human flourishing, commitments that cannot be reduced to the logics of efficiency, employability, or quantifiable impact. Consequently, higher education becomes a contested terrain in which conformity, resistance, and possibilities for critical transformation are continually negotiated.

This article examines this tension through a Marxian analysis of alienation. Rather than viewing academic work as a neutral profession simply facing external pressures, I begin from the premise that it has become a defining example of alienated labour within Fuchs' conception of digital capitalism. Universities no longer operate primarily as autonomous scholarly communities; instead, they are increasingly woven into capitalist circuits that commodify knowledge, communication, and subjectivity (Fuchs, 2015; Hall, 2018). The expansion of metrics, rankings, dashboards, and audit regimes has reshaped both the organization and recognition of academic labour. At the same time, recent developments in artificial intelligence (AI) and platform infrastructures have deepened these trends by restructuring the temporal, evaluative, and epistemic conditions under which teaching and research occur.

Critical scholarship has approached these developments from multiple perspectives. Analyses of the neoliberal or entrepreneurial university show how competition, market principles, and new public management strategies are reshaping higher education (Hall, 2018; Slaughter & Rhoades, 2009). Research on academic capitalism and global ranking systems highlights how institutions orient themselves around prestige economies and the production of human capital (Marginson, 2016; Münch, 2014). Studies of digital and surveillance capitalism trace how platforms, data analytics, and algorithmic systems reorganize work, communication, and governance (Couldry & Mejias, 2018; Fuchs, 2015; Zuboff, 2019). More recently, debates surrounding generative AI, learning analytics, and automated evaluation have begun to ask how these technologies are reshaping teaching, assessment, and authorship.

However, what is still often lacking is a sustained philosophical account of how academic work is actually lived under these conditions, as well as an examination of the forms of resistance that remain possible within and through education itself. Much of the existing scholarship is sociological, policy-focused, or centered on specific technologies and governance mechanisms. Far less attention has been paid to how academics and students experience alienation in their everyday practices, how AI and platforms intensify this alienation, and how these same practices might also serve as sites for ethical and political resistance. To respond to this gap, this study brings together Marx's concept of alienation, Musto's and Fuchs's interpretations of labour and digital capitalism (Fuchs, 2015,

2016, 2022, 2023; Marx, 1932, 1976; Musto, 2010). Stiegler's idea of cognitive proletarianization (Stiegler & Ross, 2011), and recent analyses of knowledge-commodities and knowledge-rent (Jeon, 2011; Rotta & Teixeira, 2018; Starosta, 2012). I argue that academic work is increasingly structured as digital labour in which cognitive, communicative, and affective capacities are subordinated to the imperatives of capital. AI and platform infrastructures deepen this subordination by altering work rhythms, reshaping evaluative standards, and even transforming how thinking is perceived. The outcome is a dehumanized form of education in which learning risks being reduced to optimizing responses to prompts and metrics rather than cultivating subjects capable of thinking and acting otherwise.

This reasoning has three interrelated steps. The first section develops a Marxian theory of alienated labor to demonstrate how scholarly practices are increasingly shaped by relations of commodification and control. Then, it applies this theory to modern academic activity under digital capitalism. The second section examines the emergence of what I call the "automatic university" by analyzing how AI platforms, systems, and digital infrastructures reorganize cognitive labor and contribute to the dehumanization of education by altering ethical, evaluative, and epistemic practices. The third section explores possibilities for educational resistance, articulating an ethics of academic work that aims to reclaim judgment, authorship, and epistemic responsibility within increasingly automated institutions. A brief conclusion brings these strands together and reflects on the tasks facing critical philosophy of education in the present context..

LITERATURE REVIEW

The transformation of higher education in recent decades has increasingly been analysed through the lens of capitalist restructuring, where universities operate under market-oriented governance, managerial rationalities, and performance-based accountability systems. Within this framework, academic work is progressively evaluated through quantifiable outputs, rankings, and efficiency metrics, reorienting scholarly activity toward externally defined indicators rather than intrinsic intellectual or pedagogical values. While this literature provides a persuasive account of institutional change, it often conceptualises academics as organisational units or strategic actors, leaving the structural and experiential dimensions of academic labour insufficiently examined.

Critical studies of audit culture and managerial governance demonstrate that continuous evaluation regimes reshape everyday teaching and research practices. Performance metrics, benchmarking, and monitoring systems increasingly dictate academic priorities, temporal rhythms, and quality standards. Teaching, assessment, and publication practices are aligned with metric optimization, often at the expense of professional judgment and pedagogical autonomy. However, despite their critical orientation, such analyses tend to focus on governance mechanisms and policy effects, offering limited insight into how these processes transform academic work as lived labour.

The integration of digital platforms and artificial intelligence (AI) into higher education represents a significant intensification of these dynamics. Platformised learning environments, analytics dashboards, and AI-assisted assessment tools extend managerial oversight into the micro-level of academic practice. Research on AI in education highlights how datafication and automation redistribute authority, reshape epistemic practices, and mediate relationships between educators, students, and institutions (Zermeño-flores et al., 2024). Yet much of this literature remains fragmented, addressing AI primarily through technical, ethical, or policy perspectives rather than through a systematic analysis of labour relations.

Digital labour scholarship offers a partial corrective by situating AI within capitalist relations of production. From this perspective, AI systems are regarded as the result of the collective labour of many individuals, which, under capitalist economic conditions, becomes detached from its original creators. More (2023) offers a different perspective, conceptualizing AI as an objectification of accumulated human knowledge. This challenges the prevailing narratives that portray AI as a neutral or autonomous force. However, studies of digital labour rarely engage with higher education explicitly as a distinctive institutional site of knowledge production and governance.

Marxian theories of alienation offer a critical framework for integrating these strands of analysis. Contemporary reconstructions emphasize alienation as an objective structural condition rooted in capitalist relations of production rather than a subjective or moral experience. Øversveen (2022) posits that alienation should be conceptualized as a social process stemming from appropriation, commodification, and the disconnection of workers from the conditions and significations of their labour. This reconceptualization reestablishes the analytical relevance of alienation for the examination of contemporary forms of digital and cognitive work.

Building on this foundation, Sang (2025) demonstrate that alienation persists within digital capitalism through algorithmic control, platform governance, and data-driven management. In the contemporary digital age, alienation frequently manifests in a subtle manner, operating through automation, abstraction, and mediated decision-making processes rather than through direct coercion. These insights are particularly relevant for academic labour, which increasingly combines cognitive, affective, and relational work under algorithmic oversight.

Empirical studies have begun to validate these theoretical claims within higher education contexts. Poutanen (2023) study documents various forms of alienation among academics, including the loss of autonomy, diminished control over work processes, and affective disconnection from institutional values. Küçükauncular and Ertugan (2025) also provide quantitative evidence indicating that the integration of artificial intelligence (AI) in education is associated with alienation across four Marxian dimensions: product, labour process, species-being, and interpersonal relations. Their findings indicate that positive perceptions of AI may mitigate certain experiences of alienation, but tensions related to professional identity and moral agency remain.

Concurrently, the extant literature does not present a uniform interpretation of alienation in relation to AI. Sidorkin (2025) proposes the concept of "liberatory alienation," suggesting that externalization through AI may expand human capacities under specific conditions. While this perspective underscores the ambivalence of technological mediation, it dedicates minimal attention to the institutional and political-economic structures that govern the implementation of AI in contemporary universities.

A synthesis of the extant literature reveals a conceptual gap. Existing studies examine academic capitalism, AI, and alienation largely in isolation, without fully integrating governance structures, technological automation, and labour relations. This discrepancy underscores the necessity for a synthetic framework that conceptualizes the convergence of metrics, platforms, and AI to reshape academic work as a structured regime of governance, foregrounding alienation as a central analytical category.

METHODOLOGY

This study employs a conceptual critical approach grounded in Marxian theory to analyze academic work under AI-mediated governance. Instead of amassing empirical data, the article draws on a purposively selected corpus of peer-reviewed literature addressing academic capitalism, digital and algorithmic labour, alienation, and AI in higher education. The analysis progresses through a conceptual reconstruction of Marx's four dimensions of alienation and their interpretive application to contemporary academic practices shaped by metrics, platforms, and AI systems. In this study, insights from the fields of digital labour and artificial intelligence (AI) in education scholarship are synthesised to examine how technological automation and institutional governance converge in reshaping academic labour. As a conceptual study, it does not involve human participants, sampling procedures, or statistical analyses. Analytical validity is established through theoretical coherence and consistency across converging literatures.

RESEARCH RESULT AND DISCUSSION

Alienated Labour and the Quiet Crisis of Academic Work

Marx's alienation theory is a great way to understand the hidden problems in modern scholarship. In 1844, Marx wrote about alienation in the Economic and Philosophic Manuscripts. He defined it as a system of structural relationships that separate labour from its output, its process, other workers, and the worker's own species (Marx, 1932). Marxian reconstructions of the present day emphasize that alienation is an objective situation, founded in capitalist relations of production, where human capacities are mobilized in ways that eventually impede their own development, rather than a subjective sensation (Øversveen, 2022; Sang, 2025). This viewpoint is especially useful for examining academic work in the context of digital and algorithmic governance.

When academic outputs return to academics primarily as quantifiable indicators in rankings, dashboards, and performance evaluations, alienation from the outcome of labour becomes apparent. Scholarly work is increasingly valued for its exchange value inside metricized assessment systems, rather than for its contribution to collective inquiry. Research indicates that, under AI-mediated governance, where outputs are continuously assessed, repurposed, and recombined outside of the producers' authority, this loss of authorship and ownership is exacerbated (Poutanen, 2023; Küçükuncular & Ertuğran, 2026). Academic goods circulate independently across evaluative infrastructures within what could be called the 'automatic university,' confronting its makers as external and frequently opaque forces.

Academic work becomes alienating when it is restructured through automated scheduling, reporting cycles, and algorithmically informed decision-making. Activities such as reading, writing, teaching, and collegial exchange are increasingly subordinated to audit requirements and funding timelines. This fragments intellectual labour into administratively legible tasks. Rather than fostering scholarly autonomy, institutional systems prioritize speed, standardization, and measurability. As Hall (2018) notes, the pursuit of meaning in academic work persists despite organizational structures. Within the framework of the automated university, the externalization of control intensifies as platforms and AI systems pre-structure workflows, subtly redirecting academic labour from self-directed practice to compliance with automated regimes (More, 2023; Sang, 2025).

Alienation from others is reinforced by competitive and data-driven academic environments. Colleagues are positioned as rivals for scarce resources, students are framed as clients whose satisfaction must be continuously monitored, and research participants are rendered as data points within analytic systems. Capitani (2025) describes this process as an erosion of the social meaning of work under digital capitalism, where relations are increasingly instrumentalised, and solidarity weakened. In the automatic university, social relations are mediated less by collegial recognition than by algorithmic visibility, rankings, and institutional branding.

Alienation from species-being becomes particularly visible in the figure of the "academic entrepreneur." Capacities for critical inquiry, teaching, and reflection are reorganised around the production of measurable outputs, employable graduates, and marketable knowledge. Academics are encouraged to manage themselves as portfolios of human capital, optimising visibility and impact across platforms. This reorientation generates a persistent dissonance between the ethical and intellectual motivations that draw individuals into academia and the activities they are required to perform. Such dissonance reflects a structural estrangement from academic work as a meaningful human practice rather than individual maladjustment (Øversveen, 2022; Poutanen, 2023).

Digital infrastructures that automate governance exacerbate these processes, which are not solely the product of administrative purpose. Under digital capitalism, academic labour is becoming increasingly digital, generating constant data streams that can be tracked, assessed, and monetized (Fuchs, 2015, 2016). AI systems and platform infrastructures extend control to academic micro-practices, altering not only how work is evaluated, but also how it is perceived and valued. Further research on epistemic injustice shows that, by favoring procedural outputs over situated understanding, AI-mediated knowledge creation risks undermining academic judgment and epistemic agency (Zermeño-Flores et al., 2024; Butson & Spronken-Smith, 2024).

Stiegler's concept of cognitive proletarianization clarifies this diagnosis by emphasizing how digital systems reorganize memory, attention, and imagination, shaping experience and thought (Stiegler & Ross, 2011). In the automated university, AI and platform technologies increasingly act as quasi-autonomous systems that determine what is relevant, efficient, and successful. As Al-Asadi et al. (2024) argue, when these technologies are embedded in profit-oriented, metric-driven systems, they become alienating forces that dominate rather than support human capacities.

Collectively, the quiet crises of academic work can be seen as an expression of a larger structural change: the rise of the automated university. In this system, automated processes increasingly control governance, assessment, and coordination. In this system, alienation is a fundamental characteristic that values calculability, scalability, and optimization over introspection and group meaning-making. It is not an unintentional byproduct. This conceptualization underscores the necessity of critically examining the institutional and technical systems that organize academic labour to effectively address contemporary academic distress. This approach is preferable to relying solely on human resilience or ethical principles.

The Automatic University

If the previous section conceptualised academic work as a configuration of alienation and cognitive proletarianisation, this section advances the analysis by examining how artificial intelligence (AI) and platform infrastructures consolidate these dynamics into what can be described as the automatic university. This institutional regime reorganises core academic practices through digital systems that encode managerial and capitalist imperatives into automated procedures. Rather than marking a qualitative break with earlier forms of academic capitalism, the automatic university stabilises and intensifies existing tendencies by embedding them within technical infrastructures that operate with increasing opacity and limited contestability. In doing so, it reshapes academic relations to knowledge, time, and judgement in ways that are difficult to challenge from within everyday academic practice.

From the perspective of cognitive proletarianisation, informational capitalism extends capitalist logics more deeply into domains of knowledge and cognition (Fuchs, 2015; Stiegler & Ross, 2011). AI systems and digital platforms do not simply assist academic routines; they reorganise the conditions under which teaching and research are performed and evaluated. Framed as instruments of efficiency and modernisation, these systems increasingly function as conduits for managerial priorities, narrowing the space for autonomous scholarly judgement and relocating decision-making authority to automated procedures.

One central transformation concerns the organisation of academic time. Platform-mediated connectivity promises flexibility but frequently erodes boundaries between work and non-work, normalising expectations of constant availability and rapid response (Fuchs, 2022). Time for sustained intellectual engagement is fragmented into administratively legible units, while notifications and reporting demands interrupt the rhythms of reading, writing, and teaching. This acceleration reflects capital's tendency to compress time and maximise value-producing activity (Marx, 1976), now intensified through infrastructures that translate academic labour into continuous flows of micro-tasks recorded and assessed by institutional systems. Alienation from the labour process thus appears as a loss of control over pace and rhythm, increasingly dictated by platforms rather than by the internal demands of inquiry.

A related transformation concerns evaluation and visibility. Metrics and dashboards do not merely measure academic activity; they define what counts as work. Activities that are easily tracked publications, grants, course completions, and student evaluations dominate performance assessments, while labour that resists quantification such as mentoring, close reading, and reflective preparation is marginalised (Hall, 2018; Poutanen, 2023). Platform infrastructures intensify this asymmetry by rendering some practices hyper-visible and others effectively invisible. As critics of digital capitalism have shown, such selective visibility systematically privileges activities aligned with competitive metrics and sidelines forms of work that cannot be easily quantified (Coudry & Mejias, 2018; Zuboff, 2019). In this context, academic labour is increasingly oriented toward what will register within evaluative systems rather than toward collective intellectual purposes.

AI further consolidates these tendencies by extending automation into activities traditionally grounded in human judgment. While often introduced as decision-support tools, AI systems increasingly shape how academic tasks are defined, prioritised, and justified. As algorithmic outputs acquire the status of objective reference points, deviations from them require justification, whereas compliance does not (Healy, 2020). This shift displaces judgment from academic communities to technical systems, raising fundamental questions about authority and responsibility within academic governance. As policy-oriented philosophical analyses of AI-induced alienation emphasise, such displacement is not merely technical but institutional, requiring governance responses rather than individual adaptation (Vũ, 2025).

These dynamics are especially evident in academic reading and writing. Generative AI systems can summarise texts, produce drafts, and refine arguments, blurring the boundary between human authorship and machine assistance. Writing, traditionally a medium of thinking and conceptual struggle, risks being reduced to the management and rearrangement of machine-generated text (Stiegler & Ross, 2011). In this sense, commodity fetishism reappears in a contemporary form: AI-generated outputs present themselves as autonomous products, obscuring the social and technical relations that make them possible (Marx, 1976; Musto, 2010).

Political-economic analyses further sharpen this diagnosis. Once knowledge commodities are produced, capital increasingly extracts value through rents, subscriptions, and intellectual property regimes rather than through direct labour (Rotta & Teixeira, 2018). Within the automatic university, scholarly outputs, teaching materials, and student interactions are absorbed into proprietary platforms, and AI models are governed outside academic control. Academic labour thus generates reservoirs of knowledge whose ownership and governance lie elsewhere, reinforcing institutional alienation.

Viewed as a whole, the automatic university intensifies contradictions already present in academic labour. Alienation becomes more pervasive. It structures time, evaluation, and judgment, and is more subtle because it is mediated through systems that present themselves as neutral, efficient, or inevitable. This configuration clarifies why contemporary academic distress cannot be addressed through appeals to individual resilience or ethical guidelines alone. Instead, it must be understood as a structural condition rooted in automated governance, providing the conceptual foundation for the discussion of educational resistance and ethics in the following section.

Educational Resistance and an Ethics of Academic Work

Building on the preceding analysis, this section extends the diagnosis of alienation within the automatic university toward its normative implications. As shown above, artificial intelligence (AI) and platform infrastructures intensify existing forms of alienation by reorganising academic labour through automated systems that encode managerial and capitalist imperatives. These systems reshape not only how academic work is performed but also how knowledge, time, and judgment are valued and governed.

From the perspective of cognitive proletarianisation, informational capitalism increasingly subordinates knowledge and cognition to logics of efficiency, measurability, and control (Fuchs, 2015; Stiegler & Ross, 2011). AI systems and platforms do not merely assist academic routines; they restructure the temporal and evaluative conditions of teaching and research. Introduced as tools of modernisation, they narrow the space for autonomous scholarly judgement by embedding managerial priorities into automated procedures.

One immediate effect concerns academic time. Platform-mediated connectivity dissolves boundaries between work and non-work, normalising constant availability and fragmenting time for sustained intellectual engagement (Fuchs, 2022). From a Marxian standpoint, this acceleration reflects capital's tendency to compress time and maximise value-producing activity (Marx, 1976), now intensified through infrastructures that translate academic labour into continuous, traceable micro-tasks. Alienation from the labour process thus appears as a loss of control over pace and rhythm, increasingly dictated by platforms rather than by the internal demands of inquiry.

A related transformation concerns evaluation and visibility. Metrics and dashboards define what counts as academic work, privileging activities that are easily quantified while marginalising forms of labour such as mentoring, close reading, and reflective preparation (Hall, 2018; Poutanen, 2023). Platform infrastructures intensify this asymmetry by rendering some practices hyper-visible and others invisible, reinforcing competitive and metric-driven priorities (Couldry & Mejias, 2018; Zuboff, 2019). As a result, academic outputs increasingly function as assets within institutional competition rather than as contributions to shared intellectual life.

Artificial intelligence further reinforces these trends by extending automation into areas that have traditionally relied on human judgment. Although they are often presented as decision-support tools, algorithmic systems are increasingly influencing the definition of tasks and the justification of decisions. They are gradually attaining the status of authoritative reference points that are challenging to dispute (Healy, 2020). This shift raises a significant ethical concern: when academic decisions align with algorithmic outputs, responsibility and authority transfer from academic communities to technical systems.

These dynamics are particularly evident in the world of academic writing and reading. Generative AI is blurring the line between human-written text and text with machine assistance. This shift could transform writing from a thoughtful process into merely piecing together machine-generated text (Stiegler & Ross, 2011). When AI outputs appear independent yet hide the social and technical connections behind their creation, it's akin to seeing commodity fetishism in a new form (Marx, 1976).

Taken together, the automatic university intensifies alienation by structuring academic time, evaluation, and judgment through automated governance. Within this configuration, educational resistance cannot be understood as individual refusal, moral resilience, or personal adaptation to technological change. Rather, it designates a collective effort to reclaim academic judgement, authorship, and epistemic responsibility from systems that increasingly delegate core academic decisions to metrics, platforms, and algorithms. Resistance, in this sense, is not oppositional in a narrow political sense but constitutive of academic practice itself: it concerns who has the authority to define what counts as knowledge, valuable work, and legitimate evaluation within automated institutions.

When we talk about the ethics of academic work, it's not just about following a set of moral rules. Instead, it's more about how we structure and manage our institutions. Vũ (2025) argues that when it comes to AI, we need to move away from relying on personal virtues and instead focus on governance and policy changes that help us maintain control over these complex systems. Similarly, critical digital humanism suggests that engaging ethically with AI isn't just about minimizing its negative effects. It's about taking back collective control over how these technologies are designed, implemented, and what they aim to achieve (Fuchs, 2022). So, the ethics of academic activity is really about committing to protect our ability to make judgments, reflect, and share governance in creating and evaluating knowledge. This approach sees educational resistance as essential for preserving the human and social importance of our work.

CONCLUSIONS AND RECOMMENDATIONS

This study set out to examine contemporary academic work through a Marxian analysis of alienation under conditions of digital capitalism and artificial intelligence (AI). By conceptualising academic labour as increasingly mediated by metrics, platforms, and algorithmic systems, the analysis demonstrates that AI does not introduce a fundamentally new logic into higher education but rather intensifies existing forms of alienation. Academic work is progressively reorganised through automated governance that restructures time, evaluation, and judgement, contributing to the dehumanisation of educational practices and the erosion of collective scholarly autonomy.

The findings show that these dynamics cannot be adequately understood as individual problems of adaptation, resilience, or professional ethics. Instead, they reflect structural transformations in the organisation of academic labour within what has been described as the automatic university. On this basis, the study argues that educational resistance must be understood as a collective and institutional project aimed at reclaiming academic judgement, authorship, and epistemic responsibility. An ethics of academic work, therefore, emerges not as a set of abstract moral principles but as a critical orientation toward reshaping the socio-technical conditions under which knowledge is produced, evaluated, and taught.

Based on these conclusions, several suggestions can be made. First, universities should check how AI and digital platforms are used. They should ensure that these tools assist, rather than replace, academic decision-making processes. Decisions should be transparent and include group oversight of AI tools. Academics should also be involved in designing and reviewing digital systems. Academics should collaborate to safeguard shared decision-making processes, promote non-numeric academic values, and prioritize teaching and research that foster critical thinking over mere efficiency. This study has some limitations. It is a theoretical analysis not based on real-world data; therefore, it does not consider different institutions, countries, or fields.

ADVANCED RESEARCH

Future studies could combine theory with real-world research by examining academic experiences with AI or comparing education systems. These ideas could lead to real changes by exploring policies that promote the ethical use of AI in higher education.

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REFERENCES

- Couldry, Nick, & Mejias, Ulises A. (2018). Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject. *Television & New Media*, 20(4), 336–349. <https://doi.org/10.1177/1527476418796632>.
- Fuchs, C. (2015). *Culture and Economy in the Age of Social Media* (1st ed.). Routledge.
- Fuchs, C. (2016). *Reading Marx in the Information Age: A Media and Communication Studies Perspective on Capital* (Vol. 1). Routledge.
- Fuchs, C. (2022). *Digital humanism*. Emerald.
- Fuchs, C. (2023). *Digital Ethics: Media, Communication and Society* (Vol. 5). Routledge. <https://doi.org/10.4324/9781003279488>.
- Hall, R. (2018). *The Alienated Academic: The Struggle for Autonomy Inside the University*. <https://doi.org/10.1007/978-3-319-94304-6>.
- Healy, M. (2020). *Marx and Digital Machines: Alienation, Technology, Capitalism*. University of Westminster Press. <https://doi.org/10.2307/j.ctv199tdf0>.
- Jeon, H. (2011). The value and price of information commodities: An assessment of the south korean controversy *. *Research in Political Economy*, 27, 191–222. [https://doi.org/10.1108/S0161-7230\(2011\)0000027009](https://doi.org/10.1108/S0161-7230(2011)0000027009).

- Marginson, S. (2016). The worldwide trend to high participation higher education: dynamics of social stratification in inclusive systems. *Higher Education*, 72(4), 413–434. <https://doi.org/10.1007/s10734-016-0016-x>.
- Marx, K. (1932). *Economic and Philosophic Manuscripts of 1844*. Progress Publishers.
- Marx, K. (1976). *Capital: A Critique of Political Economy* (3rd ed., Vol. 1). Charles H. Kerr and Co.,.
- More, C. (2023). A Hegelian-Marxist Analysis of Artificial Intelligence. In *Cultural Logic: Marxist Theory & Practice* (Vol. 27). <https://blogs.umass.edu/brain-wars/files/2016/03>.
- Münch, R. (2014). *Academic Capitalism* (1st ed.). Routledge.
- Musto, M. (2010). Revisiting Marx's Concept of Alienation. *Socialism and Democracy*, 24, 101–179. <https://api.semanticscholar.org/CorpusID:144261468>.
- Poutanen, M. (2023). From R&D Innovation to Academic Capitalism in Finland. *Scandinavian Journal of Public Administration*, 27(1), 29–52. <https://doi.org/10.58235/sjpa.v27i1.10969>.
- Riivari, E., Malin, V., Jääskelä, P., & Lukkari, T. (2020). University as a workplace: searching for meaningful work. *Teaching in Higher Education*, 25(3), 286–304. <https://doi.org/10.1080/13562517.2018.1563061>.
- Rotta, T., & Teixeira, R. (2018). The Commodification of Knowledge and Information (pp. 379–400). <https://doi.org/10.1093/oxfordhb/9780190695545.013.23>.
- Slaughter, S., & Rhoades, G. (2009). *Academic Capitalism and the New Economy: Markets, State, and Higher Education*. Johns Hopkins University Press.
- Starosta, G. (2012). Cognitive Commodities and the Value-Form. *Science & Society*, 76, 365–392. <https://doi.org/10.2307/41510567>.
- Stiegler, B., & Ross, D. (2011). *Digital as Bearer of Another Society*.

- Wang, Y., Cao, Y., Gong, S., Wang, Z., Li, N., & Ai, L. (2022). Interaction and learning engagement in online learning: The mediating roles of online learning self-efficacy and academic emotions. *Learning and Individual Differences*, 94, 102128. <https://doi.org/https://doi.org/10.1016/j.lindif.2022.102128>.
- Zuboff, S. (2019). Surveillance Capitalism and the Challenge of Collective Action. *New Labor Forum*, 28(1), 10–29. <https://doi.org/10.1177/1095796018819461>.