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FROM ALGORITHM TO ACTION: A SYSTEMATIC REVIEW ON MAPPING THE PATHWAYS OF GIG WORKERS BEHAVIOR

DARI ALGORITMA KE TINDAKAN: TINJAUAN SISTEMATIS TENTANG PEMETAAN JALUR PERILAKU PEKERJA GIG

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ABSTRACT

The implementation of algorithmic management in the platform-based gig economy has brought fundamental changes, not only in how work is performed, but also in how gig workers adapt their behavior to decisions made automatically by algorithms. This study aims to systematically review how algorithmic management shapes gig workers behavioral responses through internal psychological mechanisms. A systematic literature review was conducted following PRISMA guidelines. A total of 525 articles were initially retrieved from the Scopus database using keyword-based search strategies. After applying strict inclusion and exclusion criteria, 40 high-relevance articles were selected for thematic synthesis. The findings reveal that algorithmic management triggers diverse internal responses, including cognitive appraisals, affective states, psychological strain, and motivational changes. These processes lead to varied behavioral outcomes, ranging from constructive and proactive to destructive, passive, and ambivalent behaviors. Algorithmic systems profoundly shape gig workers perceptions, emotions, and behaviors. Future research should adopt cross-contextual designs to better understand these dynamics. Platforms must balance efficiency with worker well-being by embedding fairness, transparency, and psychological safety into algorithmic practices.

Keywords: *Algorithmic Management, Behavioral Response, Cognitive Appraisal, Psychological Mechanisms, Stimulus Organism Response*

ABSTRAK

Penerapan manajemen algoritmik dalam ekonomi gig berbasis platform telah membawa perubahan mendasar, tidak hanya dalam cara kerja dilakukan, tetapi juga dalam cara pekerja gig menyesuaikan perilaku mereka terhadap keputusan yang dibuat secara otomatis oleh algoritma. Studi ini bertujuan untuk melakukan tinjauan sistematis tentang bagaimana manajemen algoritmik membentuk respons perilaku pekerja gig melalui mekanisme psikologis internal. Tinjauan literatur sistematis dilakukan sesuai dengan pedoman PRISMA. Sebanyak 525 artikel awalnya diidentifikasi dari basis data Scopus menggunakan strategi pencarian berbasis kata kunci. Setelah menerapkan kriteria inklusi dan eksklusi yang ketat, 40 artikel yang relevan dipilih untuk sintesis tematik. Temuan menunjukkan bahwa manajemen algoritmik memicu respons internal yang beragam, termasuk penilaian kognitif, keadaan afektif, tekanan psikologis, dan perubahan motivasi. Proses-proses ini menghasilkan hasil perilaku yang bervariasi, mulai dari perilaku konstruktif dan proaktif hingga perilaku destruktif, pasif, dan ambigu. Sistem algoritmik secara mendalam membentuk persepsi, emosi, dan perilaku pekerja gig. Penelitian masa depan harus mengadopsi desain lintas konteks untuk memahami dinamika ini dengan lebih baik. Platform harus menyeimbangkan efisiensi dengan kesejahteraan pekerja dengan mengintegrasikan keadilan, transparansi, dan keamanan psikologis ke dalam praktik algoritmik.

Kata Kunci: Manajemen Algoritmik, Respons Perilaku, Penilaian Kognitif, Mekanisme Psikologis, Respons Stimulus-Organisme

INTRODUCTION

In recent years, the sharing economy has experienced significant growth (Duggan et al., 2020), as reflected in the increasing number of freelance workers operating through various digital platforms (Hall & Krueger, 2018). These peoples exchange products and services via platform-mediated systems that offer low transaction costs (Jabagi et al., 2019), allowing the sharing economy to expand across various sectors and connect individuals to new employment opportunities (Acs et al., 2021). To manage thousands of transactions and

workers, digitalization and artificial intelligence are needed to support decision making that is automatic, accurate, and free from bias, a process known as algorithmic management (Stone et al., 2015). Digital platforms in transportation, food delivery, and other service sectors widely adopt algorithmic management (AM) to enhance operational efficiency and workforce productivity (Jarrahi et al., 2021). AM utilizes algorithms and digital systems to automatically manage, monitor, and evaluate gig workers performance (Mateescu & Nguyen, 2019). It also handles task assignments, scheduling, payment, performance reviews (Kadolkar et al., 2024), determines dynamic pricing based on market supply and demand to ensure fair compensation (Rosenblat & Stark, 2015), and calculates incentives automatically (Chen et al., 2017). AM also integrates client feedback and task success rates to optimize customer–worker matching and support continuous performance improvement (Irani & Silberman, 2013; Kässi & Lehdonvirta, 2018).

However, AM also brings significant negative impacts. A lack of transparency in algorithmic systems makes it difficult for gig workers to understand how platforms operate, while new forms of control and dominance reduce their autonomy and limit their freedom in performing tasks (Meijerink & Bondarouk, 2023; Muldoon & Raekstad, 2023; Sloth Laursen et al., 2021). These conditions create tension between algorithmic control and job autonomy, often leading to psychological stress, emotional exhaustion, and pressure caused by constant monitoring and unclear performance criteria (Duke, 2022; Kinowska & Sienkiewicz, 2023; Sun, 2023; Zhang et al., 2023). Mismatches between worker preferences and platform algorithms may further erode well-being (Felix et al., 2023) and, in some cases, push workers to take unsafe actions to meet strict time targets (Kellogg et al., 2020). Over time, these patterns may erode workers sense of personal responsibility, replacing intentional service with blind compliance to system instructions, which ultimately diminishes service quality, weakens worker retention, and threatens the sustainability of the platform itself (Jarrahi et al., 2021; Kadolkar et al., 2024; Wood, 2021).

The research gap lies in the limited understanding of how gig workers experiences with algorithmic management influence their psychological responses and behaviors. Although some negative outcomes of algorithmic management have been identified, few studies have examined the full pathway from algorithmic systems to internal processes and resulting worker behavior. Based on the observed phenomenon and identified research gap, this study aims to address the following two main research questions:

RQ1. How does algorithmic management influence the behavior of gig workers?

RQ2. What key issues should be explored in future research to better understand the influence of algorithmic management on gig workers behavior?

RESEARCH METHODS

Aims of the Review

The main objective of this study is to comprehensively identify how algorithmic management influences the behavior of platform based gig workers. Guided by the Stimulus Organism Response framework, this review seeks to map the behavioral pathways initiated by external algorithmic stimuli, followed by internal psychological processes such

as cognitive appraisals, emotional reactions, motivation, and work attitudes, which ultimately lead to observable behaviors. This study also aims to identify critical knowledge gaps, particularly regarding how gig workers interpret and respond to algorithmic systems through a sequence of internal processes. By emphasizing this perspective, the review encourages future research to move beyond assessing end-point outcomes and to consider the cognitive and emotional mechanisms that link algorithmic management with worker behavior.

Design

This study employs a systematic literature review (SLR) approach to ensure transparency, rigor, and replicability in synthesizing existing knowledge. The review process adheres to the PRISMA 2020 guidelines, which provide a standardized protocol for identifying the relevant studies, application of predefined inclusion and exclusion criteria, extraction of key data, critical appraisal of study quality, and thematic or content-based synthesis of findings (Sakib et al., 2023). Following these guidelines enhances the credibility and reproducibility of the review by minimizing bias and ensuring a comprehensive and structured assessment of the current state of research.

Search Strategy and Data Sources

To identify relevant literature on algorithmic management and gig worker behavior, the authors conducted a search using the string TITLE ABS KEY with the keywords ("algorithmic control" OR "algorithmic management") AND ("gig" OR "platform" OR "worker"). The authors also limited data extraction and analysis with the constraints "title, abstract, keywords," to prevent articles that are not related to the research object from being extracted because the keywords appear in the body of the text. The database used to extract information is Scopus, because this database is widely used and is the largest database available for multidisciplinary scientific literature (Guerrero-Bote et al., 2020). Scopus also provides complete information on the supporting data needed so that the authors are confident in the quality of the publications they choose. The research and extraction were conducted on May 2025 and yielded a total of 525 initial articles.

Eligibility Criteria and Study Selection

Inclusion Criteria

Studies were included if they explicitly examined algorithmic management or algorithmic control in the context of platform-based gig work such as ride-hailing, food delivery, or online freelancing. Eligible articles focused on behavioral, psychological, or cognitive responses among gig workers. To ensure quality and consistency, the review was limited to journal articles that were peer-reviewed, written in English, available in open access format, and contained the relevant search terms in their title, abstract, or keywords.

Table 1. Screening Criteria

Keywords (Title, Abstract, or Keywords)	("algorithmic control" OR "algorithmic management") AND ("gig" OR "platform" OR "worker")
Database	Scopus
Language	English
Document Type	Article
Source Type	Journal
Search Period	Not Specified
Open Access	Yes

Exclusion Criteria

Articles were excluded based on the following considerations. First, duplicate entries were removed to avoid

redundancy in the dataset. Second, articles that were not available in open access format or not written in English were excluded to ensure full accessibility and consistency of analysis. Third, documents that were not classified as journal articles, including conference papers, books, technical reports, and opinion essays, were omitted. Fourth, studies were removed if the relevant search keywords appeared only within the main body of the text, but not in the title, abstract, or keyword section, as this typically indicated limited relevance to the core research focus. Fifth, articles that centered on non-gig work environments, such as conventional employment settings, were excluded. Finally, studies that discussed algorithmic systems purely from a technical or computational perspective, without addressing their psychological or behavioral impacts on workers, were also excluded from the review.

Data Extraction

Data extraction was carried out manually by the authors using a structured and replicable procedure in accordance with PRISMA guidelines. The selection process was illustrated using a PRISMA flow diagram, which detailed the number of records identified, screened, excluded, and included at each stage. To enhance the rigor of the analysis, the following steps were undertaken:

(1)Removing duplicate articles. Duplication occurs because the same study is extracted twice or there are two types of documents, usually a proceeding and a final article, but the content of both articles is the same.

(2)Articles are filtered using several criteria, such as consideration of writing articles in English, non-articles (still in the proceeding stage or in the form of books and reports). The next criterion is that non-open access articles are removed from the list of articles to be discussed. From these criteria, 181 articles were filtered.

(3)The next filtering stage involved downloading articles from the Scopus database, during which 29 articles were filtered out.

(4)152 selected articles were then read and reviewed to determine whether the article is in accordance with the research objectives to be discussed, so that finally 40 articles were obtained that were in accordance with the context of the discussion and ready to be studied further.

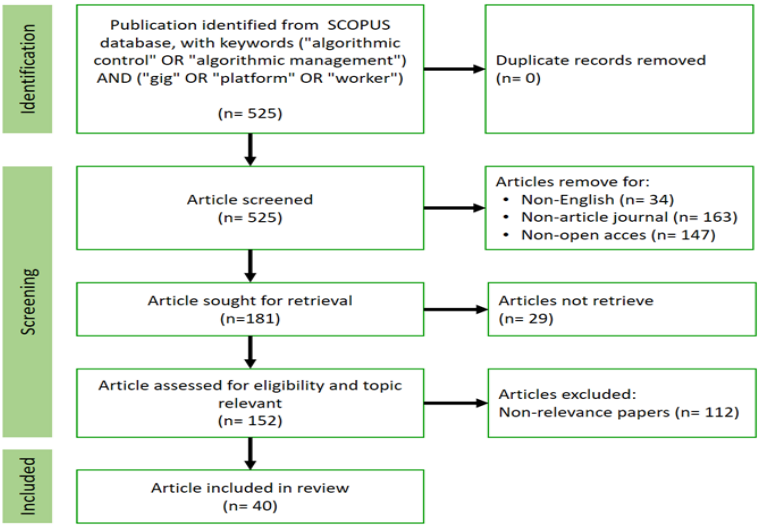

Figure 1. Screening Protocol

Quality Appraisal

Given the diverse nature of the selected literature, which included both empirical and conceptual studies, a formal quality appraisal using standardized scoring tools was not applied. Instead, the review adopted a narrative and thematic appraisal strategy, consistent with the objectives of a conceptually oriented systematic literature review. All 152 articles were assessed based on three main criteria which include (1) conceptual clarity and coherence; (2) relevance to the central themes of algorithmic management, gig work, and worker behavior; and (3) alignment with the analytical framework, particularly the mapping of stimulus, organism, and response components. Studies were also reviewed for their theoretical contributions, methodological transparency (if empirical), and analytical depth in addressing psychological or behavioral mechanisms under algorithmic systems. Based on these appraisals, a final set of 40 articles was selected for in-depth analysis due to their high relevance and significant contribution to understanding gig worker behavior in the context of algorithmic management and digital labor.

Data Analysis/ Synthesis

The data extracted from the selected articles were systematically analyzed using thematic synthesis. This approach was adopted to integrate diverse study types into a coherent mapping of behavioral mechanisms under algorithmic management. The synthesis was structured around the Stimulus Organism Response framework, allowing for categorization of findings into three analytical dimensions which include algorithmic stimuli, internal psychological responses, and behavioral outcomes.

RESULTS AND DISCUSSIONS

Results

Characteristics of Included Studies

We analyzed 152 articles on algorithmic management, which were filtered from the Scopus database following the screening protocol outlined in Figure 1. To provide an overview of research trends within this dataset, Figure 2 illustrates the annual number of publications addressing the relationship between algorithmic management and gig workers from 2016 to 2024. As shown in the figure, research interest in this topic has grown significantly since 2020.

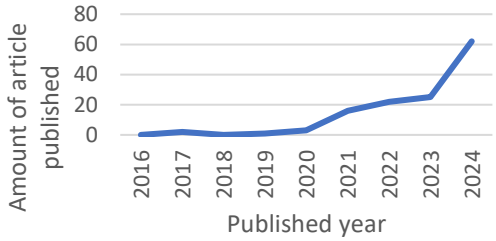

Figure 2. Amount of article published by year

To shed light on how various forms of external stimuli shape gig workers behavior, this study is guided by the Stimulus Organism Response framework. These stimuli, particularly algorithmic management (AM) and algorithmic control (AC), are processed through a set of internal mechanisms that represent how workers perceive, interpret, and respond to the systems that govern their work. Based on the literature reviewed, these internal processes can be grouped into six main categories. The first is cognitive appraisal, which refers to how workers assess whether job demands are viewed as challenges or obstacles. The second is cognitive behavioral intention, such as the intention to leave the platform or switch to alternative gig providers. The third is affective state, which includes short term emotions such as frustration,

anxiety, or pride. The fourth is psychological state, referring to deeper conditions such as stress, burnout, and overall psychological wellbeing. The fifth is motivational state, which encompasses work engagement, intrinsic drive, and commitment. The sixth is subjective evaluation, which reflects how workers make personal judgments about their experiences, including whether their work feels meaningful or fair.

These internal states ultimately give rise to various observable behaviors, which can be categorized into five types of responses. Constructive responses involve positive behaviors such as providing extra service beyond what is required. Proactive responses reflect worker initiatives like job crafting or self-directed adaptation to algorithmic demands. Destructive responses represent deviant or harmful behaviors, including deliberate attempts to disrupt or bypass the system. Passive responses emerge when workers comply mechanically with algorithmic instructions without reflection or engagement. Ambivalent responses describe mixed or contradictory behaviors, such as switching platforms or pushing oneself beyond healthy limits to meet algorithmic targets. This classification of external stimuli, internal psychological mechanisms, and observable behaviors is summarized in Table 4 for further reference and clarity.

Table 2. Mapping of Stimulus, Organism, and Behavioral Responses

Author(s)	Stimulus					Organism				Response-Behavior				
	AM	*AC*	*Others*	*CA*	*CBI*	*AS*	*PS*	*MS*	*SE*	*Constructiv*	*Proactive*	*Destructive*	*Passive*	*Ambivalent*
Alacovska et al. (2024)	√						√				√			
Allen-Perkins & Cañedo-Rodríguez (2023)		√							√		√			
Anwar et al. (2024)	√			√						√		√		
Badoi & Preoteasa (2024)		√									√			
Bellesia et al. (2023)	√			√							√			
Bucher et al. (2021)	√								√		√	√	√	
Cameron (2024)	√					√						√	√	
Chan (2022)	√								√			√	√	
Cheng et al. (2024)		√					√							

Cini (2023)		√								√		
Cram et al. (2022)		√			√							
Cui et al. (2024)	√				√			√				
Duggan et al. (2023)		√	√		√							
Felix et al. (2023)	√		√									
Granulo et al. (2024)	√						√					
Griesbach et al. (2019)		√						√		√		
Iazzolino & Varesio (2023)	√							√	√	√		
Jabagi et al. (2025)	√				√							
James (2024)	√					√		√				
Liang et al. (2024)		√	√						√			
Liu & Yin (2024)	√		√						√			
Ķešāne & Spuriņa (2024)		√					√	√				
Mbare et al. (2024)	√					√			√			
McDaid & Free (2025)	√									√		
Parent-Rocheleau et al. (2024)		√	√									
Park & Ryoo (2023)		√						√			√	√
Pieczka & Miszczyński (2024)	√							√				
Schaupp (2021)	√								√	√		
Schreyer (2024)	√				√					√		
Semujanga & Parent-	√			√	√	√						

Rocheleau (2024)												
Tuomi et al. (2024)	√				√					√		
Vasudevan & Chan (2022)			√				√		√	√		
Vieira (2023)	√						√					√
Wan et al. (2024)	√			√					√	√		
Wiener et al. (2023)		√		√					√	√	√	
Woodcock (2022)		√								√		
Yu et al. (2025)	√			√	√							
Zhang et al. (2023)	√			√						√		
Zhou et al. (2025)			√				√	√				
Zoonen et al. (2024)		√					√		√			

Note: (AM) Algorithmic Management, (AC) Algorithmic Control, (CA) Cognitive Appraisal, (CBI) Cognitive–Behavioral Intention, (AS) Affective State, (PS) Psychological State, (MS) Motivational State, (SE) Subjective Evaluation.

Future Research Agenda

Recent studies on algorithmic management through the Stimulus Organism Response framework show that gig workers experiences are shaped by both external and internal factors. In the stimulus dimension, research highlights how algorithmic control, transparency, data protection, social support, and power relations within digital platforms influence workers environments. In the organism dimension, scholars emphasize the psychological impacts of algorithmic systems, including stress, emotional resilience, motivation, trust, and identity, as well as the roles of personal and peer support in coping with pressure. Finally, in the response dimension, studies examine behavioral reactions such as adaptation, resistance, job satisfaction, work–life balance, and service interactions. Together, these findings suggest that future research should not only focus on technical mechanisms but also consider the broader psychological, social, and cultural contexts that shape workers experiences in algorithmic work systems, as summarized in Table 3.

Table 3. Key Issues for Future Research Agenda

Staging	Author	Key Issues for Future Research Agenda
Stimulus	(Cameron, 2024; Cheng et al., 2024; Ķešāne & Spuriņa, 2024; McDaid & Free, 2025; Park & Ryoo, 2023; Tuomi	Social support, algorithmic transparency, algorithmic policy and regulation, personal data protection,

	et al., 2024; Vieira, 2023; Zhou et al., 2025)	power relations in digital platforms, and digital working conditions.
Organism	(Bellesia et al., 2023; Cheng et al., 2024; Granulo et al., 2024; Jabagi et al., 2025; Liang et al., 2024; Mbare et al., 2024; Parent-Rocheleau et al., 2024; Park & Ryoo, 2023; Pieczka & Miszczyński, 2024; Schreyer, 2024; Zhou et al., 2025)	Well-being, burnout, mental health, intrinsic motivation, trust in the platform, professional identity, sense of place, resilience, peer social support, job satisfaction, and work-life balance.
Response	(Allen-Perkins & Cañedo-Rodríguez, 2023; Chan, 2022; Granulo et al., 2024)	Resistance, adaptation, worker–customer interactions, switching and disengagement.

Discussion

Stimulus Dimension: Work Shaped by Algorithms

Digital platforms in the sharing economy have experienced a significant transformation. They have evolved from merely acting as service connectors to becoming entities that rely heavily on algorithmic control as the main foundation of their management systems. Two specific forms of stimuli that have received considerable attention in recent academic literature are AM and AC. Both forms are now recognized as having a systematic influence on workers job experiences and their perceptions of autonomy and control (Muldoon & Raekstad, 2023; Sloth Laursen et al., 2021). Sun (2023) argues that the intensity of these systems does not only influence the physical structure of work but also creates significant psychological pressure and cognitive strain for workers. Gig workers often face an ongoing tension between following strict algorithmic standards and trying to maintain the sense of autonomy that gig work originally promised. Even in service sectors that involve emotional labor, such as digital mortgage services, Terry et al. (2022) found that algorithmic control limits emotional autonomy, which had previously been considered a positive aspect of such work.

In the case of food delivery and ride hailing services, the growing dominance of algorithms has contributed to the fragmentation of work. Workers become increasingly dependent on automatic decisions generated by the platform's system (Mendonça & Kougiannou, 2023). Over time, this dependency leads to a stronger perception of being controlled, which intensifies psychological pressure and eventually has a negative impact on how workers view their job as a whole (Sun, 2023). In such environments, the space for independent thinking or meaningful work becomes narrower, further affecting workers' satisfaction and well-being. Nonetheless, it is important to note that algorithmic systems are not entirely negative in their effects. Some workers still recognize the benefits that these systems can offer, particularly in terms of task clarity and access to financial incentives (Meijerink & Bondarouk, 2023). However, these advantages often come with tradeoffs, such as reduced work autonomy and increased psychological uncertainty. Workers may feel they are treated more like data points within a system than as individuals capable of exercising judgment and discretion in their work.

Organism Dimension: Internal Psychological Processing.

The stimulus of AM and AC does not lead directly to behavioral responses from workers. Instead, it operates through a series of complex internal processes within the individual. In the Stimulus Organism Response framework, this stage is referred to as the organism phase, where psychological and perceptual mechanisms play a central role in shaping how workers respond to external conditions (Griesbach et al., 2019; Zhang et al., 2023). This internal processing involves various interrelated psychological aspects, including cognitive evaluations, emotional states, and motivational drives, all of which contribute to the development of actual workplace behaviors.

One of the most critical components of this organism phase is the cognitive appraisal process, in which workers assess whether the demands created by algorithmic systems are viewed as positive challenges or negative hindrances (Glavin et al., 2021). This appraisal strongly influences how workers respond emotionally and behaviorally to their work environment. For example, when AM is perceived as a challenge, workers are more likely to engage positively with their tasks, showing higher levels of job involvement and prosocial motivation. On the other hand, if the stimulus is interpreted as a hindrance, workers may develop intentions to leave the platform or selectively avoid certain tasks. These forms of reaction are captured under the concept of cognitive behavioral intention, which reflects the mental decision making that leads to specific behavioral responses (Felix et al., 2023). In addition to cognitive appraisal, algorithmic stimuli also give rise to various emotional conditions, referred to as affective states. These include feelings such as frustration, emotional stress, or short term satisfaction, depending on the specific working conditions experienced (Wood et al., 2019). For instance, workers in sectors like ridesharing or food delivery often report feelings of pressure, frustration, and social isolation due to constant monitoring and irregular work hours (Duke, 2022; Glavin et al., 2021). Over time, these emotional experiences may contribute to deeper psychological states, such as burnout or long term mental distress, especially in work environments that are dominated by intense algorithmic control (Kinowska & Sienkiewicz, 2023).

Another important element that emerges from the organism phase is the motivational state of the worker. Despite the pressures and demands of AM, some workers continue to show high levels of work engagement. This is often driven by intrinsic motivation or urgent financial needs that push them to maintain their performance and stay productive even in difficult circumstances (Vallas & Schor, 2020). Motivation, whether internal or external, plays a key role in helping workers cope with challenges and remain committed to their tasks. Equally important is the process of subjective evaluation, in which workers reflect on and assess the core aspects of their job experience, such as fairness, meaningfulness, and the degree of human value within their work (Felix et al., 2023; Griesbach et al., 2019). These personal judgments determine the overall impact of algorithmic stimuli on how workers perceive the quality of their job. Research has shown that workers who view their jobs as meaningful and fair are more likely to respond positively to AM. In contrast, those who perceive injustice or inhuman treatment from the algorithmic system tend to experience

dissatisfaction and show a higher likelihood of job mobility or platform switching (Zhang et al., 2023).

Response Dimension: Gig Workers Behavioral Shifting

After going through the internal organism phase in response to the stimulus of AM and AC, gig workers display a wide range of complex and diverse behaviors. Recent literature shows that their responses cannot be simply categorized as passive or active. Instead, workers demonstrate a broad spectrum of behaviors that reflect how they adapt to the pressures and opportunities introduced by algorithm based systems of work (Hödl & Myrach, 2023; Vieira, 2023). To begin with, some workers exhibit constructive responses by showing high levels of loyalty to the platform, delivering extra service, and maintaining a strong work ethic. These behaviors often stem from a positive appraisal of the challenges presented by AM. In such cases, workers view the demands of the system not as burdens, but as opportunities for professional and financial growth (Vallas & Schor, 2020). Their motivation is supported by a sense of personal agency and a belief that effort will be rewarded under the algorithmic model. In addition, many workers engage in proactive responses by developing their own strategies to cope with or work around algorithmic constraints. These include practices such as job crafting, self-organization, and designing personal workflows. Such behaviors suggest that workers are not merely passive recipients of algorithmic rules. Rather, they take an active role in navigating the system, making conscious efforts to adapt, innovate, and optimize their performance within a highly structured environment (Christiaens, 2025).

On the opposite side of the spectrum, some workers adopt destructive responses as a form of resistance to what they perceive as unfair or overly invasive algorithmic control. These actions may include sabotage, intentional manipulation of ratings, or deliberate underperformance. These behaviors often emerge from feelings of frustration, alienation, or deep dissatisfaction with algorithmic management practices that are seen as inhumane or lacking transparency (Kougiannou & Mendonça, 2021). Passive responses are also present, where workers comply with the demands of AM without clear agency or room to renegotiate their working conditions. In such situations, workers may overwork themselves in order to meet algorithmic expectations, often at the expense of their personal well-being. This can lead to long term consequences such as emotional exhaustion, chronic stress, or burnout (Huws, 2024; Kinowska & Sienkiewicz, 2023). These responses are not driven by motivation but by necessity and a lack of viable alternatives.

Another notable category is ambivalent responses. Ambivalent responses reflect the moral and emotional dilemmas faced by workers who are constantly trying to balance flexibility with income stability. These behaviors are neither entirely positive nor negative, but rather represent the complexity and contradiction of surviving in a system that offers freedom on the surface but uncertainty in practice (Cini, 2023; Vieira, 2023). In response to these ongoing challenges, some workers have turned to collective action and voice mechanisms to advocate for better working conditions. In several countries, collective bargaining has become a key tool used by gig workers to demand transparency in algorithmic systems, protect personal data, and secure fair

labor standards (De Stefano & Taes, 2023; Stefański & Żywolewska, 2024). These collective responses serve not only as a form of resistance, but also as a constructive dialogue with platforms aimed at ensuring that worker rights are respected and protected.

This discussion makes it clear that the relationship between algorithmic management as a stimulus and the behavioral responses of gig workers is not linear. Rather, it is a mediated process shaped by internal psychological dynamics. The Stimulus Organism Response framework provides a more comprehensive understanding of the complex impact that AM and AC has on gig workers. This model does not simply offer a theoretical classification, but also reveals a clear psychological pathway that begins with external stimuli, continues through the internal processing of the worker, and ends with actual behavioral responses. By mapping these stages in detail, the framework allows researchers and practitioners to see how algorithmic systems are not experienced uniformly, but rather are interpreted and acted upon differently depending on individual and contextual factors.

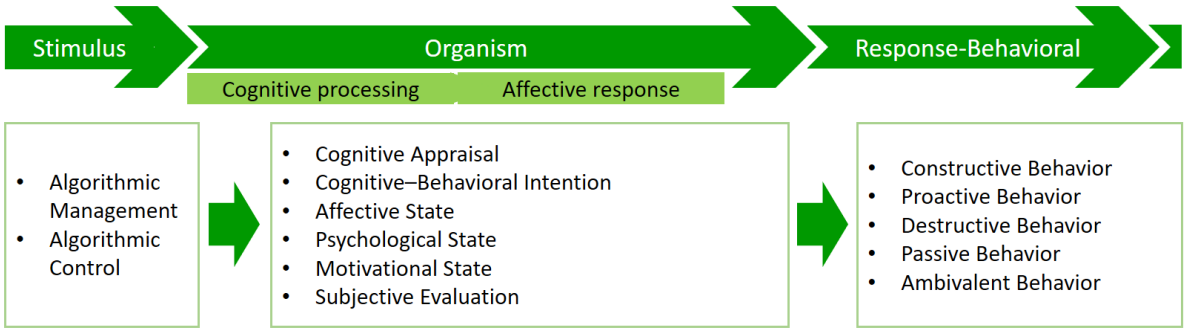

Figure 1. A Pathway of Gig Worker Responses to Algorithmic Management

Limitations

The restriction to English-language, open access, and Scopus-indexed journal articles may have excluded relevant studies from grey literature or non-English sources. The methodological and conceptual diversity of included studies also limits direct comparability, as definitions and frameworks related to algorithmic management and worker behavior vary. Additionally, the use of a single database may have constrained the scope of findings. Lastly, the absence of meta-analytical synthesis limits statistical generalizability, although the thematic approach was appropriate for the reviews conceptual objectives.

Implications for Behavioral Science

This review highlights the importance of behavioral science in understanding how algorithmic systems influence the psychological processes and actions of gig workers. The application of the Stimulus Organism Response framework demonstrates that external algorithmic mechanisms can trigger internal reactions including cognitive appraisals, emotional strain, and motivational shifts. These internal processes ultimately shape workers decisions and actions. Insights from behavioral science can therefore guide the development of platform features that are not only operationally efficient but also psychologically supportive, ethically grounded, and responsive to worker well-being.

CONCLUSION

This systematic literature review demonstrates that the influence of algorithmic management on gig workers' behavior can be effectively understood through the Stimulus Organism Response framework. The framework captures the complex relationship between external stimuli generated by algorithmic control systems, the internal psychological processing by workers, and the resulting behavioral responses. Moving forward, future research should aim to empirically validate this conceptual model by investigating how perceived algorithmic management acts as a stimulus that shapes workers' cognitive appraisals. These appraisals, in turn, influence emotional states and ultimately drive behavioral actions. Understanding this pathway offers a foundation for designing algorithmic systems that are not only technologically optimized but also human-centered and psychologically sustainable.

REFERENCES

Acs, Z. J., Song, A. K., Szerb, L., Audretsch, D. B., & Komlósi, É. (2021). The evolution of the global digital platform economy: 1971–2021. *Small Business Economics*, *57*(4), 1629–1659. https://doi.org/10.1007/s11187-021-00561-x

Alacovska, A., Bucher, E., & Fieseler, C. (2024). Algorithmic Paranoia: Gig Workers' Affective Experience of Abusive Algorithmic Management. *New Technology, Work and Employment*. https://doi.org/10.1111/ntwe.12317

Allen-Perkins, D., & Cañedo-Rodríguez, M. (2023). Weaving the algorithm: participatory subjectivities amongst food delivery riders. *Subjectivity*, *30*(4), 435–454. https://doi.org/10.1057/s41286-023-00167-6

Anjali Anwar, I., Garcia, P., & Hui, J. (2024). Entangled Independence: From Labor Rights to Gig "Empowerment" Under the Algorithmic Gaze. *Proceedings of the ACM on Human-Computer Interaction*, *8*(CSCW2), 1–26. https://doi.org/10.1145/3686916

Badoi, D., & Preoteasa, A. M. (2024). 'I don't know what awaits me.' Understanding Uncertainty and Spatiotemporal Flexibility among Platform-based Food Delivery Couriers in Romania. *Sociológia - Slovak Sociological Review*, *56*(6), 529–554. https://doi.org/10.31577/sociologia.2024.56.6.19

Bellesia, F., Mattarelli, E., & Bertolotti, F. (2023). Algorithms and their Affordances: How Crowdworkers Manage Algorithmic Scores in Online Labour Markets. *Journal of Management Studies*, *60*(1), 1–37. https://doi.org/10.1111/joms.12870

Bucher, E. L., Schou, P. K., & Waldkirch, M. (2021). Pacifying the algorithm – Anticipatory compliance in the face of algorithmic management in the gig economy. *Organization*, *28*(1), 44–67. https://doi.org/10.1177/1350508420961531

Cameron, L. D. (2024). The Making of the "Good Bad" Job: How Algorithmic Management Manufactures Consent Through Constant and Confined Choices. *Administrative Science Quarterly*, *69*(2), 458–514. https://doi.org/10.1177/00018392241236163

Chan, N. K. (2022). Algorithmic precarity and metric power: Managing the affective measures

and customers in the gig economy. *Big Data & Society*, *9*(2). https://doi.org/10.1177/20539517221133779

Chen, M. K., Chevalier, J. A., Rossi, P. E., & Oehlsen, E. (2017). *The Value of Flexible Work: Evidence from Uber Drivers* (Issue March). http://www.nber.org/papers/w23296

Cheng, Y., Cheng, W.-J., Lin, R.-T., Wang, Y.-T., & Ko, J.-J. R. (2024). Associations Between Labor Control Through Digital Platforms and Workers' Mental Wellbeing: A Survey of Location-based Platform Workers in Taiwan. *Safety and Health at Work*, *15*(4), 419–426. https://doi.org/10.1016/j.shaw.2024.08.003

Christiaens, T. (2025). Cornelius Castoriadis' agonistic theory of the future of work at Amazon Mechanical Turk. *Distinktion: Journal of Social Theory*, *26*(1), 56–75. https://doi.org/10.1080/1600910X.2024.2320661

Cini, L. (2023). Resisting algorithmic control: Understanding the rise and variety of platform worker mobilisations. *New Technology, Work and Employment*, *38*(1), 125–144. https://doi.org/10.1111/ntwe.12257

Cram, W. A., Wiener, M., Tarafdar, M., & Benlian, A. (2022). Examining the Impact of Algorithmic Control on Uber Drivers' Technostress. *Journal of Management Information Systems*, *39*(2), 426–453. https://doi.org/10.1080/07421222.2022.2063556

Cui, T., Tan, B., & Shi, Y. (2024). Fostering humanistic algorithmic management: A process of enacting human-algorithm complementarity. *The Journal of Strategic Information Systems*, *33*(2), 101838. https://doi.org/10.1016/j.jsis.2024.101838

De Stefano, V., & Taes, S. (2023). Algorithmic management and collective bargaining. *Transfer: European Review of Labour and Research*, *29*(1), 21–36. https://doi.org/10.1177/10242589221141055

Duggan, J., Carbery, R., McDonnell, A., & Sherman, U. (2023). Algorithmic HRM control in the gig economy: The app-worker perspective. *Human Resource Management*, *62*(6), 883–899. https://doi.org/10.1002/hrm.22168

Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM. In *Human Resource Management Journal* (Vol. 30, Issue 1, pp. 114–132). https://doi.org/10.1111/1748-8583.12258

Duke, B. (2022). 24/7 Digital Work-Based Spy: The Effects of Technological Panopticism on Workers in the Digital Age. *Journal of Labor and Society*, *25*(4), 1–39. https://doi.org/10.1163/24714607-bja10068

Felix, B., Dourado, D., & Nossa, V. (2023). Algorithmic management, preferences for autonomy/security and gig-workers' wellbeing: A matter of fit? *Frontiers in Psychology*, *14*(2019). https://doi.org/10.3389/fpsyg.2023.1088183

Glavin, P., Bierman, A., & Schieman, S. (2021). Über-Alienated: Powerless and Alone in the Gig Economy. *Work and Occupations*, *48*(4), 399–431. https://doi.org/10.1177/07308884211024711

Granulo, A., Caprioli, S., Fuchs, C., & Puntoni, S. (2024). Deployment of algorithms in management tasks reduces prosocial motivation. *Computers in Human Behavior*, *152*(December 2023), 108094. https://doi.org/10.1016/j.chb.2023.108094

Griesbach, K., Reich, A., Elliott-Negri, L., & Milkman, R. (2019). Algorithmic Control in Platform Food Delivery Work. *Socius: Sociological Research for a Dynamic World*, *5*. https://doi.org/10.1177/2378023119870041

Guerrero-Bote, V. P., Chinchilla-Rodríguez, Z., Mendoza, A., & de Moya-Anegón, F. (2020). Comparative Analysis of the Bibliographic Data Sources Dimensions and Scopus: An Approach at the Country and Institutional Levels. *Frontiers in Research Metrics and Analytics*, *5*(January), 1–12. https://doi.org/10.3389/frma.2020.593494

Hall, J. V, & Krueger, A. B. (2018). An Analysis of the Labor Market for Uber's Driver-Partners in the United States. *ILR Review*, *71*(3), 705–732. https://doi.org/10.1177/0019793917717222

Hödl, T., & Myrach, T. (2023). Content Creators Between Platform Control and User Autonomy. *Business & Information Systems Engineering*, *65*(5), 497–519. https://doi.org/10.1007/s12599-023-00808-9

Huws, U. (2024). Algorithmic violence. *Work Organisation, Labour & Globalisation*, *18*(1), 97–122. https://doi.org/10.13169/workorgalaboglob.18.1.0097

Iazzolino, G., & Varesio, A. (2023). Gaming the System: Tactical Workarounds and the Production of Antagonistic Subjectivities among Migrant Platform Workers in Italy. *Antipode*, *55*(3), 877–896. https://doi.org/10.1111/anti.12917

Irani, L. C., & Silberman, M. S. (2013). Turkopticon. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 611–620. https://doi.org/10.1145/2470654.2470742

Jabagi, N., Croteau, A.-M., Audebrand, L. K., & Marsan, J. (2019). Gig-workers' motivation: thinking beyond carrots and sticks. *Journal of Managerial Psychology*, *34*(4), 192–213. https://doi.org/10.1108/JMP-06-2018-0255

Jabagi, N., Croteau, A.-M., Audebrand, L. K., & Marsan, J. (2025). Do algorithms play fair? Analysing the perceived fairness of HR-decisions made by algorithms and their impacts on gig-workers. *The International Journal of Human Resource Management*, *36*(2), 235–274. https://doi.org/10.1080/09585192.2024.2441448

James, A. (2024). Platform work-lives in the gig economy: Recentering work–family research. *Gender, Work & Organization*, *31*(2), 513–534. https://doi.org/10.1111/gwao.13087

Jarrahi, M. H., Newlands, G., Lee, M. K., Wolf, C. T., Kinder, E., & Sutherland, W. (2021). Algorithmic management in a work context. *Big Data & Society*, *8*(2). https://doi.org/10.1177/20539517211020332

Kadolkar, I., Kepes, S., & Subramony, M. (2024). Algorithmic management in the gig economy: A systematic review and research integration. *Journal of Organizational Behavior*, *July*, 1–24. https://doi.org/10.1002/job.2831

Kässi, O., & Lehdonvirta, V. (2018). Online labour index: Measuring the online gig economy for policy and research. *Technological Forecasting and Social Change*, *137*, 241–248. https://doi.org/10.1016/j.techfore.2018.07.056

Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at Work: The New Contested Terrain of Control. *Academy of Management Annals*, *14*(1), 366–410. https://doi.org/10.5465/annals.2018.0174

Ķešāne, I., & Spuriņa, M. (2024). Sociological Types of Precarity Among Gig Workers: Lived Experiences of Food Delivery Workers in Riga. *Social Inclusion*, *12*, 1–18. https://doi.org/10.17645/si.7696

Kinowska, H., & Sienkiewicz, Ł. J. (2023). Influence of algorithmic management practices on workplace well-being – evidence from European organisations. *Information Technology & People*, *36*(8), 21–42. https://doi.org/10.1108/ITP-02-2022-0079

Kougiannou, N. K., & Mendonça, P. (2021). Breaking the Managerial Silencing of Worker Voice in Platform Capitalism: The Rise of a Food Courier Network. *British Journal of Management*, *32*(3), 744–759. https://doi.org/10.1111/1467-8551.12505

Liang, X., Fu, W., Luo, P., & Huo, Y. (2024). Challenge or Hindrance? The Dual Impact of Algorithmic Control on Gig Workers' Prosocial Service Behaviors. *Behavioral Sciences*, *14*(6), 497. https://doi.org/10.3390/bs14060497

Liu, R., & Yin, H. (2024). How Algorithmic Management Influences Gig Workers' Job Crafting. *Behavioral Sciences*, *14*(10), 952. https://doi.org/10.3390/bs14100952

Mateescu, A., & Nguyen, A. (2019). Algorithmic management in the workplace. In *Data & Society* (Issue February).

Mbare, B., Perkiö, M., & Koivusalo, M. (2024). Algorithmic management, wellbeing and platform work: understanding the psychosocial risks and experiences of food couriers in Finland. *Labour and Industry*, *34*(4), 386–411. https://doi.org/10.1080/10301763.2024.2423442

McDaid, E., & Free, C. (2025). Stories of resistance: The role of online forums in response to Uber's algorithmic management. *Critical Perspectives on Accounting*, *101*(March), 102790. https://doi.org/10.1016/j.cpa.2025.102790

Meijerink, J., & Bondarouk, T. (2023). The duality of algorithmic management: Toward a research

agenda on HRM algorithms, autonomy and value creation. *Human Resource Management Review*, *33*(1), 100876. https://doi.org/10.1016/j.hrmr.2021.100876

Mendonça, P., & Kougiannou, N. K. (2023). Disconnecting labour: The impact of intraplatform algorithmic changes on the labour process and workers' capacity to organise collectively. *New Technology, Work and Employment*, *38*(1), 1–20. https://doi.org/10.1111/ntwe.12251

Muldoon, J., & Raekstad, P. (2023). Algorithmic domination in the gig economy. *European Journal of Political Theory*, *22*(4), 587–607. https://doi.org/10.1177/14748851221082078

Parent-Rocheleau, X., Parker, S. K., Bujold, A., & Gaudet, M. (2024). Creation of the algorithmic management questionnaire: A six-phase scale development process. *Human Resource Management*, *63*(1), 25–44. https://doi.org/10.1002/hrm.22185

Park, S., & Ryoo, S. (2023). How Does Algorithm Control Affect Platform Workers' Responses? Algorithm as a Digital Taylorism. *Journal of Theoretical and Applied Electronic Commerce Research*, *18*(1), 273–288. https://doi.org/10.3390/jtaer18010015

Pieczka, A., & Miszczyński, M. (2024). Meaningful app-work? Exploring meaningful work experiences of food delivery couriers in Poland. *Central European Management Journal*, *2019*. https://doi.org/10.1108/CEMJ-02-2024-0057

Rosenblat, A., & Stark, L. (2015). Uber's Drivers: Information Asymmetries and Control in Dynamic Work. *SSRN Electronic Journal*, *10*, 3758–3784. https://doi.org/10.2139/ssrn.2686227

Sakib, M. N., Tabassum, F., & Uddin, D. M. M. (2023). What we know about the trends, prospects, and challenges of human resource outsourcing: A systematic literature review. *Heliyon*, *9*(8), e19018. https://doi.org/10.1016/j.heliyon.2023.e19018

Schaupp, S. (2021). Technopolitics from Below: A Framework for the Analysis of Digital Politics of Production. *NanoEthics*, *15*(1), 71–86. https://doi.org/10.1007/s11569-021-00386-8

Schreyer, J. (2024). Chained to the App: German Bike Couriers Riding into Digital Capitalism. *TripleC: Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society*, *22*(1), 265–291. https://doi.org/10.31269/triplec.v22i1.1463

Semujanga, B., & Parent-Rocheleau, X. (2024). Time-Based Stress and Procedural Justice: Can Transparency Mitigate the Effects of Algorithmic Compensation in Gig Work? *International Journal of Environmental Research and Public Health*, *21*(1), 86. https://doi.org/10.3390/ijerph21010086

Sloth Laursen, C., Nielsen, M. L., & Dyreborg, J. (2021). Young Workers on Digital Labor Platforms: Uncovering the Double Autonomy Paradox. *Nordic Journal of Working Life Studies*.

https://doi.org/10.18291/njwls.127867

Stefański, K., & Żywolewska, K. (2024). Lack of Transparency in Algorithmic Management of Workers and Trade Unions' Right to Information: European and Polish Perspectives. *Białostockie Studia Prawnicze*, *29*(2), 53–63. https://doi.org/10.15290/bsp.2024.29.02.05

Stone, D. L., Deadrick, D. L., Lukaszewski, K. M., & Johnson, R. (2015). The influence of technology on the future of human resource management. *Human Resource Management Review*, *25*(2), 216–231. https://doi.org/10.1016/j.hrmr.2015.01.002

Sun, G. (2023). Quantitative Analysis of Online Labor Platforms' Algorithmic Management Influence on Psychological Health of Workers. *International Journal of Environmental Research and Public Health*, *20*(5). https://doi.org/10.3390/ijerph20054519

Terry, E., Marks, A., Dakessian, A., & Christopoulos, D. (2022). Emotional Labour and the Autonomy of Dependent Self-Employed Workers: The Limitations of Digital Managerial Control in the Home Credit Sector. *Work, Employment and Society*, *36*(4), 665–682. https://doi.org/10.1177/0950017020979504

Tuomi, A., Jianu, B., Hua, M., Roelofsen, M., & Ascenção, M. P. (2024). Strategies for communicating and mitigating algorithmic control on delivery platforms. *Convergence: The International Journal of Research into New Media Technologies*, *30*(5), 1685–1709. https://doi.org/10.1177/13548565241270908

Vallas, S., & Schor, J. B. (2020). What do platforms do? Understanding the gig economy. *Annual Review of Sociology*, *46*(July), 273–294. https://doi.org/10.1146/annurev-soc-121919-054857

van Zoonen, W., Sivunen, A. E., & Treem, J. W. (2024). Algorithmic management of crowdworkers: Implications for workers' identity, belonging, and meaningfulness of work. *Computers in Human Behavior*, *152*(December 2023), 108089. https://doi.org/10.1016/j.chb.2023.108089

Vasudevan, K., & Chan, N. K. (2022). Gamification and work games: Examining consent and resistance among Uber drivers. *New Media & Society*, *24*(4), 866–886. https://doi.org/10.1177/14614448221079028

Vieira, T. (2023). Platform couriers' self-exploitation: The case study of Glovo. *New Technology, Work and Employment*, *38*(3), 493–512. https://doi.org/10.1111/ntwe.12272

Wan, Z., Zhang, L., Wang, L., & Zhang, F. (2024). Navigating autonomy: unraveling the dual influence of job autonomy on workplace well-being in the gig economy. *Frontiers in Psychology*, *15*(July), 1–13. https://doi.org/10.3389/fpsyg.2024.1369495

Wiener, M., Cram, W. A., & Benlian, A. (2023). Algorithmic control and gig workers: a legitimacy perspective of Uber drivers. *European Journal of Information Systems*, *32*(3), 485–507. https://doi.org/10.1080/0960085X.2021.1977729

Wood, A. J. (2021). Algorithmic Management: Consequences for Work Organisation and Working Conditions. In *JRC Working Papers Series on Labour, Education and Technology*. https://ec.europa.eu/jrc

Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy. *Work, Employment and Society*, *33*(1), 56–75. https://doi.org/10.1177/0950017018785616

Woodcock, J. (2022). Artificial intelligence at work: The problem of managerial control from call centers to transport platforms. *Frontiers in Artificial Intelligence*, *5*. https://doi.org/10.3389/frai.2022.888817

Yu, S., Liu, S., Gong, X., Liu, C., & Cai, W. (2025). Online platform algorithmic control and gig workers' turnover intention in China: The mediating role of relative deprivation. *Journal of Management Science and Engineering*, *10*(1), 37–53. https://doi.org/10.1016/j.jmse.2024.08.004

Zhang, L., Yang, J., Zhang, Y., & Xu, G. (2023). Gig worker's perceived algorithmic management, stress appraisal, and destructive deviant behavior. *PLOS ONE*, *18*(11), e0294074. https://doi.org/10.1371/journal.pone.0294074

Zhou, L., Lei, X., Liu, M., Huang, X., & Hou, R. (2025). Algorithmic Competency of On-Demand Labor Platform Workers: Scale Development, Antecedents, and Consequences. *Asia Pacific Journal of Human Resources*, *63*(2). https://doi.org/10.1111/1744-7941.70004.