

Contrôle algorithmique et bossware : résistance des employés et évolution des pratiques de contournement dans un contexte de travail traditionnel

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Résumé :

Le contrôle algorithmique (CA) s'est largement diffusé dans les organisations traditionnelles depuis la pandémie de COVID-19, pourtant la façon dont les salariés perçoivent et répondent à ce CA dans les contextes de travail traditionnels (CTT) reste peu étudiée. En mobilisant la théorie des contournements et le cadre des 6R, nous menons une analyse netnographique et de text mining de 14740 commentaires publiés sur Reddit. Nous montrons que le contrôle dans les CTT est hybride, combinant supervision managériale et CA, et produisant des dynamiques de pouvoir distinctes de celles observées dans le travail sur plateformes. Nous étendons la théorie des contournements en validant le processus en trois étapes d'Alter et en identifiant la neutralisation éthique comme un mécanisme proximal important reliant les finalités perçues du contrôle aux réponses comportementales. Nous soulignons également l'influence du cadrage procédural et juridique sur ces réponses. Cette étude met enfin en lumière la manière dont des contournements individuels se transforment en résistance collective par leur codification et leur diffusion en ligne, suscitant ainsi des réactions organisationnelles et managériales.

Mots clés :

contrôle algorithmique, pratiques de contournement, résistance des salariés, surveillance des employés



Algorithmic control and bossware: Employee resistance and evolution of workarounds in a traditional work context

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Abstract

Algorithmic control (AC) has diffused widely in traditional organisations since the COVID-19 pandemic, yet how employees perceive and respond to AC in traditional work contexts (TWC) remains underexamined. Drawing on the theory of workarounds and the 6R framework, we conduct a netnographic, text-mining analysis of 14,740 Reddit comments. We show that control in TWC is hybrid, blending managerial oversight with AC and producing power dynamics distinct from platform work. We extend the theory of workarounds by validating the three-stage process of Alter's theory of workarounds and identifying ethical neutralisation as an important proximal step linking perceived control purpose to behavioural responses. We further emphasize how procedural and legal framing influences these responses. This study also highlights how individual workarounds transform into collective resistance through codification and online diffusion, thereby prompting organisational and managerial responses.

Keywords:

algorithmic control, workarounds, employee resistance, employee monitoring



1. Introduction

The growth of remote and hybrid work, combined with the availability of digital management tools, has led organisations to seek greater oversight of their employees working at a distance using monitoring software to reduce coordination failures, opportunism, and safety/compliance risks (Williams & Khan, 2025). Algorithmic Control (AC) refers to the use of algorithms and other data-driven technologies to monitor, evaluate and guide workers' behaviour and performance (Kellogg et al., 2020). AC has its roots in traditional Taylorist ideas of scientific management, involving constant surveillance, control and the standardisation of work to maximise efficiency (Noponen et al., 2023). Although these AC technologies are portrayed as promoting efficiency and value creation, they act as a double-edged sword both enabling and constraining employees' autonomy (Meijerink & Bondarouk, 2023).

Prior literature on surveillance and AC has largely focused on platform-mediated work contexts (PWC) (Cameron & Rahman, 2022; Wood et al., 2019), where work is mediated by digital labour platforms and mobile apps such as Uber and Deliveroo (Krzywdzinski et al., 2025). However, the concept of AC and surveillance extends beyond platform-based companies to traditional workplace contexts (TWC) (Jarrahi et al., 2021; Noponen et al., 2023). In contrast to PWC, employees in TWC typically have standard employment contracts and operate within established managerial hierarchies and are monitored through enterprise systems and HR management software (Williams & Khan, 2025). A diverse range of employee monitoring software (e.g., Hubstaff, Teramind, Control.io), commonly referred to as *Bossware*¹, are readily available on the market. These tools can capture screenshots, log keystrokes, activate webcams and microphones, record mouse movements, and employ artificial intelligence and machine learning algorithms to analyse data, generating productivity and risk scores. After the COVID-19 pandemic, with the uptick in and continuation of hybrid working arrangements, the usage and sales of this software have increased exponentially in traditional organisations (Williams & Khan, 2025). The implementation of ACs in traditional organisations alters the power dynamics by reconfiguring knowledge, decision making power and sanctioning authority (Krzywdzinski et al., 2025). These altered power relations between managers and employees, and the changes

¹ In France and other EU jurisdictions, proportionality and transparency regulations restrict certain forms of monitoring (keylogging or continuous webcam/mic capture). Consequently, judicial and regulatory variations across contexts may influence how algorithmic control mechanisms are implemented and perceived, and the findings of this study should be interpreted accordingly.

to employees' workflows following the introduction of employee-monitoring software, may crystallise into individual or collective resistance (Lapointe & Rivard, 2005).

Moreover, the dominant narrative on implementation of ACs has largely been framed as control-resistance binaries (Meijerink & Bondarouk, 2023; Noponen et al., 2023). Employees interact with ACs in more complex ways, where they do not just resist but might reshape or reinterpret these controls creatively (Möhlmann et al., 2021). This may involve job crafting, as seen among bank employees in France, who adopted job crafting in response to the loss of autonomy caused by the implementation of algorithmic task allocation and reporting systems (Perez et al., 2022). Much research treats AC implementation as a control-resistance paradigm, foregrounding control and structural dynamics while obscuring intermediate adaptive responses. Our study builds on this insight and argues that workarounds act as intermediary responses that sit somewhere between outright resistance and compliance. Following Alter (2014), we define workarounds as goal-directed, intentional deviations from prescribed procedures or intended system use enacted to overcome misfits, anomalies, managerial expectations, or structural constraints that impede legitimate work and personal goals. In our study, we extend this view by highlighting how such workarounds can also constitute subtle acts of resistance to perceived inappropriate forms of managerial control. Since AC mechanisms differ in what they measure and restrict, employee workarounds diverge, ranging from withdrawal and non-compliance to active resistance. Employees deploy ethical neutralisation to justify these responses, whether through workarounds or formal escalation, rather than fitting into a simple resistance-compliance dichotomy (Alter, 2014; Kellogg et al., 2020). As such, we formulate the following research question: *How do employees perceive different AC mechanisms within a traditional work context and respond to them using workarounds?*

To explore this, we collected 14,740 comments from Reddit, an online community. Due to its anonymous nature, Reddit is suitable to collect data about sensitive topics like workarounds. We used text mining drawing on Kellogg et al.'s (2020) 6R framework of AC mechanisms to identify how employees perceived various AC mechanisms in TWC. The 6R framework distinguishes six different AC mechanisms (recommending, restricting, recording, rating, replacing, and rewarding) used to control and direct workers (Kellogg et al., 2020). This study adds to growing literature on the AC research in TWCs, revealing hybrid control dynamics in TWCs, where algorithms complement managerial oversight and employees position managers as

interpreters and boundary-setters (Cortellazzo et al., 2019; Krzywdzinski et al., 2025). We also identified how different AC mechanisms elicit distinct artefact-centred workarounds and give rise to different ethical neutralisations. This study also extends Alter's (2014) theory by validating the three-stage process and identifying ethical neutralisation as the proximal step linking perceived control purpose to subsequent behavioural responses of compliances, workarounds and formal recourse. We also demonstrate how procedural framing influences these responses. By combining Alter's focus on individual workaround responses with Lapointe and Rivard's (2005) multilevel model, we trace how micro-level tactics diffuse into collective resistance through online diffusion, potentially prompting organisational and managerial responses.

2. Literature Review

2.1 Algorithmic control

Control can be defined as the processes or mechanisms that assist in aligning the actions of individuals toward organisational interests (Snell, 1992), with managers coordinating activities and resources to achieve predefined goals. The aim of control is to generate maximum value from workers' labour (Kellogg et al., 2020; Wood et al., 2019). AC can be defined as the "*managerial use of intelligent algorithms and advanced digital technology as a means to align worker behaviours with organisational objectives*" (Wiener et al., 2021, p. 1). Advances in technology have played a critical role in enabling employers to deploy novel control systems (Leclercq-Vandelannoitte & Isaac, 2013; Kellogg et al., 2020). For example, in the platform economy, AC is used to influence Uber drivers' behaviour through digital nudges (surge pricing, bonuses) to align with platform goals and objectives (Möhlmann et al., 2021; Cameron, 2024).

The IS and management literature presents multiple conceptualisations of the AC phenomenon (Alizadeh et al., 2023). Wiener et al. (2021), within the framework of control theory, conceptualise AC as comprising gatekeeping AC and guiding AC. Parent-Rochelleau and Parker (2021) conceptualise AC based on the job-demands resources model, classifying it into six distinct human resource management (HRM) functions: monitoring, goal setting, performance management, scheduling, compensation, and job termination. Grounded in labour process theory, Kellogg et al.

(2020) identify six different AC forms and propose the 6R conceptual framework: recommending, restricting, recording, rating, replacing, and rewarding.

The 6R conceptual framework proposed by Kellogg et al. (2020), compared to the other frameworks, applies to an extensive range of contexts in both the platform economy and TWC (Alizadeh et al., 2023; Hirsch et al., 2023). In contrast, the 2G framework proposed by Wiener et al. (2021) applies to specific work contexts, such as the platform economy (ride-hailing) (Alizadeh et al., 2023). Parent-Rocheleau and Parker's (2021) framework focuses on HRM-specific AC dimensions. Thus, the 6R framework is more appropriate to this study because it provides distinct AC dimensions applicable to a wide variety of contexts.

2.2. Algorithmic control in different work contexts

Although AC is mainly linked to online labour platforms and the platform economy, its applications extend to TWCs (Möhlmann et al., 2023). The key difference lies in the employment relationships (full-time vs. independent contractors) and how these are implemented within existing organisational structures, thereby altering established power dynamics (Krzywdzinski et al., 2025). In TWCs, algorithms do not entirely replace human managers; instead, they serve as technological tools aiding supervising, monitoring, and evaluating employees (Benlian et al., 2022; Noponen et al., 2023). For example, AC has already found applications in several TWCs like hospitality, management and retail (Parent-Rocheleau & Parker, 2021), where it operates in tandem with human managers within the organisational hierarchy (Jarrahi et al., 2021). Cameron's (2024) study demonstrates that platform workers' consent is manufactured through confined choice architectures (gamified ride acceptance), TWCs utilise a hybrid model where human supervisors reinterpret algorithmic outputs, such as modifying AI-generated shift schedules to account for employee preferences (Benlian et al., 2022). This distinction highlights a critical gap in prior studies that focused on online labour platforms and PWCs (Cameron & Rahman, 2022; Möhlmann et al., 2021), that frame AC as dyadic human algorithm interactions, overlooking the role of institutional hierarchies in TWCs that moderate algorithmic control through human intermediaries. The effectiveness of AM in traditional organisations is underscored by a symbiotic division of labour, where human managers act as shapers during

implementation and collaborators during everyday operations (Schmid & Wiesche, 2026).

Recent literature shows that in TWCs, the usage of algorithmic management (AM) and experiences of loss of control and autonomy increase the perception of workplace bullying (Reimann & Diewald, 2024). Williams and Khan (2025) argue that vendors of HR management, employee monitoring software frame these systems as structurally antagonistic, legitimising surveillance by casting employees as latent security risks and managers as guardians of organisational assets, thereby exploiting the labour-capital antagonism. Such antagonistic framings can lead to workers' suspicions about the intended use of the software. Even when such tools are positioned as improving safety or performance, workers may perceive them negatively, eroding trust and increasing stress (Giacosa et al., 2023). In turn, employees' concerns centre on privacy, future re-use of their data, and low institutional trust (Mani et al., 2023). Regulatory and institutional context further shape the dynamics, even when implementation of AC is justified by privacy and labour laws, it centralises knowledge and decision-making rights in traditional hierarchies (Krzywdzinski et al., 2025). Taken together, these conditions tilt employees toward workarounds, to maintain status-quo and familiar routines and workflow (Shirish & Batuekueno, 2021).

2.3. Workers' resistance to algorithmic control

Managers use novel technologies, surveillance, and control mechanisms to extract maximum value from workers' labour; in response, workers resist to defend their autonomy (Kellogg et al., 2020). This dynamic interplay leads managers to tighten control while workers adopt varied responses, including workarounds (Cameron & Rahman, 2022). Resistance to AC manifests at multiple levels: individually, employees contest perceived autonomy loss and privacy concerns, while at the group level, workers mobilise through coordinated actions like strikes (Giacosa et al., 2023; Lapointe & Rivard, 2005; Mani et al., 2023). Van Zoonen et al. (2025) further distinguished workers' resistance into three behavioural intentions: compliance, alteration, and avoidance. This distinction demonstrates that resistance is not a monolithic response but rather a choice among adhering to, tampering with, or circumventing algorithmic protocols.

Resistance to AC often drives workaround behaviour (Kellogg et al., 2020). For example, Uber drivers engage in data obfuscation by collectively gaming the surge price algorithm (Möhlmann et al., 2021). Workers also employ scripts to monitor their workplace (Irani & Silberman, 2013), for instance, to constantly monitor for lucrative and suitable work assignments on platforms like Mobileworks and CloudFactory, attempting to tweak the ACs for their benefit (Lehdonvirta, 2018). Similarly, to evade monitoring software that continuously captures screenshots of computer screens, employees install a secondary monitor to bypass the system (Wood et al., 2019). Zhang et al. (2025) argue that workers often cope with the paradox of algorithmic control through workplace games, where they treat algorithmic metrics as a game to be won. This gaming behaviour can be fundamentally categorised as a form of 'threat-coping' (Weber et al., 2025). When workers perceive ACs as a direct threat to their professional identity and well-being, they may resort to reactive coping, which takes the form of reactive workarounds in both traditional and platform work contexts.

Employees develop tactical responses to monitoring tools, such as adjusting self-presentation in video calls (Clauzel et al., 2024). Sum et al. (2025) highlighted how employees develop everyday tactics like obfuscation, commiseration, and soldiering to manage constant monitoring. Workarounds like usage of shadow IT often emerge from employees' efforts to balance efficiency gains with security risks, driven by motivations such as autonomy preservation and workflow optimisation (Barlette et al., 2024). In traditional organisations, artefact-centred workarounds are well-defined, where employees appropriate or reconfigure IT artefacts to keep the work flowing (Bartelheimer et al., 2023; Davison et al., 2019).

Overall, individual resistance to AC manifests through gaming, bypassing, and circumventing the control mechanism. Most research concentrates on individual-level algorithmic resistance and treats AC as a singular and uniform phenomenon (Laumer et al., 2017). However, past research in PWCs indicates that worker behaviour varies depending on the type of AC mechanism (Wiener et al., 2021; see Table A1). Similarly, recent EU evidence on AM in traditional workplaces shows that monitoring, algorithmic direction (shift/task allocation) and algorithmic evaluation (automated scoring/leaderboards) are distinct mechanisms with different employee implications, reinforcing the

need for a mechanism-specific lens (Gonzalez Vazquez et al., 2025). Therefore, a nuanced understanding of employee behavioural responses to specific AC mechanisms is important for comprehending how workers employ workarounds to regain their self-esteem and social power (Laumer et al., 2017).

2.4. Theory of workarounds as theoretical lens

In IS literature, control relies on agency theory to explain the dynamics between the controller (principal) and the controlled (agent). The purpose of technology is to reduce the opportunistic behaviour of the agent and align their behaviour towards organisational goals. In a technology-mediated control environment, technology can assist the managerial control process by monitoring and offering valuable insights into employee behaviour (Cram & Wiener, 2020). While both agency theory and theory of workarounds share several agency-relevant concepts such as moral hazard, goal alignment and incentives, theory of workarounds places greater emphasis on the behavioural discretion of the agent to deviate when goals or procedures misfit occur (Alter, 2014). These misfits are often interpreted by employees as an algorithmic threat to their performance and autonomy. This threat perception triggers reactive coping strategies, where workarounds serve as defensive mechanisms to maintain well-being (Weber et al., 2025).

In contrast, labour process theory-oriented studies (Krzywdzinski et al., 2025; Williams & Khan, 2025), foregrounds the politics of control, surveillance, and value extraction, examine how AM alters traditional hierarchies concentrating knowledge and tightening managerial sanctioning capacity. Theory of workarounds adds a micro-behavioural lens that is lacking in both agency theory and labour process theory, although it shares agency related ideas (goal alignment, moral hazard), it emphasises the behavioural discretion and agency of actors to deviate purposefully when misfits or conflicting situations arise (Alter, 2014). It also provides us with the necessary steps to understand the chronology of the workaround and to understand the context in which it appeared (Wibisono et al., 2019). In Appendix A, Table A1 summarises these stages.

These steps help us identify the goals and interests of managers in implementing AM systems, an aspect that prior studies have rarely examined (Krzywdzinski et al., 2025). It is important to

understand these initial conditions such as the regulatory environment and power dynamics because they shape how employees interpret the purpose of AM systems (control vs. safety) and which ethical neutralisations they mobilise to justify using workarounds. Neutralisation is the process by which employees try to rationalise an infraction to justify their rule-breaking actions (Roder et al., 2016). Neutralisation is implicitly embedded in theory of workarounds. Alter (2014) highlights the role of ethical considerations in justifying goal-directed workaround behaviour; however, he does not specify how such justifications are produced or why they prevail. Research on shadow IT shows that, even under the deterrence of sanctions, employees deploy neutralisation techniques to justify non-compliance, which predicts both their intentions and actual use (Silic et al., 2017). The acceptance of these justifications is contingent upon the type of use: current users are swayed by descriptive norms (others' noncompliance), while non-users' acceptance depends on perceived benefits (Haag et al., 2019). Siponen et al. (2025) argue that neutralisations are not limited to guilt and shame but also include other motivations, such as stress, boredom, and resentment toward the organisation. These motivations have their roots in employee productivity expectations and institutional settings. We therefore model neutralisation as the mediating step in connecting perceptions of ACs to workarounds. Previous literature has highlighted both the positive and negative consequences associated with workarounds (Wibisono et al., 2019). Individual workarounds can create complex ripple effects throughout the organisation, leading to positive innovations or disruptions to established organisational routines and procedures (Wolf & Beverungen, 2019). On a positive note, they are necessary to address the inadequacies of IS, anomalies, and technological misfits that hinder practical work (Wong et al., 2022). Workarounds are also considered creative acts essential for making technology work in practice. Often, workarounds serve as extensions created by end users to improve operational efficiency and maintain normal business processes when existing IT systems enforce operational constraints (Spierings et al., 2017).

On the negative side, workarounds are considered a byproduct of employee resistance to managerial control (Ferneley & Sobreperez, 2006). Predominantly, workarounds are viewed negatively and are often associated with employee resistance to behavioural control and decreased productivity (Huck-

Fries et al., 2016). However, workarounds are considered harmless if they do not affect the workflow or data capture, even if they do not conform to terms of use (Ferneley & Sobreperéz, 2006). Sometimes, workarounds are perceived as illegal or unethical violations, or as undesirable and hazardous procedures (Alter, 2014), especially in clinical settings, where nurses may utilise workarounds to overcome time constraints, resource limitations or impractical procedures to provide timely patient care, often blurring ethical boundaries and risking patient safety (Baillette et al., 2022; Debono et al., 2013).

2.5. Factors underpinning perceptions of AC mechanisms in TWC

For the present study, only four AC mechanisms, recommend, restrict, record, and rating were considered, as the other two control mechanisms, replacing and rewarding, are less relevant in the TWC. Algorithmic replacing is specific to platform work, where algorithms replace underperforming employees (Alizadeh et al., 2023; Lippert et al., 2023). Based on evidence from EU surveys, AM in traditional organisations primarily involves automated direction (recommendations, task allocation, workflow restrictions) and automated evaluation (activity recording, ratings-based assessment), while rewarding and replacing remain uncommon (Gonzalez Vazquez et al., 2025).

Algorithmic rewarding involves non-monetary rewards such as virtual achievement badges and monetary rewards for completing a certain number of pre-defined tasks, like rides and deliveries (Lippert et al., 2023). These rewards are common in PWC to nudge workers towards meeting platform demands. However, in TWC, such instant reward nudges appear less salient in employee monitoring narratives (Parent-Rochelleau & Parker, 2021) and it is rare for algorithms in a traditional workplace to directly award performance-based bonuses without human involvement. As noted by Lippert et al. (2023), AC mechanisms are not universally applicable, and many used in PWC do not directly translate to TWC where high-stakes decisions (like bonus allocations or job terminations) require a human-in-the-loop. Including these rare mechanisms would create unnecessary noise, shifting the focus toward extreme outliers rather than the common patterns that define algorithmic control in traditional settings. Table 1 provides a brief description of AC mechanisms with examples from employee monitoring.

AC Mechanisms	Definition	Example from Employee Monitoring Software
Algorithmic Recommending	<i>“Algorithmic recommending entails employers using algorithms to offer suggestions intended to prompt the targeted worker to make decisions preferred by the choice architect.”</i> (Kellogg et al., 2020, p. 372)	Hubstaff ² : Provides employees with personal insights about their productivity patterns for data-driven decisions.
Algorithmic Restricting	Algorithmic Restricting <i>“entails the use of algorithms to display only certain information and allow specific behaviours while preventing others.”</i> (Kellogg et al., 2020, p. 375)	Teramind ³ : Uses behaviour analytics to identify anomalous and deviating behaviour. Restricts the amount of time spent on social media websites and idle time monitoring. Netvizer ⁴ : While the application is running, it controls the types of chat messages that employees can and cannot use.
Algorithmic Recording	<i>“Algorithmic recording entails the use of computational procedures to monitor, aggregate, and report, often in real-time, a wide range of finely-grained data from internal and external sources.”</i> (Kellogg et al., 2020, p. 376)	Hubstaff ² : Captures periodic screenshots and calculates <i>“activity rates”</i> based on the frequency of mouse and keyboard usage.
Algorithmic Rating	Algorithmic Rating entails <i>“computational technologies to gather ratings and rankings to calculate some measure of workers’ performance, as well as predictive analytics to predict measures of their future performance.”</i> (Kellogg et al., 2020, p. 378)	Controlio ⁵ : Automatically analyses workforce productivity and provides productivity scores at staff and team levels.

Table 1. Summary of AC mechanisms with examples

Two factors, controller relationships and ethical issues, are added for this present study, arising from issues specific to TWCs. A typical control relationship consists of two entities: a controller (source of control) and a controlled (target of control) (Cram & Wiener, 2020). In TWC, AC is applied across the organisational hierarchy, making issues of power relevant (Jarrahi et al., 2021). Understanding controller relationship issues enables us to comprehend why certain workarounds are developed. For instance, employees may resort to workarounds when they perceive the intentions, protocols, and control mechanisms imposed on them by the controller hinder their productivity or effectiveness.

² <https://hubstaff.com/product/insights>

³ <https://www.teramind.co/solutions/employee-monitoring-software>

⁴ <https://www.netvizer.net/features.htm>

⁵ https://controlio.net/use_cases_productivity_analytics.html

Incorporating ethical issues to understand workarounds is crucial because the enactment of a workaround could blur ethical boundaries. For example, medical professionals use workarounds to bypass privacy safeguards and to access patient medical records to provide emergency care during critical situations. Thus, incorporating ethical issues helps us understand the trade-offs between ethical concerns and practicality. These issues also assist us in pinpointing the neutralisation process used by employees. Therefore, to comprehend employee workaround behaviour, it is crucial to understand their ethical perceptions about ACs.

3. Methodology

3.1. Data collection

As the research questions addressed in this study are exploratory, we opted for the netnography method, which allowed us to collect diverse perspectives from a large sample in a short period (Daneshfar et al., 2023). We selected Reddit for data collection, as social media data provides rich insights into people's inner and outer worlds (McKenna et al., 2017). Reddit is particularly suitable for our research for the following two main reasons. First, the topic of employee perceptions about algorithmic surveillance and control is sensitive. Reddit's permissive policies and user anonymity facilitate data collection on sensitive topics (Proferes et al., 2021). Second, this approach facilitates the collection of naturally occurring conversations without researcher intervention (Bucher et al., 2021). Previous studies related to AM have also incorporated textual data (Bucher et al., 2021; Möhlmann et al., 2021). Cameron et al. (2023) suggested using text-mining methods to study AM by relying on data from online discussion forums to derive new insights.

In the first stage, we collected relevant posts and comments using specific keywords related to the study (bossware, tattware, employee monitoring software, mouse jiggler) using a Python-based API wrapper package (PRAW). Keywords were selected after thoroughly reviewing related posts. For example, a keyword "mouse jiggler" was included after analysing 500 random comments to confirm its relevance. Additionally, we conducted an internet search and identified mentions of this term in several newspaper articles (Belkin & Ellis, 2023). We ensured that keywords like bossware and tattware uniquely identified employee monitoring software. Ambiguous keywords like snoopware

and surveillance software were excluded from the study due to numerous false positives related to government surveillance.

A total of 14,740 comments were initially collected. After excluding comments with fewer than three words, non-English posts, and deleted/removed comments, the final corpus comprised 12,873 comments collected between 01-02-2020 and 17-07-2022. We did not restrict our search to selected subreddit communities. Instead, we followed a keyword-based search strategy to identify relevant posts throughout the entire website, irrespective of subreddit communities. This approach was chosen for the following reasons. First, there is a lack of sizeable communities specifically related to our study. Second, for a diverse topic like employee monitoring, individuals' perspectives may vary depending on the industry they work in and their technical knowledge. The data collection strategy aimed to address this issue by including diverse opinions from multiple subreddit communities. This procedure naturally yielded comments from 25 communities, narrative-driven subs (r/MaliciousCompliance, r/antiwork) offering granular descriptions of workarounds and managerial triggers, and policy-focused subs (r/technology, r/news) highlighting regulatory interpretations and tool affordances. The composition of these subreddits aligns with previous studies that have adopted similar approaches (Sum et al., 2025). A detailed list of comments collected from each subreddit is provided Appendix A, Table A3.

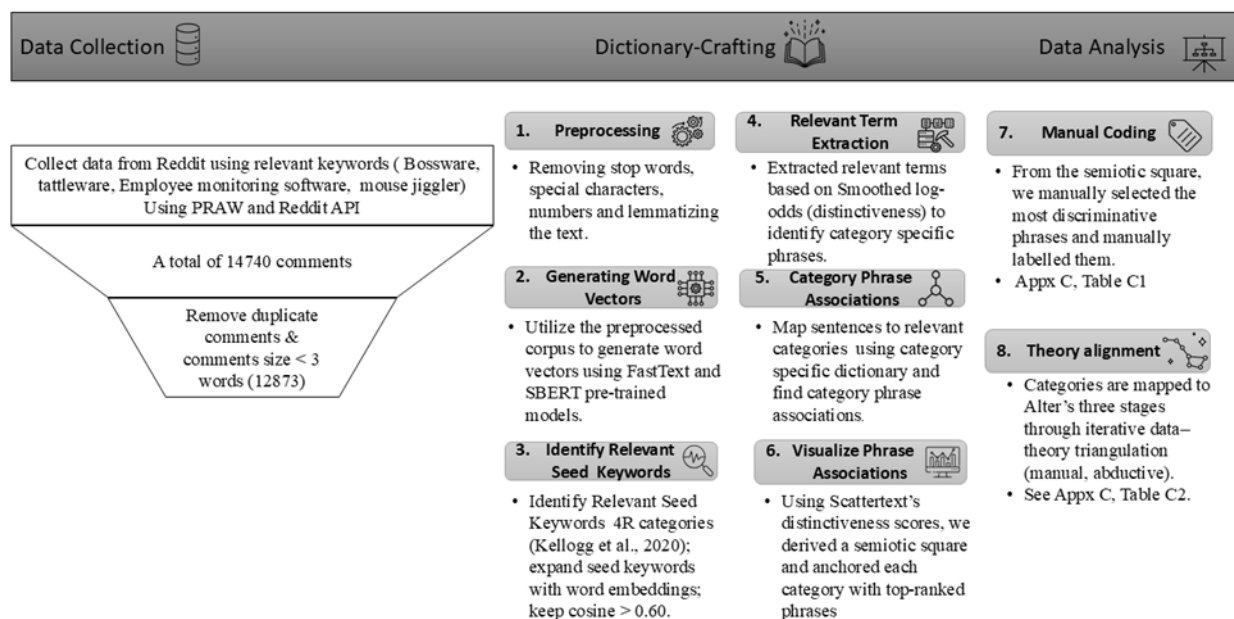


Figure 1. Description of the methodology (Data collection, Dictionary-Crafting, and Data analysis)

Given Reddit's pseudonymity, we cannot ascertain users' employment status from profiles. To partially overcome this limitation, we coded employment context from textual cues in the comments (references to HR, managers, PTO (paid time-off), performance reviews, VPN (virtual private network) /enterprise tools like Teams/Slack) to infer traditional workplace and to identify comments belonging to platform work (accept/decline jobs, tips/quests, Uber/Deliveroo). Of the 12,873 comments, 15.10% contained cues that positively identified TWCs, 0.91% indicated platform/gig contexts, and 0.34% were mixed. Although we were only able to tag 15.10% of the sample with TWC-related cues, there is a high thematic similarity between the verified comments and the unidentified majority, suggesting the dataset primarily reflects traditional work experiences. Details about the distributions of roles are provided in Appendix A, Figures A1-A3. We acknowledge Reddit's tech-savvy, skewed user base and upvote-driven visibility.

3.2. Crafting a semi-supervised dictionary

To conduct a content analysis on the text corpus, a predefined categorisation will help in mapping the relationships between words and comments. We use Kellogg et al.'s (2020) relevant 6R framework to classify the different AC mechanisms in the workplace.

A top-down supervised approach is suitable when categorization is predefined, but the association between textual features (words, sentences) and categories is undefined (Debortoli et al., 2016). In our case, relevant categories exist, but a dictionary to map the content to these categories is missing. Therefore, we employed a top-down semi-supervised method to create a dictionary. Hu and Liu (2004) previously extracted opinion terms by utilizing relevant antonyms and synonyms of seed opinion terms. In this study, we employed a similar method. First, we identified seed keywords relevant to the themes and concepts of the study (Bucher et al., 2021; McKenna et al., 2017). Subsequently, these seed keywords were then used to extract other relevant keywords from the corpus to construct a dictionary. The complete dictionary is presented in Appendix A, Table A2.

3.3. Extract relevant terms using seed keywords.

To extract relevant terms from the corpus, we pre-processed the text to remove stopwords and special characters. The cleaned text was tokenised to generate pre-trained word vectors, which can capture syntactic similarities between words in higher-dimensional space (Bojanowski et al., 2017) (see Appendix B for details). Finally, we calculated the similarity between seed keywords and other words in the corpus using a simple cosine similarity function. All words with a cosine similarity greater than 0.60 in the corpus were added to the dictionary. Using a threshold of 0.5 resulted in over 1100 words, many of which were irrelevant. A threshold of 0.7 yielded around 120 words but did not align well with the 6 dimensions. We finally chose the threshold of 0.6 based on previous research on text clustering (Steinbach et al., 2000), where they specified that in the absence of external class labels the cohesiveness of the cluster can be used as a measure of cluster similarity. We visualised the clusters into semantic space using t-SNE in Fig B2, and B3 in the appendix to visually inspect the quality of clustering. Based on our observation, a threshold of 0.6 yielded comprehensive and specific clusters. This threshold provided a good balance between the number of clusters and their interpretability, ensuring that each cluster was meaningful and distinct.

3.4. Data analysis

The type of workaround used by employees depends on the nature of the conflict they experience (Roder et al., 2016). To investigate how different AC mechanisms contribute to various ethical issues and workarounds, we utilised the category-specific dictionary from the previous step to map relevant sentences to each category. Unlike individual words, bigrams (multi-word phrases) provide a better context for interpreting relevant concepts within each category. Therefore, to extract important phrases and words from the document, we used the Python package phrasemachine (Handler et al., 2016). Phrasemachine extracts all the important noun sentences in the corpus. After extracting important noun phrases from the corpus, we need to distinguish between category-specific phrases and those that are significant across multiple categories. To address this issue, we applied LORs (Log-Odds Ratios) with Dirichlet Informative priors, as suggested by Monroe et al. (2008). The priors for the Dirichlet distribution were constructed based on the background frequency of word counts in each category. These LORs help quantify the association between a phrase and its parent category.

$$Smoothedlog - Odds - Ratio(term_i, category_a, category_b) = \log \frac{y_{ai} + \alpha_a}{n_a + \alpha_a \cdot |y| - y_{ai} - \alpha_a} - \log \frac{y_{bi} + \alpha_b}{n_b + \alpha_b \cdot |y| - y_{bi} - \alpha_b} \quad (1)$$

y_{ai} and y_{bi} are frequencies of term I in categories a and b . n_a and n_b are the total frequency counts of all words in categories a and b . α_a and α_b are Dirichlet priors for categories a and b .

3.5. Visualise the phrase and category associations.

Scattertext is an open-source software package developed by Kessler (2017) which was utilised for visualizing the differences in workplace usage and prominence across different categories. We used a rank difference score to highlight key phrases within each category on the scatterplot. Additionally, semiotic squares were used to identify distinctions and commonalities. Figure 2 depicts the semiotic square illustrating the relationship between algorithmic rating and recording.

The top y-axis in the square features phrases common to both algorithmic recording and ratings, such as *mouse movement*, *track productivity*, and *work company*. The upper-left and right quadrants contain words specific to algorithmic recording and rating, respectively. The x-axis (recording/workarounds and rating/workarounds) shows phrases common to control mechanisms and workarounds. On the recording/workaround's axis, device-related phrases (personal vs. company) dominate like *work laptop*, *company laptop*, and *personal computer*. Conversely, the rating/workaround axis emphasises metrics-related keywords like *way measure*, *metric use*, and *measure performance*.

The bottom quadrants represent workarounds specific to algorithmic recording and rating. For algorithmic recording, IT-artefact-related workarounds dominate the plot, like *tape camera*, *camera cover*, and *device manager*. In contrast, for algorithmic ratings, workarounds target the rating algorithm by manipulating the metrics using automated scripts. Table 2 concisely contrasts phrases associated with algorithmic control mechanisms, workarounds, ethical issues, and controller relationships. For instance, terms like *work laptop* and *personal computer* are common to both algorithmic recording and associated workarounds, while “camera cover” is unique to recording workarounds.

To aid in the interpretation of the phrases, content analysis is applied to identify major themes based on the content similarity (Daneshfar et al., 2023). First, we grouped the phrases based on similarity, and then we filtered the comments that used those phrases to identify the commonalities between.

Description	Recommendation	Restriction	Recording	Rating
Phrases common to both Algorithmic control mechanisms and workarounds	work laptop, work time, free time, work computer, good job, time work, hour week, idle time, actual work, work office	control employee, remote control, level control, force employee, force work, force use, employee behaviour	work laptop, company computer, personal computer, company laptop, use computer, work computer, company software	way measure, metric use, measure performance, productive work, idle time, loss quality, productive home, increase productivity
Workarounds related to specific control mechanisms	python script, cover webcam, game work, perfect solution, solution work, pretend work, company phone, slide cover, slider cover	powershell script, device manager, USB port, task manager, group policy, corporate policy, scroll lock	tape camera, camera cover, cover camera, device manager, disable microphone, cover webcam, laptop camera, electrical tape	game system, powershell script, script mouse, run script, script run, play game, simple script, shell script, game break
Phrases common to both Algorithmic control mechanisms and Ethical Issues	good job, free time, use work, hour day, hour work, job work, time work, work laptop, work hour day	electronic communication, admin control, protect company, control panel, acceptable use,	use work, company computer, personal computer, tape camera, computer work, work	way measure, quality work, measure productivity, complete task,
Ethical issues related to the specific control mechanism	illegal company, privacy work, home consent, expectation privacy, privacy connect, op consent	invasion privacy, expectation privacy, right privacy, privacy home, privacy law, illegal	illegal record, illegal company, home network, illegal state, illegal monitor, illegal activity	invasion privacy, reasonable expectation, reasonable expectation privacy, expectation
Phrases common to both Algorithmic control mechanisms and controller relationship	work company, hour day, free time, workday, work hour day, hour week, long work, good job, time work, job work	control employee, protect company, control freak, electronic communication, monitor network traffic, level control, camera house watch	long work, work company, personal computer, workday, work phone, new job, homework, remote work, extra work	performance issue, employee performance, poor performance, triple productivity, line code, productive home, good measure
Controller relationship issues related to a specific control mechanism	work company, company work, middle manager, upper management, trust employee, good employee,	company computer, company device, middle management, task manager, company laptop, device manager, company policy	work company, company work, personal device, company property, company time, large company, ideal employee	company computer, middle management, company device, task manager, company phone, middle manager

Table 2. Comparison of Phrases Related to Algorithmic Control Mechanisms and (Workarounds, Ethical Issues, Controller Relationships)

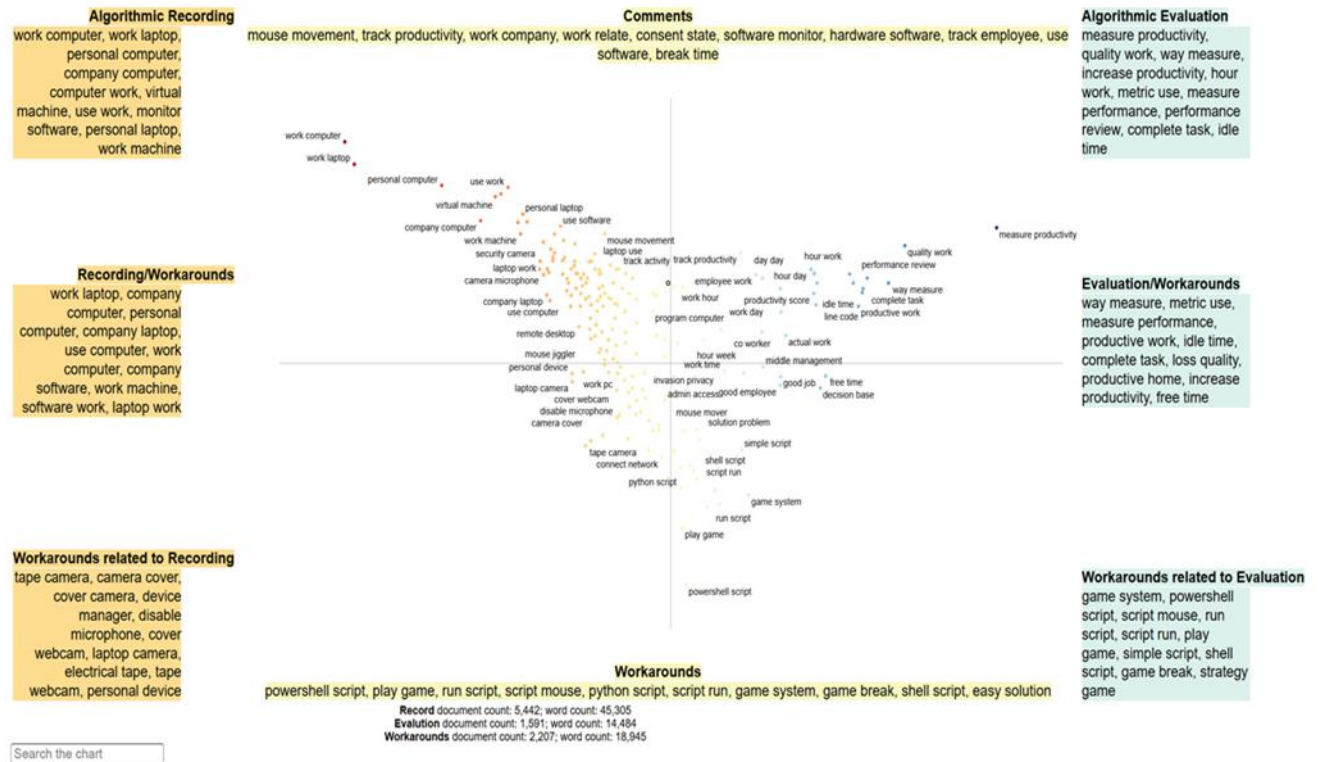


Figure 2. The semiotic square between recording rating and workarounds

To briefly summarize the methodology, we employed a corpus-driven, iterative approach. First, we identified important terms and co-occurrences in the corpus using Scattertext. These were then organised using a semiotic square to structure key oppositions (AC mechanisms, control, ethics) highlighted (see Table 2). The resulting clusters (time management, pretend work, micromanagement, trust) were labelled manually. The associated phrases, categories, and example quotes are presented in Appendix C, Table C1. We then aligned these categories to Alter's (2014) three-stage model through abductive reasoning, iterating multiple times between the categories and the theory. The mapping of categories to theory and the associated quotations are provided in Appendix C, Table C2. Figure 1 summarizes the different steps in the data analysis process.

3.6. Identifying the importance of legal clues using the Legal Framing Index

To test whether legal framing acts as an initial condition shaping employees' escalation paths (workaround vs formal recourse) (Lapointe & Rivard, 2005), we constructed a dictionary-based composite legality framing index (LFI) from comment text. The LFI consists of an equally weighted composite score derived from four binary cues: asserted illegality, consent conditions, statute/case

citations, and enforceability scepticism. A detailed description of these dictionaries can be found in Appendix D, Tables D1-D3. The outcomes are binary variables representing behavioural talk: formal recourse (is_formal) and workarounds (is_workaround), which define the intention to choose either formal recourse or workaround usage. We derived a regulatory regime moderator from the comments based on mentions of jurisdiction or regulatory cues, identifying EU-like (1.49%) and US-like (4.98%) contexts, with the remaining 93.53% categorised as Unknown. We tested the models using logistic regression, since the dependent variable is binary, the findings of this analysis are discussed in the results section. Our results are observational and text-based; therefore, they indicate associations, not causal effects of legal framing.

4. Results

In the next section, each AC mechanism is described with an illustrative extract verbatim from a Reddit member in italics, followed by a description of the workarounds related to the mechanism extracted from the analysis.

4.1. Workaround strategies against different AC mechanisms

Algorithmic recommending: In TWC, the algorithmic recommendations are provided by analysing the employee's activity like email, interactions on enterprise social networks, and video conferencing data. These recommendations provide detailed insights into employees' working patterns, along with suggestions on how to improve productivity. For example, the software provides detailed reports on time spent on different tasks, the average time spent on each task, and information about periods of focused work and any potential distractions. It provides a visual representation of individual goal attainments and key performance indicators (KPIs) and compares them with their peers. These applications overemphasise quantitative aspects of work (time spent, hours worked), ignoring the qualitative aspects of work.

“Most of these productivity software/ apps push us to get more work done, without taking into account the quality of work that's churned out in those hours. (Source: Reddit)”

Pretending to work as a workaround against algorithmic recommending: These recommendations push employees to constantly stay online and engaged, discouraging any idle periods or free time. However, this continuous push for productivity can create additional stress, leading to fatigue and burnout, as expressed by one employee:

“I would be significantly worse at my job if I tried to spend all 8 hours of my day being "productive" and writing code. Mental fatigue is very real. (Source: Reddit)”

To overcome this situation, employees try to utilise some automated tools and scripts to simulate activity, aiming to reduce idle time. These tools simulate activities such as mouse movements and scrolling in Excel sheets, resembling inputs from employee activities. This creates the appearance of productivity and engagement without performing any work-related tasks, especially in situations where employees have minimal workload or need free time to cope with mental fatigue.

“I did something very similar when we started working from home. I wrote a python script that moves my mouse and clicks every 60 seconds to avoid appearing idle on our IM. (Source: Reddit)”

Algorithmic restrictions: In TWC, algorithmic restrictions are primarily focused on limiting certain actions and behaviours deemed counterproductive to the organisation, such as restricting social media usage, non-work-related internet activity, taking longer breaks, and moving away from the PC for extended periods.

“That’s so annoying of a way for management to view working time. Even in the office people get up and move around from time to time. (Source: Reddit)”

These applications limit the amount of time spent on social media, news outlets and instant messaging. Some applications go further by limiting the type of chat messages employees can use when the application is running. They utilise rule-based behavioural analytics to compare employees’ everyday baseline behaviour and to identify any anomalous or deviating behaviour.

“Many monitoring solutions are adapting to your everyday behaviour and once you step out of lines, it will trigger an alarm. (Source: Reddit)”

These limitations can affect the flexibility of employees, including their ability to take short breaks and complete their work at a preferred pace.

Bypassing as a workaround against algorithmic restriction: Employees use different tactics to regain their flexibility by bypassing the algorithmic restrictions. For example, employees use secondary laptops to browse through non-work-related activities and employ alternative chat applications to bypass any restrictions placed on company-provided chat applications.

“So now we all use signal with each other, completely bypassing company chat. So, the company gained nothing and lost all. (Source: Reddit)”

Algorithmic recording: Employee monitoring software records the keystrokes, mouse movements, screenshots of desktops, and recording from webcam and microphone data. However, this real-time monitoring and constant surveillance erode the sense of privacy and autonomy among employees. Another issue that raises elevated privacy concerns is when the software starts tracking the activities of employees on their personal devices and home networks. For instance, employers implement monitoring software on personal devices used by employees during remote work. This software not only monitors work-related activities but also monitors personal browsing habits and social media interactions within the boundaries of the employee’s home network. This blurs the boundaries between the personal and professional space for the employee.

Artefact (DIY / device)	Purpose	AC mechanism countered	Neutralisation	Example Quotes	Benign vs Assertive (Trigger condition)
Mouse jiggler (USB/mechanical)	Simulates the mouse movement to avoid idle status	Recording, Rating	Necessity (avoid false idle)	<i>“They are literally inviting you to game the system. Your manager doesn’t look at the real metrics to determine your productivity? Fine, keep using your mouse jiggler.”</i>	Benign when used to prevent false idle status and to prevent away status during short physiological breaks. It becomes Assertive when used to simulate work and fake availability.
Camera cover / tape / lens shutter	Physically blocks webcam from recording	Recording	Privacy (dignity)	<i>“I taped the video camera on my laptop and disabled the client software to record logs and everything.”</i>	Benign when used to protect privacy/home space from exposure. It changes to Assertive when used to bypass mandatory monitoring and to intentionally evade oversight.
Hardware mic- mute (disable mic)	Cuts or prevents audio capture at device level	Recording	Privacy (boundary)	<i>“Depending on the level of access you have you can disable other mics in sound settings. Depending on how invasive the software is it may be able to enable it.”</i>	Benign when used to prevent private home conversations from being recorded. It becomes Assertive when used to bypass mandatory audio recording.
Arduino (key- board emulator)	To simulate hardware key presses. When company policy limits external software installations.	Restricting, Rating	Necessity / metrics (prevents false idle/lockouts that misreport performance)	<i>“I made a little thing with an Arduino and a servo that pressed the Ctrl key every few minutes to keep my screen active. It's not a good metric of course, if the work is done the work is done.”</i>	Benign when mostly used to prevent screen lockouts during long processing tasks that don’t require active input. It becomes Assertive when used to inflate activity and create a false sense of active presence.
Second device (Monitor, personal laptop/PC)	Move non-work task off monitored device	Recording, Restricting	Privacy (Personal vs company owned)	<i>“They can track anything through that – when it’s on a company computer. But if you’re using MS teams on a personal computer, they can’t access ANYTHING</i>	Mostly Benign if used to maintain the separation of personal files and data. It can become Assertive when explicitly used

				on it.”	to conceal work activity.
Run YouTube in the background to stay available	Keep IM icon showing as available when idle.	Recording, Rating	Necessity (meet presence expectation)	“Run a YouTube video when I’m idle. It keeps the icon showing as available for me.”	Benign when mostly used to cope with poor metric that is used a proxy of presence. It becomes Assertive when it was deliberately used to misrepresent presence.
Paperweight/coin on key	Keeps active status without software.	Recording, Rating	Social Norm justification	“Everyone I know just opens notebook and places a paperweight on a key.”	Benign When used a low-tech alternative for short-term coping. It shifts Assertive when the practice becomes normalised and collective.
Virtual machine (guest network)	Isolate work-related monitoring to VM/guest network.	Recording	Privacy & isolation (minimise capture)	“If you’re working from home, install virtualization software and instantiate an instance of whatever OS you plan on using inside of it and use that for your work. Ideally, you put it on a guest network internally so there’s no other network traffic for it to snoop on.”	Benign When used for technical security and to separate work/personal data. It becomes Assertive when used to completely bypass mandatory surveillance and to create a black box environment with zero visibility to employer.
Self-Teams meeting	Prevents interruptions and timeouts, while looking busy.	Restricting	Efficiency (avoid interruptions)	“At least I look busy and also my calcs won’t get interrupted for stupid reason”	Benign when used to crave uninterrupted worktime and block any notifications. It becomes Assertive when explicitly used to appear busy to avoid work.

Table 3. Artefact based workarounds with purpose and neutralisation strategy

Note. In this table, we use the “Benign vs Assertive” column as an analytical label to indicate how artefact-based workarounds are understood and enacted. For example, workaround practices are considered benign when their objective is to protect boundaries or prevent the system from incorrectly classifying employees as idle. By contrast, workarounds are considered assertive when they involve deliberate evasion of monitoring, falsification, or bypassing of algorithmic controls and metrics.

“I use my laptop to clock in and out of work and use work email on it. Is there any way my employer can monitor what I’m doing on my personal time through this. (Source: Reddit)”

No data or wrong data as a workaround against algorithmic recording: To regain their autonomy and ensure their privacy, employees employ different tactics to manipulate the data collection. First, they disrupt the data collection by disabling the mic and camera on their computers, physically covering the camera, or blocking their microphone.

“You might be able to disable the mic (and webcam) in the BIOS and then only connect external physical devices when necessary. (Source: Reddit)”

Second, they tamper with the data collection by feeding the software with the wrong data. For example, to prevent the microphone from recording during a break, employees feed white noise to the microphone and use a secondary monitor to thwart the monitoring software from taking screenshots.

“If you have more than one monitor you can have whatever you want on the 2nd one since the application only takes a screenshot of your primary desktop. (Source: Reddit)”

Algorithmic rating: In TWC, organisations track employee activity and generate productivity scores based on various arbitrary factors. These scores are then utilised to predict future performance and determine the individual’s risk score within the organisation. The simplistic metrics utilised by organisations to quantify employee productivity may not accurately capture the actual performance, often leading to adverse effects such as fatigue and turnover intentions. For example, monitoring software gauges the productivity of the employees by tracking their keyboard and mouse activity, activity on chat applications, and idle status.

“Discover what metric they are mind-numbingly using as a decision point. It’s usually something convenient for them to monitor, not something indicative of true value. (Source: Reddit)”

Gaming the system as a workaround against algorithmic rating: To game the system, employees initially identify the specific aspects that the algorithm prioritises, subsequently, they focus exclusively on the monitored aspects of work. For example, if the monitoring software uses word count and other

keyboard activity to calculate employee productivity. Employees then use automated scripts and mouse jiggers to game the evaluation metrics.

“Bottom line, if you count key presses as productivity, you will get a very inaccurate picture of productivity. That's a system that can easily be gamed. Also, if I spend that time ‘gaming the system’, problems won't get solved. Customers won't be happy. (Source: Reddit)”

4.2. Ethical issues related to algorithmic control

Across all different AC mechanisms, privacy/dignity issues dominate ethical discourse among employees, especially when monitoring extends to home or personal devices. First, keywords like privacy, home and home consent indicate employee concerns related to their privacy within their homes.

“Monitoring has to be justifiable and proportionate, be transparent etc. A worker has the right to expect a reasonable level of privacy, especially in their own home. (Source: Reddit)”

Second, phrases like company device, personal device, and personal computer indicate concerns related to tracking activities on devices (personal vs. company-owned). Most employees have, to varying degrees, consented to tracking activities on company-provided devices.

“You want your monitoring software on it, you can provide me a computer since it's so important. (Source: Reddit)”

Employees were completely opposed to organisations installing monitoring software or tracking the activities on their devices.

“I don't agree with an employer installing any tattle apps on anyone's personal devices. I enjoy my privacy and the separation between work and personal. (Source: Reddit)”

The privacy and dignity concerns raised by employees align with the multilevel resistance model proposed by Lapointe and Rivard (2005). These privacy issues are perceived as threats that trigger episodes of resistance. Such resistance depends on three interrelated objects (recording/monitoring on home or personal devices), implementation process (consent/proportionality of monitoring), actors enforcing it (managers/IT). These threats trigger individual resistance behaviours, such as refusing to

install tracking software, requesting company-issued devices, or employing artefact-focused workarounds.

4.3. Control relationship issues related to algorithmic control

Like ethical issues, we did not observe significant variation based on the type of AC mechanism. Phrases like middle manager, upper manager, and control employee, in this context, represent control relationships and intentions. Employees perceive the purpose of managerial use of monitoring software as a means of exercising control and power over them.

“Because it was never about concern regarding production. It's about maintaining control. (Source: Reddit)”

Phrases such as remote work, employee trust, productive home, and employee productivity indicate managerial concerns regarding employees working from home. Employees perceive managers using monitoring software as a sign of distrust in their ability to work from home productively.

“If you don't trust your employees working from home, maybe you should re-evaluate your hiring practices. (Source: Reddit)”

4.4. Using the theory of workarounds to understand the context in which workarounds arise

Beyond the identification of workarounds related to specific AC mechanisms, the theory of workarounds provides us with the necessary steps to understand the chronology of the workaround and enables us to understand the context in which it arises (Wibisono et al., 2019). These steps help uncover how and when workarounds emerge in an organisational context, shedding light on motivations and circumstances under which employees use these strategies. Drawing on the theory of workarounds (Alter, 2014), we used content analysis to match the discussions to the three steps in the emergence of workarounds, namely, intentions, goals, and interests; perceived need for a workaround; and identification of workarounds. In this way, we match empirical patterns to the theory of workarounds (Alter, 2014) in TWC.

4.4.1. Divergence of principal-agent intentions, goals, and interests

Control Purpose: Employees were sceptical about the purpose of AC mechanisms, with many questioning the intentions and motives of the managers and organisations implementing them. Many question whether the purpose of implementing these technologies is primarily to control employees, rather than to improve productivity

“A lot of these things is essentially about control, compliance and submission - sometimes as a direct corporate strategy. (Source: Reddit)”

Some employees perceive that organisations prioritise their power and control over dignity and privacy and place more emphasis on maintaining their power and dominance using these monitoring tools.

“This just seems to be a power play about exerting dominance and control and robbing workers of their dignity. (Source: Reddit)”

Trust: Organisations using monitoring software to regularly track and evaluate employee work activity can create a sense of mistrust among employees. Many employees feel that the use of monitoring software is too intrusive and unnecessary, signalling to employees that they cannot work independently without supervision and reinforcing a culture of mistrust.

“What I am not ok with is someone tracking my screen time/ camera and effectively showing they don't trust me AND they feel like they need to tell me how to do my job. (Source: Reddit)”

Micromanagement: Algorithmic monitoring and evaluation practices provide fine-grained details about employee work-related activities, and this increased visibility affords organisations the ability to enforce higher degrees of control compared to traditional management control practices. However, employees often consider these practices as counterproductive as they fail to take into consideration the complex and dynamic nature of work.

“There is no way I will be able to be productive for a full work day, so I fear this technology will result in micromanagement and turn me off to a position I enjoy. (Source: Reddit)”

Slacking-off: The primary justification that organisations provide for implementing employee monitoring software is to reduce employee slack-off and opportunistic behaviour by employees. This

becomes particularly important in remote work, where there is a lack of traditional oversight. Employees exhibit some level of acceptance of this intended purpose.

“I work productively but I need breaks every 2 hours. This software will just see that I’m slacking off but not that I’m efficient. (Source: Reddit)”

Relevance: Technological advancements and automation have significantly diminished the role of middle managers in organisations. As a result, we can see employees working in remote and non-traditional work arrangements questioning the relevance of middle managers in the context of algorithmic management and employee monitoring software.

“Middle managers insisting on bossware not realizing that they are amid self obsolescence. (Source: Reddit)”

Some even argue that middle managers are insisting on the implementation of these technologies to justify their existence.

“Seems like a bad way to justify management jobs that shouldn’t exist. (Source: Reddit)”

4.4.2. Perceived need for a workaround

The perceived need for a workaround arises due to inadequacies in IT and the divergence of *“performance goals, and participants’ goals toward the work system.”* (Wibisono et al., 2019, p.189).

Dehumanizing: The concept of being managed by algorithms that constantly monitor and evaluate employee behaviour, coupled with a lack of transparency, is considered unfair and dehumanizing. The expectation to constantly meet productivity quotas and constant manipulation of their behaviour by algorithms leads to feelings of stress and burnout.

“You get paid to do a job, not to be treated like some kind of machine that needs to be constantly tweaked and manipulated to extract maximum efficiency. (Source: Reddit)”

Need for personal time: Employees try to overcome algorithmic restrictions and evade algorithmic monitoring to carve out some personal time for socializing and relaxation. Unlike the platform economy, employees with full-time contracts do not receive any additional bonuses for meeting

productivity targets, thereby prompting them to use workarounds to create personal time. The intention and need to use workarounds to create personal time increases if employees perceive algorithms as unfair or if they fail to take into consideration the unique needs of individual employees.

“It sounds like your WFH setup is similar to my company’s. What they don’t get is you’re allowed to be away from your desk even if you go in. It’s perfectly acceptable to go for a smoke break, go talk to someone, bathroom, etc. all of which would cause your computer to lock. (Source: Reddit)”

Job Misfits: When algorithmically encoded work practices fail to take into consideration local realities and actual work conditions results in job misfits. To some extent, employees use workarounds to bridge the gap between algorithmic expectations and the reality of work.

“I did a lot of monitoring systems, so, even if I was sitting there actively doing what I was paid to do, I wasn’t necessarily using the mouse or keyboard. (Source: Reddit)”

Need for privacy: Employees show elevated privacy concerns when algorithm monitoring extends to their home environment. They perceive it as a breach of their privacy and a violation of their work-life boundaries. Within this context, the need for workarounds arises to preserve their privacy and prevent employers from gaining insights into their personal lives.

“We could cover our webcams and protect our privacy at home or just close the software that is being used to take the photos. (Source: Reddit)”

Flawed metrics: It is difficult to measure productivity, as it is complex multidimensional and subjective. Most employees monitor software and algorithms attempt to quantify employee productivity by relying on measures that are easy to capture like keystrokes, idle times, and time spent on activity. Thus, most employees express concern regarding the quantification of employee productivity as unfair, as these metrics don’t capture the full picture of employee work contributions and productivity.

“What is the point of having all of those advanced metrics to assess performance if the only thing they care about is whether or not you’re messaging someone. (Source: Reddit)”

4.4.3. Identification of possible Workarounds

The identification of possible workarounds and the sophistication of the workarounds depend on the available knowledge, ethical deliberations, and a cost-benefit analysis. Employees try to fill their knowledge gaps by actively trying to understand the internal workings of the algorithms through experience or asking others with more knowledge.

“Just curious because I’m having trouble finding an answer. Does 365 only monitor usage within the Microsoft network of apps? (Source: Reddit)”

Ethical considerations also play an important role in the identification and actual implementation of workarounds. Employees weigh the ethical issues regarding the transparency of the algorithmic systems and whether their dignity, rights and well-being are respected. Based on these ethical deliberations they consider whether to deploy a workaround to remedy the perceived violation of ethics.

“My job uses activity tracking software, but the settings are turned so low that it’s pretty difficult to generate an adverse report. Plus they explicitly told us what the system records and does not. So far it’s been a non-issue. (Source: Reddit)”

4.5. Individual and collective resistance and initial conditions

Although the workarounds reported in Reddit begin as individual acts of resistance (using mouse jiggers, taping webcams), the platform’s mechanisms (upvote, cross-posts) diffuse them online and transform them into shared scripts and collective knowledge. Over time, contributors codify and refine these tactics into step-by-step guides, code snippets.

“For anyone looking to do something similar, save the below script as a .ps1 on your desktop. Every 10 seconds it will move your mouse cursor 1 pixel (Source: Reddit).”

“Go on amazon and search for ‘mouse jiggler’. It’s basically a USB thumb drive that tricks your computer into thinking it’s a mouse.”

These social proofs reduce perceived risk and normalise the behaviour (“everyone here keeps Teams green”). In some cases, these online norms spill over into workplaces, where teams adopt common practices or escalate collectively (unionizing, policy complains).

“The employee can contact the local government office or union to create a formal complaint against the employer (Source: Reddit)”

Consistent with the findings of Lapointe & Rivard (2005), perceived individual level threats (privacy/dignity concerns) elicit benign workarounds, whereas threats that were framed as collective threats (control, power dynamics) elicit more formal collective responses through unions and regulatory mechanism (Håkansta et al., 2024).

Based on the analysis of comments using lexical cues and LFI index (see Appendix D for full details), higher LFI levels are associated with a shift toward formal channels and fewer mentions of workarounds. The high levels of legality framing significantly predicted greater odds of formal recourse (OR = 1.41, 95% CI [1.31, 1.52], $p < .001$) and lower odds of workarounds (OR = 0.91, 95% CI [0.83, 0.99], $p = .026$). For workarounds, the LFI $\times$ US-like interaction indicated attenuation (toward higher workaround odds as LFI increases; OR = 1.18, 95% CI [1.00, 1.40], $p = .050$); the LFI $\times$ EU-like interaction was not significant. Baseline regime differences (at LFI = 0) showed higher odds of formal recourse in EU-like (OR = 3.09, 95% CI [1.02, 9.38], $p = .046$) and US-like contexts (OR = 2.53, 95% CI [1.39, 4.60], $p = .002$) versus Unknown.

5. Discussion

This study examines how employees in a TWC perceive and respond to AC mechanisms, demonstrating how workaround behaviours emerge from these perceptions. By utilising Alter’s (2014) Theory of Workarounds and Kellogg et al.’s (2020) 6R framework, we demonstrate how divergence in AC mechanisms leads to different employee resistance tactics. The findings of this research were synthesized into a three-stage model (see Figure 3) that highlights the chronology of workarounds and the contextual factors influencing them. Unlike PWCs, where algorithms often take over functions previously performed by human managers, TWCs rely on a hybrid control regime. In TWCs, algorithms support and complement managerial oversight instead of fully replacing them (Krzywdzinski et al., 2025).

This hybrid arrangement creates a unique dynamic in which employees see algorithms as an extension of managerial control, directing resistance towards algorithmic metric proxies and device or space

boundaries. As a result, they increasingly treat managers as interpreters of algorithmic outputs rather than as direct supervisors, with their roles shifting towards setting boundaries and building capabilities (Cortellazzo et al., 2019). Importantly, we observed that employees do not respond uniformly to AC mechanisms. Some workarounds are enacted pragmatically to make systems work in practice or to repair misfits, while others take a more assertive form, as employees intentionally bypass monitoring requirements or game the metrics. This determines the type of organisational response, as some benign workarounds are tolerated when they fix system weaknesses or make system work in practice, whereas others are sanctioned.

Building on Alter's (2014) three-stage model (divergence of intentions, perceived need, identification of workarounds), this study identifies ethical neutralisation as a key mechanism linking employee perceptions and workaround behaviours. For example, when AC mechanisms extend into home or personal devices, employees often perceive them as tools of control rather than support, as they feel their privacy boundaries are being violated. Similar perceptions also arise when AC mechanisms are misaligned with the nature of the work, for instance metrics based on presence or keystrokes versus actual outcome. Employees justify their workaround behaviours by appealing to different ethical concerns. They invoke privacy (reasonable expectation of privacy at home), fairness and proportionality of monitoring (tracking break times and off hours) and higher loyalties (protecting one's personal time and mental health). These patterns are consistent with findings related to shadow-IT, showing that neutralisation can predict behavioural intentions and actual use (Haag et al., 2019; Silic et al., 2017).

When employees perceive they are treated 'like a machine', they reframe AC as dehumanising, which amplifies dignity-related neutralisations (Bender, 2024). Recent studies indicate that the purpose of neutralisation strategies may extend beyond simple guilt or shame diffusion and include other motivations such as stress, boredom and resentment rooted in institutional expectations (Siponen et al., 2025). In our analysis, we found that specific neutralisation tactics are tied to a particular AC mechanism. For example, privacy-based justifications are used to resist algorithmic recording, including hardware mic-muting and the use of camera covers.

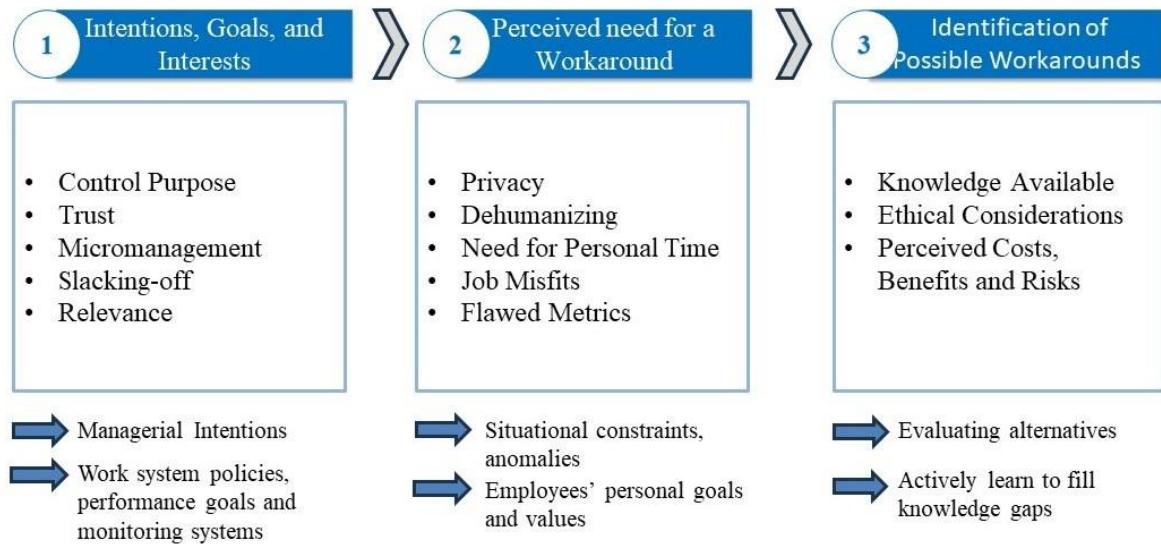


Figure 3. Chronology of workarounds based on identified themes

Note: In line with Alter's (2014) workaround theory, Figure 3 depicts the staged process through which workarounds arise. The blue-bordered boxes list representative considerations and psychological states (micromanagement, dehumanisation) at each stage. The blue arrows indicate external environmental conditions, situational factors, and actor inputs that shape movement across stages.

Fairness and proportionality concerns under restrictive monitoring conditions support the use of secondary devices and off-channel communication, while worries about human pacing are invoked to legitimise the gaming of metrics.

These findings operationalise Alter's (2014) ethical considerations in observable discourse. By triangulating these discourses with the LFI index, we found that both procedural and rights-related issues frequently co-occur with mentions of formal recourse. This result suggests that managerial framing can dampen neutralisation-based justifications for workarounds and shift responses toward more formal escalation. When analysed through Lapointe and Rivard's (2005) multilevel resistance framework, workarounds can span both individual and collective levels. Workarounds that initially started as individual acts of resistance (mouse jigglers, taped webcams) can become collective as Reddit's affordances like upvotes, cross posts diffuse and codify them into shared repertoires and norms. As these artefact-centred repositories diffuse more widely, they may prompt organisational responses like policy clarifications or the reconfiguration of control tools. Overall, our findings align with other similar TWC studies (Bartelheimer et al., 2023; Davison et al., 2019). While at the same time, they extend this

literature by showing how online diffusion can turn into shared resources that reshape organisational control.

5.1. Theoretical Implications

Our study has several major contributions. First, previous studies have predominantly applied the concept of AC to PWCs in the platform economy (Krzywdzinski et al., 2025; Wiener et al., 2021). Platform work often extensively relies on the automation of AC mechanisms, in TWC, by contrast algorithms complement managerial oversight rather than completely replacing it. Thus, employees perceive AC as an extension of managerial control, which can shift the objects of resistance away from managers and toward algorithms, software agents, and the boundaries they enforce. These findings closely mirror those of Hirsch et al. (2023), who emphasise that AC in non-platform settings coexists with traditional control. Employees actively question the role and relevance of managers under these hybrid control settings, while at the same time treating them as interpreters and boundary setters of algorithmic outputs, reflecting evolving leadership roles in digitised environments (Cortellazzo et al., 2019). Managers act as shapers (Schmid & Wiesche, 2026), utilising their agency to exclude certain applications from AC to preserve established work relationships.

These findings nudge us to reevaluate the philosophical underpinnings of the panopticon in the age of digitally mediated control (Bentham, 1787; Foucault, 1975). A common assumption about the digital panopticon is that, due to its continuous and automated nature, these surveillance systems enhance managerial power by producing compliance through internalised self-discipline. Our findings suggest a more contingent view of AC-mediated hybrid control regimes, where employees do not simply behave as passive actors by internalised control. Instead, employees often identify objects of contestation within the algorithmic control apparatus (software agents, device/home boundaries, and metric proxies) and utilise them to manage visibility by controlling the data flows that are captured. Workarounds and other subversive tactics often produce interpretive gaps in hybrid control regimes, where algorithmic control coexists with managerial oversight, creating room for employees to renegotiate control expectations or bypass metric proxies. Overall, our findings suggest that the effects of the digital panopticon are contingent; they depended on the perceived legitimacy of monitoring

practices, metrics and the ongoing interactions between managerial responses and employees' adaptations.

Second, the current literature does not distinguish how employee resistance tactics differ based on different AC mechanisms (Kellogg et al., 2020). Jiang et al. (2023) identified systematic differences in how individuals respond to different AC mechanisms, but this study is mostly focused on platform work. In TWCs, we identified predominantly artefact-focused workarounds (mouse jigglers, camera covers) and ethical neutralisation (privacy justifications) as distinct strategies contrasting with platform workers' collective workaround strategies. These divergences arise due to the isolated nature of employees in TWCs, which is a result of hierarchical power structures. Although the IS literature has recognised artefact-centred workarounds as generative, bottom-up adaptations that repair misfits and sometimes seed process innovations (Bartelheimer et al., 2023; Davison et al., 2019). We extend this stream of research by theorising workarounds as mechanism-sensitive and by specifying how they differ based on the AC mechanisms used and employee legitimacy appraisals. This extends beyond the control–resistance framing in literature by showing which mechanisms tend to trigger which workaround logics, and under what conditions in TWCs.

Third, we extend Alter's (2014) Theory of Workarounds to TWCs. We validated the three-stage process of divergence of intentions, perceived need, and identification of workarounds, and identified ethical neutralisation (privacy, dignity/fairness, higher loyalties) as the missing link that channels perceived control purpose into a response mode (compliance, workaround, or formal recourse). While Alter recognises ethical considerations as an important step actors use to justify goal-directed deviations, the theory does not elaborate on how such justifications are produced and sustained. This explains why morally charged contexts (home/personal devices; always-on capture) produce specific artefact-level workarounds, whereas procedural/rights framing (purpose, proportionality, recourse) redirects those justifications toward formal escalation.

In TWCs and remote work context, employees are often physically dispersed and feel vulnerable and exposed when they deviate alone. Our findings show that online communication channels and forums

like Reddit enable them to cope with a sense of isolation and vulnerability, allowing them to share their interpretations, establish shared norms about what counts as fair and unfair AC practices and to circulate collective workaround repositories. The workaround diffusion dynamics in online forums resonate with Alter's (2000) notion of the ordinary innovator, where these deviant practices gain traction and enough support only when actors mobilise allies and reach a critical mass that can shift managerial interpretations of what is acceptable. As these practices become widespread, individual sanctioning may become less feasible. Instead, organisations may be pushed more toward policy clarification or selective enforcement rather than individualized discipline (Lapointe & Rivard, 2005).

Finally, Alter (2014) explains why workarounds emerge (misfits, goal protection) and how they are selected (available knowledge, cost-benefit, ethical justification). Lapointe & Rivard (2005) explain how individual works transform into collective routine (norm diffusion, coordination) and organisational episodes. We demonstrate that ethically justified workarounds diffuse online into shared repertoires and can trigger organisational responses, thereby bridging micro-level resistance and macro-level change. Cameron et al. (2023) suggested using data from online communities and natural language processing to understand the perspective of employees and managers. This current study used data from an online community (Reddit) to study perceptions of employees experiencing ACs. By categorising workarounds using semi-supervised methods, this study fulfils the calls for research to identify and categorise workarounds using data-driven methods (Bartelheimer et al., 2023).

5.2. Practical Implications

The results of this study provide valuable insights for managers regarding the potential negative consequences of implementing AC mechanisms without considering the local realities. Our findings highlight that strict and opaque monitoring can backfire, as employees may perceive such measures as unfair and actively seek ways to avoid them. If certain types of monitoring feed excessive and universal resentment (constant webcam surveillance), it is recommended to reconsider those unless necessary. Managers should adopt a least-intrusive-necessary rule and assess every AC mechanism against 3P, Purpose (legitimate aim), Proportionality (least-intrusive means), and Process (notice, appeal, oversight) before deployment. Consistent with our LFI analysis, when monitoring cannot be

avoided, 3P framing dampens benign workaround use and shift employees concerns to more formal channels. Managers should treat dashboards and activity/idle monitors as diagnostic signals, and anchor evaluation in outputs and quality. By excluding personal devices and home networks from monitoring, organisations neutralise the most important privacy-based justification for workarounds.

5.3. Limitations and Future Research

Although this study makes several contributions, it is not without limitations. It relies solely on textual data from Reddit and is analysed from the perspective of employees, thus limiting its generalisability. Second, the present study focuses on a single application (employee monitoring software) of AC in TWC and doesn't represent the entire spectrum of AM applications in other TWCs, such as Amazon's warehouses and the trucking industry. Due to Reddit's pseudonymous user base and its skew toward male, tech-oriented users (for example, discussions often feature tactics such as Python scripts or virtual machines, which many employees outside tech-oriented roles may not know how to implement). As a result, our findings may overemphasise certain job types or attitudes. Therefore, the prevalence of workarounds identified may not generalise to the entire workforce. The timeframe of the data used in this study covers the early pandemic period, during which organisations and employees were still adjusting to changes. Our dataset was collected in 2022, when organisational policies and norms were still evolving. During this period, managers may have overcompensated by adopting heavier monitoring. As the pandemic eased, organisations may have reduced control measures, and employees may have adapted in different ways. Accordingly, our findings are context-dependent and temporally situated and may not be directly generalisable to today's hybrid-work environment. The robustness of the classification and analysis depends on the quality of the custom-built dictionary. A significant limitation of our dictionary-based approach is its reliance on simple keyword-based matching; future studies could utilise advanced natural language processing (NLP) and transformer-based methods like BERT to capture latent legal framing cues that explicit keyword matching might miss. Another limitation of our study is the LFI index, which mostly captures associational and correlational patterns in how commenters frame regulatory issues and do not constitute a causal test of regulatory effects. Thus, our categorisation (EU-like, US-like) should be interpreted as exploratory

and a future study can test the causal relationship. Future research could test, where the patterns we identified vary across different AC mechanisms and whether they change with evolving hybrid work-policies. Future research can validate the robustness of the dictionary by testing it with a larger dataset. Additionally, future research can improve generalizability by incorporating multiple data sources and including the perspective of diverse stakeholders such as managers, and software developers. Comparative research between gig workers and employees under algorithmic management could shed light on context-specific resistance. Complementary methods, such as longitudinal diaries, panel studies, and ethnographic research, can be used to empirically study how workarounds and justifications evolve post-deployment. We observe that procedural/regulatory framing in text co-occurs with more formal recourse and less benign workaround talk. A future study could experimentally test the 3P (Purpose, Proportionality and Process) model. By manipulating these three dimensions, researchers can identify the dimension which triggers act as strong proponent that can shift Stage 2 (perceived need for a workaround) to formal recourse (complaints, grievances, or legal action).

6. Conclusion

This study examines how employees in TWCs experience and responds to AC mechanisms by analysing their workaround strategies. Our findings show that in TWCs, ACs operate in hybrid control regimes where algorithms implement rather than replace managerial control. Employees perceive ACs as an extension of managerial control and view managers as boundary setters and interpreters of algorithmic outputs. In TWCs, employees express their digital agency through artefact-based workarounds, and their choice of whether to circumvent control mechanisms or formally contest them depends on how they use ethical neutralisation and legal or procedural framing. In intrusive monitoring environments, employee creativity is systematically redirected toward avoidance rather than value creation.

We contribute to Alter's Theory of Workarounds by validating the three-stage process, that includes divergence of goals, perceived need for workarounds, and identification of workarounds and by identifying ethical neutralisation and legal framing as key proximal mechanisms that channel

perceived control purposes into response modes. Managerially, our findings highlight that opaque and intrusive monitoring leads to negative consequences, such as non-compliance and workarounds, whereas transparent justification, proportionality, and a focus on outputs mitigate workaround use. Future research can use alternative data sources like interviews, organisational case studies, and longitudinal designs to capture demographic variation and power relations.

Declaration of Generative Artificial Intelligence technologies

During the preparation of this work, the authors used ChatGPT to improve the grammar and readability and flow of the research article. After using this tool service, the authors have revised and edited the content as necessary and assume full responsibility for the content of the publication.

CRedit statement

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