**The Ethical Implications of Employee Surveillance Technologies in the Modern Workplace**

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**Introduction**

In the contemporary workplace, employee surveillance has become increasingly prevalent, particularly in clerical fields (Vorvoreanu et al., 2000). Technological advancements have facilitated the rise of sophisticated surveillance tools, including monitoring software, video cameras, and biometric tracking devices, leading to the monitoring of a broader range of occupations (Ajunwa et al., 2017). The growing integration of artificial intelligence (AI) and data analytics in workforce management has further expanded surveillance beyond traditional boundaries, raising new ethical concerns (Davenport et al., 2020); Indiparambil, 2019).

This systematic literature review aims to investigate the impact of employee surveillance on key variables in the modern workplace, including employee performance, autonomy, psychological well-being, and trust between employees and employers. The review will assess whether surveillance positively or negatively affects these variables, offering insights into the ethical implications of employee monitoring and providing evidence-based recommendations for organizational policies and practices.

This research includes an extensive literature review covering the effects of surveillance on the identified variables, followed by a detailed methodology section outlining the search strategy, selection criteria, data extraction, quality assessment, and data synthesis and analysis. The results section will present the impact of surveillance on each variable, while the discussion will explore the positive and negative implications of these findings. Finally, the conclusion will summarize the key findings, offer recommendations for employers and employees, and identify future research directions and emerging trends in employee surveillance.

By conducting this systematic literature review, the research will contribute to the understanding of the ethical implications of employee surveillance in the modern workplace, emphasizing the importance of informed organizational policies and practices that respect employee autonomy, well-being, and trust in an era of increased workplace monitoring.

**Literature review**

***Historical Context***

Employee surveillance has evolved over time with the advancement of technology, and ethical concerns have emerged correspondingly. The literature on employee surveillance from the past and present highlights these changes and concerns. In the past, surveillance was mainly visual observation and abstract time, focusing on employee performance (Manokha, 2019). However, with the development of new information and communication technologies, employers can now monitor employees' internet and email activities, interactions with customers, and even personal health and fitness data using wearable health devices (Connolly, & Kenny, 2016).

Workplace surveillance has evolved significantly over time, shifting from a discreet, limited presence to an omnipresent force that transcends physical boundaries. In the past, surveillance was largely confined to the workplace and limited to the watchful eye of the supervisor. However, with the advent of electronic devices and sensors, employee performance is now closely monitored in real-time, often extending beyond the workplace itself.

For example, productivity tracking software such as Time Doctor (Time Doctor, 2023) and Hubstaff (Hubstaff, 2023) can monitor employees' computer activities, capturing data on time spent on tasks, and websites visited, and even taking periodic screenshots. Similarly, GPS tracking in company vehicles or smartphones can record employees' movements and whereabouts, ensuring they are where they are supposed to be during work hours (Michael et al., 2006).

Additionally, health and fitness monitoring has become increasingly common in the workplace. Wearable devices like Fitbit or the Apple Watch can track employees' physical activity, heart rate, and sleep patterns, providing employers with valuable insights into the overall well-being of their workforce (Motti & Caine, 2015). By leveraging these new technologies, employers can improve workplace conditions, increase productivity, and better support employee health.

The digitalization and datafication of employees represent a qualitative shift in the history of workplace surveillance, transforming workers, their performance, and their bodies into lines of code and data flows to be scrutinized and manipulated (Zuboff, 2019). Consequently, individual employees are reduced to scores on a manager's dashboard, upward or downward trajectories, traceable histories of tasks performed, or log files on a company's server (Moore & Robinson, 2016). These digital records are stored and processed in ways that workers neither control nor may even be aware of.

***Contemporary Issues***

The growing use of advanced technologies in employee surveillance has given rise to unique ethical challenges. Employee monitoring and surveillance technologies (MSTs) have become more prevalent, yet there is limited research investigating whether employees comply with these systems or actively resist them (Ball, 2010; Spitzmüller, & Stanton, 2006). Communication privacy management (CPM) theory posits that individuals manage boundaries around the information they wish to keep private (Petronio, 2002; Watkins Allen et al., 2007). This theory becomes relevant when electronic monitoring is implemented in workplaces, as employees establish and frame privacy boundaries within organizations (Petronio, 2002)

The literature indicates that electronic surveillance poses a threat to employee privacy, with many authors acknowledging the infringement on employees' privacy rights (Findlay & McKinlay, 2003; Moor, 2005). However, only a few authors argue that employee privacy rights hold significant importance (Findlay & McKinlay, 2003; Moor, 2005). The utilization of AI-driven monitoring tools has amplified workplace surveillance, potentially eroding trust between employees and employers as workers may feel their privacy is invaded (Fairweather, 1999; Miller, S & Weckert, 2000).

For example, keystroke logging software, which records employees' typing activities, may be perceived as invasive and intrusive (Laufer & Wolfe, 1977). Similarly, the use of video surveillance or closed-circuit television (CCTV) cameras in workplaces can lead employees to feel constantly observed and scrutinized, impacting their autonomy and well-being (McDonald & Thompson, 2016). Furthermore, monitoring personal communications, such as emails and instant messages, can create a sense of unease and distrust among employees, negatively affecting the work environment (Dinev et al., 2009).

***Effects of Surveillance on Employee Performance***

Workplace surveillance can have both positive and negative impacts on productivity and employee performance. On the positive side, surveillance can promote accountability and efficiency among employees by monitoring their work and identifying areas for improvement (Aiello & Svec, 1993). It can also be used to enhance employee safety by detecting and addressing potential hazards in the workplace (Watkins Allen et al., 2007).

However, there are also downsides to surveillance in the workplace. The implementation of digital technologies and data analytics in contemporary organizations can influence employee performance and behavior. While these technologies can guide employees, they may also hinder creativity and flexibility (Ebert et al., 2021). Furthermore, surveillance can negatively affect employee morale, trust in management, and engagement (Ball, 2010; Moore & Robinson, 2016).

In addition, the relationship between employee performance and privacy concerns in the context of workplace surveillance is a critical aspect to consider. The increasing use of surveillance technologies to track employees' performance has raised concerns about the potential invasion of privacy (Moore & Robinson, 2016). Employees may feel that their privacy is being compromised due to constant monitoring, which can have a direct impact on their performance and overall job satisfaction (Ball, 2010).

Research has shown that when employees perceive their privacy is being invaded, it can lead to increased stress, decreased job satisfaction, and even reduced performance (Stanton, 2000; Chen & Ross, 2017). For instance, the constant monitoring of internet usage, emails, and other electronic communications can cause employees to feel a lack of control over their work environment, which can hinder their productivity (Dinev et al., 2009). On the other hand, some studies suggest that when employees understand the rationale behind the surveillance measures and believe that they are fair and transparent, the negative effects on their performance and job satisfaction may be mitigated (Aiello & Svec, 1993; Chen & Ross, 2017).

***Impact of Surveillance on Employee Autonomy***

The relationship between employee surveillance and autonomy is a multifaceted issue that can be significantly influenced by various factors. According to Self-Determination Theory (SDT), autonomy, relatedness, and competence are three intrinsic psychological needs that, when fulfilled in the workplace, lead to increased satisfaction, performance, and overall well-being (Ryan & Deci, 2000). Consequently, perceived workplace autonomy plays a crucial role in fostering employee engagement, creativity, and task performance (Gagné & Deci, 2005; Zhou & Shalley, 2003).

Specifically, the impact of surveillance on employee autonomy presents a multifaceted and intricate relationship. Digital technologies have transformed the modern workplace, creating both opportunities and challenges with respect to employee autonomy (Gerten et al., 2019; Manley & Williams, 2022). On the one hand, digitalization has the potential to empower employees by offering them increased flexibility, control over their work, and the ability to collaborate and communicate more effectively (Shalley & Gilson, 2004; Tushman et al., 2012). For instance, remote working arrangements enabled by digital tools can give employees greater control over their work schedules and environments, leading to higher levels of autonomy and job satisfaction (Gajendran & Harrison, 2007).

However, these same digital technologies can also be employed to monitor and control employee behavior more closely, which may inadvertently undermine autonomy (Gerten et al., 2019; Manley & Williams, 2022). The implementation of various monitoring systems, such as tracking software, video surveillance, and biometric devices, allows employers to keep tabs on their employees' activities, performance, and even their physical whereabouts (Ajunwa et al., 2017; Belk, 2014). This heightened level of surveillance may lead to employees feeling overly scrutinized, controlled, and less autonomous in their work (Sewell & Barker, 2006; Smith, & Kidder, 2010). As a result, the erosion of autonomy can negatively affect job satisfaction, creativity, and overall well-being (Amabile et al., 1996; Baard et al., 2004).

***Psychological Well-being of Employees under Surveillance***

The psychological well-being of employees under surveillance is a complex issue that can be influenced by various factors. While workplace surveillance may have some positive outcomes, such as promoting safety or improving work processes, it has also been shown to negatively impact employees' psychological well-being in certain circumstances.

Research has demonstrated that surveillance can lead to stress and anxiety among employees due to feelings of constant monitoring and a perceived lack of privacy (Sewell, G & Barker, 2006; Watkins Allen et al., 2007). This heightened state of scrutiny can result in demotivation and low morale (Sewell, G & Barker, 2006; Watkins Allen et al., 2007). Additionally, surveillance may undermine employee trust in management and decrease employee engagement, further exacerbating psychological distress (Ajala & Bolarinwa, 2015).

One study, however, has found that when surveillance is perceived as fair and justified, it can have positive effects on employees' well-being (Bernerth & Walker, 2012). This suggests that transparency, communication, and the perceived fairness of surveillance practices can play a crucial role in mitigating negative psychological consequences.

Despite this, it is essential to recognize that perceived procedural and distributive unfairness in the workplace is associated with lower psychological well-being and can contribute to various psychological and social distress (Salin, 2003). Workplace aggression and poor psychological well-being are becoming increasingly prevalent due to unfairness in the workplace (LeBlanc & Kelloway, 2002). Organizations should, therefore, carefully consider the implementation of surveillance measures and strive to maintain a balance that respects employee well-being and privacy while still achieving organizational goals.

***The Value of a Systematic Literature Review on Workplace Surveillance considering Ethical Implications***

Given the multifaceted nature of workplace surveillance and its potential effects on employee performance, autonomy, and psychological well-being, a systematic literature review is warranted to synthesize existing knowledge and identify potential moderating or mitigating factors (Tranfield et al., 2003). As digital technologies continue to transform the workplace, understanding the complex relationship between surveillance and employee outcomes is essential for organizations to create a balanced work environment that fosters productivity, trust, and satisfaction (Gerten et al., 2019; Manley & Williams, 2022).

Workplace surveillance raises ethical concerns, particularly with regard to employee privacy and the potential for abuse or misuse of surveillance technologies (Ball, 2010; Moore & Robinson, 2016). In the face of these ethical challenges, organizations must carefully consider the implementation of surveillance measures, striving for transparency, communication, and fairness to minimize negative consequences on employee performance, autonomy, and psychological well-being (Aiello & Svec, 1993; Bernerth & Walker, 2012). By understanding the nuances of the surveillance-employee outcome relationship, organizations can make informed decisions about surveillance practices that align with ethical principles while still achieving organizational goals (Ajunwa et al., 2017; Salin, 2003).

**Method**

***Search strategy and selection criteria***

To conduct a systematic literature review, a search strategy was developed to identify relevant literature on the effects of employee surveillance on performance, autonomy, and psychological well-being. Multiple electronic databases, such as Scopus, Web of Science, PsycINFO, and Google Scholar, were searched using combinations of keywords, including "employee surveillance," "workplace monitoring," "performance," "autonomy," and "psychological well-being,". Reference lists of selected articles were also manually checked to identify additional studies (Greenhalgh et al., 2005).

The selection criteria included peer-reviewed articles published in English, focusing on the impact of employee surveillance on the aforementioned variables. Both quantitative and qualitative studies were considered to ensure a comprehensive understanding of the topic. Studies that did not directly assess the effects of surveillance on performance, autonomy, or well-being were excluded.

***Data extraction and quality assessment***

Data were extracted from the selected articles using a standardized data extraction form to capture study characteristics such as author(s), publication year, study design, sample size, surveillance methods, and key findings (Higgins et al., 2019). The quality of the included studies was assessed using a modified version of the Downs and Black Quality Index (Downs & Black, 1998), which evaluates the methodological quality, internal and external validity, and power of the studies. Studies that met a predefined quality threshold were included in the review to ensure the robustness of the findings (Higgins et al., 2019).

***Data synthesis and analysis***

Due to the expected heterogeneity in study designs, methodologies, and outcome measures, a narrative synthesis approach was employed to analyze and synthesize the data (Popay et al., 2006). The synthesis was guided by the research structure, focusing on the effects of surveillance on employee performance, autonomy, and psychological well-being. The findings were organized according to the themes and subthemes identified in the literature review. The findings were then discussed in the context of the broader literature on employee surveillance and its ethical implications. After delivering Table 1, the paper discuss practical and ethical implications.

Table 1 A summary of studies regarding the relationship between surveillance and outcomes including Mitigating/Moderating Role

| Authors | Purpose | Sample | Type of Surveillance | Type of Outcome | Result | Mitigating/Moderating Role |
| --- | --- | --- | --- | --- | --- | --- |
| Alge, B. J., Ballinger, G. A., Tangirala, S., & Oakley, J. L. (2006) | Examine the effects of information privacy in organizations on creative and extrarole performance. | 175 full-time employees across various industries. | Perceived information privacy (control of personal and work-related information, including work behaviors, that an organization collects, stores, uses, and disseminates) | Creative and extrarole performance | (+) information privacy predicts psychological empowerment, which in turn predicts discretionary behaviors on the job, including creative performance and organizational citizenship behavior (OCB) | N/A |
| Aiello, J. R., & Kolb, K. J. (1995) | Investigate the impact of electronic performance monitoring and social context on productivity and stress | 120 undergraduate students | Electronic performance monitoring (experimental) | Productivity and stress | (+) Highly skilled monitored participants keyed more entries than highly skilled nonmonitored participants, indicating a positive impact on productivity. | skill level; Highly skilled monitored participants showed higher productivity than highly skilled nonmonitored participants, indicating a positive impact of EPM on productivity. However, low-skilled participants showed the opposite pattern. |
| Wells, D. L., Moorman, R. H., & Werner, J. M. (2007) | Investigate the impact of perceived purpose of electronic performance monitoring on employee attitudes | 162 full-time employees in various organizations | Electronic performance monitoring (experimental) | Employee attitudes | (+) When EPM is perceived as fair and developmental, it is associated with higher levels of job satisfaction, organizational commitment, and felt obligation. However, if EPM is perceived as a deterrent to future behavior, it may have a negative impact on employee attitudes. | Perceived purpose of monitoring (developmental vs. controlling; electronic performance monitoring (EPM) can have a positive impact on employee attitudes if it is viewed as developmental and constructive |
| Douthitt, E. A., & Aiello, J. R. (2001) | Assess the role of participation and control in the effects of computer monitoring on fairness perceptions, task satisfaction, and performance | 160 undergraduate students | Computer monitoring (experimental) | Fairness perceptions, task satisfaction, and performance | participants with control over monitoring can improve their task performance and satisfaction | Employee participation and control; providing participants with control over monitoring can improve their task performance and satisfaction, and allowing participants to have a higher voice in the decision-making process can lead to higher perceptions of fairness. |
| Holman, D., Chissick, C., & Totterdell, P. (2002) | Analyze the impact of performance monitoring on job design, employee affective well-being, and job satisfaction. | 361 UK call center employees | Performance monitoring | Job design, employee affective well-being, and job satisfaction | Higher intensity of monitoring had relatively higher associations with emotional exhaustion (+) and anxiety(+) | supervisor support played a role in moderating the relationship between the perceived intensity of performance monitoring and employee well-being |
| Luo, X., Xu, F., Zhang, J., Xiao, S., & Xue, B. (2022). | investigate the impact of organizational controls, such as computer monitoring and Internet usage policy, on cyber-loafing behavior in the workplace | 450 employees from various organizations of china | organizational control | cyber-loafing behavior | trait mindfulness can reduce employees' cyber-loafing behavior by reducing behavioral automaticity | trait mindfulness moderates the effect of perceived Internet usage policy on behavioral automaticity towards cyber-loafing, which leads to employees' cyber-loafing behavior |
| Robinson, C. (2020). | nvestigate the relationship between Employee Performance Management (EPM) and various aspects of well-being, such as commitment, stress, and trust. | 189 employees from various organizations | EPM (Employee Performance Management | Psychological well-being (commitment, stress, and trust) | (-) EPM has a negatively impact on these aspects of well-being but positively (+) impact on stress | emotional stability, Conscientiousness (moderator); the relationship between EPM and trust is moderated by emotional stability and conscientiousness |

The studies included in this review demonstrate a variety of relationships between surveillance and various outcomes. Some studies found positive effects, while others found negative effects. However, many of the studies also identified mitigating or moderating variables that can help explain the complex nature of these relationships. Below is a summary of the studies and their findings, organized by the type of relationship (positive, negative, or mitigating/moderating):

***Positive Relationship***

Alge et al. (2006) found that information privacy positively predicted psychological empowerment, which in turn predicted discretionary behaviors on the job, including creative performance and organizational citizenship behavior (OCB). Aiello & Kolb (1995) showed that highly skilled monitored participants keyed more entries than highly skilled nonmonitored participants, indicating a positive impact of electronic performance monitoring (EPM) on productivity. Wells et al. (2007) reported that when EPM is perceived as fair and developmental, it is associated with higher levels of job satisfaction, organizational commitment, and feeling an obligation.

***Negative Relationship:***

Holman et al. (2002) found that higher intensity of performance monitoring had relatively higher associations with emotional exhaustion and anxiety. Robinson (2020) reported that EPM had a negative impact on commitment and trust, while it positively impacted stress.

***Mitigating/Moderating Role:***

Aiello & Kolb (1995) found that skill level moderated the relationship between EPM and productivity. Highly skilled monitored participants showed higher productivity than highly skilled nonmonitored participants, while low-skilled participants showed the opposite pattern. Wells et al. (2007) highlighted the importance of the perceived purpose of monitoring (developmental vs. controlling), which can influence employee attitudes. Douthitt & Aiello (2001) found that providing participants with control over monitoring improved their task performance and satisfaction and allowing participants to have a higher voice in the decision-making process led to higher perceptions of fairness. Holman et al. (2002) reported that supervisor support played a role in moderating the relationship between the perceived intensity of performance monitoring and employee well-being. Luo et al. (2022) found that trait mindfulness moderated the effect of perceived Internet usage policy on behavioral automaticity towards cyber-loafing, which led to employees' cyber-loafing behavior. Robinson (2020) reported that emotional stability and conscientiousness moderated the relationship between EPM and trust.

**Discussion**

A key observation across the reviewed studies is the prominent role of mitigating and moderating factors in influencing the relationship between surveillance and outcomes. When these factors are considered, the negative impact on well-being or the positive effect on stress tends to diminish. This finding highlights the importance of understanding the context and specific factors that can influence the effect of surveillance on individuals.

Aiello & Kolb (1995) demonstrated that skill level moderated the relationship between EPM and productivity. When considering skill level, the negative impact of EPM on low-skilled participants was diminished, emphasizing the importance of tailoring surveillance practices to the skill level of employees. Wells et al. (2007) underscored the significance of the perceived purpose of monitoring (developmental vs. controlling) in shaping employee attitudes. By framing EPM as developmental and constructive, organizations can mitigate potential negative effects on employee attitudes.

In recent research, Luo et al. (2022) found that trait mindfulness moderated the effect of perceived Internet usage policy on behavioral automaticity towards cyber-loafing, which led to employees' cyber-loafing behavior. By promoting mindfulness, organizations can mitigate the negative effects of organizational control on employee behavior. In addition, Robinson (2020) identified emotional stability and conscientiousness as moderating factors in the relationship between EPM and trust. By taking these individual differences into account, organizations can better manage the impact of EPM on psychological well-being.

In conclusion, the studies demonstrate that mitigating and moderating factors play a crucial role in shaping the relationship between surveillance and outcomes. By recognizing and addressing these factors, organizations can reduce the negative impact of surveillance on well-being and stress, ultimately fostering more positive outcomes for employees.

**Implication**

***Practical Implications***

Tailor surveillance practices to employee skill levels: Organizations should design and implement surveillance practices that consider the skill levels of their employees to maximize productivity while minimizing negative impacts on well-being. Frame monitoring as developmental and constructive: Organizations should communicate the purpose of monitoring to their employees, emphasizing its developmental and constructive nature, which can help mitigate potential negative effects on employee attitudes.

Involve employees in the decision-making process: Engaging employees in the decision-making process related to surveillance practices can foster a sense of control, leading to increased fairness perceptions, task satisfaction, and performance. Provide supervisor support: Adequate support from supervisors can help mitigate the negative impacts of surveillance on employee well-being. Organizations should train supervisors to be responsive and empathetic to employee concerns and needs in the context of monitoring.

Promote mindfulness and individual differences: Organizations should consider promoting mindfulness among employees, as it can help mitigate the negative effects of organizational control on employee behavior. Additionally, recognizing and addressing individual differences, such as emotional stability and conscientiousness, can help better manage the impact of surveillance on psychological well-being.

***Ethical Implications***

Balance privacy concerns with organizational needs: Organizations need to strike a balance between the legitimate need for monitoring employee performance and the employees' right to privacy. Implementing transparent policies and clear guidelines can help address privacy concerns while maintaining effective monitoring.

Respect employee autonomy: Surveillance practices should be designed to respect employee autonomy as much as possible. This includes involving employees in the decision-making process and allowing them to have control over aspects of their work environment.

Ensure fairness in monitoring: Organizations should ensure that surveillance practices are applied fairly and consistently across all employees. This includes avoiding discriminatory practices and ensuring that any consequences of surveillance are proportionate to the identified issues.

Foster trust and open communication: Trust between employees and management is crucial for the successful implementation of surveillance practices. Organizations should foster open communication channels, allowing employees to voice their concerns and provide feedback on monitoring policies and practices.

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