The Algorithm's Middlemen: Resistance, Compliance, and Managerial Contradictions in Amazon's Warehouses in Poland

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As algorithmic management diffuses beyond platform labour into conventional firms, the role of middle managers is becoming even more complex and contested than ever. Despite studies that have focused on how algorithmic systems automate monitoring and discipline (De Stefano and Taes, 2023; Kellogg *et al*., 2020; Mateescu and Nguyen, 2019), the assumption that managers are strictly the enforcers of digital control overlooks their ambiguous structural positionality. Recent work argues that algorithmic management challenges the power of lower-level managers by centralising decision-making and knowledge in technical systems (Jarrahi *et al*., 2021), yet middle managers are also needed as 'algorithmic brokers' who interpret and translate these systems for both workers and upper management (Kellogg *et al*., 2020). In this dual role, managers act both as agents of implementation and as subjects of constraint, navigating organisational pressures, regulatory frameworks, and conflicting managerial strategies (Thompson and McHugh, 2009; Vidal, 2022).

This article reveals the unique positionality of middle management within algorithmic governance (Alaimo and Kallinikos, 2021, 2022) by investigating how managers resolve the tension between their public alignment with corporate directives and their private

understandings of managerial autonomy. In other words, we explore mechanisms that produce the stablising or contesting effects that middle-managers activate while performing their roles. Considering that human involvement in algorithmic systems might be emancipatory, we examine how managerial actions—such as softening algorithmic outputs or translating system objectives to local contexts—may simultaneously uncover deeper asymmetries of power. To do so, we analyse Amazon warehouses, which are widely recognised as sites of extreme algorithmic governance (Delfanti, 2018; Miszczynski and Zanoni, 2025; Zanoni and Miszczynski, 2024). Although the expanding literature on Amazon has emphasised its digitally supported model of 'augmented despotism' (Delfanti, 2018; Vallas *et al*., 2022), the role of middle managers within this regime remains underexplored. To fill this gap, we examine how middle managers in Amazon's Polish warehouses respond to the increasing centralisation of control through algorithmic systems, and how this redefines their roles and everyday practices—revealing new tensions between compliance and autonomy, discretion and discipline.

We therefore treat Amazon's Polish warehouses as an extreme example of the infrapolitics of middle management under algorithmic governance (Scott, 1990). As we show, the post-socialist, labour-arbitrage context sharpens the contradictions of middle managers' roles: positioned between highly surveilled associates and remote, data-driven corporate decision-making, they are both the implementers of algorithmic discipline and the subjects of its constraints. Drawing on interviews with 26 managers across three hierarchical tiers, our study identifies the subtle, often-concealed practices through which managers navigate, reinterpret, and resist the demands of algorithmic governance. In this way we capture 'hidden transcripts' of managerial experience that would remain invisible in more conventional accounts, and foreground the situated, relational nature of algorithmic control in a transnational logistics regime.

Literature review

In the literature of management and organization studies, middle managers do not constitute a uniform category. Their roles and responsibilities vary across organisations and countries, making them a controversial subject (Dopson and Stewart, 1990; Thomas and Listead, 2002: 73).The lack of a universal definition reflects the varied and dynamic nature of their role (Heyden *et al*., 2017; Reimer *et al*., 2016); for that reason, middle management frequently occupies a position in organisational hierarchies 'between the operating core and the apex' (Mintzberg, 1989: 98). The literature notes that this term often has a hierarchical meaning and is used to separate middle managers from top managers and pure non-managers (Gjerde and Alvesson, 2020; Mintzberg, 2009; Watson and Harris, 1999). This variability suggests that middle managers' roles and responsibilities are subject to each organisation's specific context (Marks and Baldry, 2009) with a common function of being 'at once controller, controlled, resister and resisted' (Harding *et al*., 2014: 1231).

Managers are seen as key figures in the power dynamics of organisations; performing the dual function of mediating and bridging the interests of capital and of labour (Carter, 1985). The nature of their duties is twofold: 1) it involves leadership and labour control for maximum value extraction from the workforce (while implementing the directives of senior management); and 2) it requires coordination and unity to manage diverse activities and orders while responding to the concerns and needs of frontline employees (Carchedi, 1977; Carter, 1985; Gjerde and Alvesson, 2020; Hales, 2005; Rezvani, 2017). This shared understanding of the complex position of middle managers produces an understanding that their role is based on balancing its dual responsibilities. The literature increasingly focuses on this duality – noting that previous research has concentrated on either subordination or

superiority, especially the latter (Alvesson and Sveningsson, 2003; Gjerde and Alvesson, 2020; Sims, 2003).

Algorithmic governance as transnational control

With the exponential growth of algorithmic management, scholars warn that middle managers risk becoming 'artificial humans,' subordinated to technological systems and deprived of opportunities to develop tacit knowledge (Demetis and Lee, 2018; Jarrahi *et al*., 2021). For example, global warehousing corporations, such as Amazon, have entrenched new regimes of control in their models of algorithmic governance, enabling hyper-surveillance, automated enforcement, and the commodification of workers as 'programmable cogs in machines' (Frischmann and Selinger, 2018; Miszczynski and Zanoni, 2025). As Fleming (2019: 27) argues, these dynamics reflect not technological inevitability but deliberate 'socio-organizational forces, with power being a particularly salient factor' (2019: 27). For managers, algorithmic governance amplifies centralisation of decision making on a transnational level, disempowering managers from questioning or resisting authority (Farrell and Morris, 2013; Hassard et al., 2012; Kanter, 1989; Loebbecke and Picot, 2015; Ogbonna and Wilkinson, 2003; Raisch and Krakowski, 2021) and shifting their roles towards implementing digital changes rather than making strategic decisions (Hallier and James, 1997; Van Doorn *et al*., 2023). In practice, we see how centrally parametrised metrics and cross-site data flow reallocate decision rights.

The compression of managerial discretion has progressed, recasting middle-managers as algorithmic brokers. Within this sphere, they retain their role in maintaining control over day-to-day operations, also for instance adjusting the workforce to accommodate technological and structural transformations (Radaelli and Sitton-Kent, 2016; Van Niekerk and Jansen van Rensburg, 2022; Wooldridge *et al*., 2008). Within this governance model, the

boundaries between management and workplace algorithms are fluid, requiring constant renegotiation, questioning, alteration, and auditing of data-based decisions (Jarrahi *et al*., 2021). These tasks require role-specific, data-based competences and varying degrees of power in shaping technological oversight (Gjerde and Alvesson, 2020; Raisch and Krakowski, 2021; Rezvani, 2017; Shet and Pereira, 2021; Van Doorn *et al*., 2023). In Figure 1, we show how these two spheres intertwine within the transnational context.

[insert Figure 1]

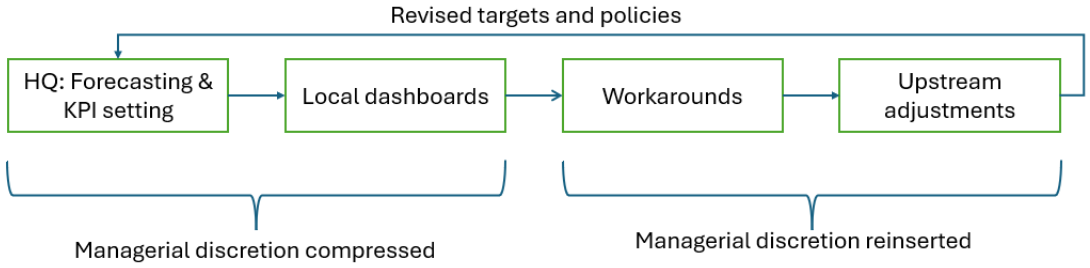

Figure 1: Decision rights in algorithmic governance as a form of transnational control.

Our theoretical focus addresses the positionality of middle management in the current workplace realities built on a model of radical, technology-based algorithmic control. The literature asserts that within algorithmic management, middle management is especially torn between administering and submitting to highly quantified, technological meritocracy, at the same time, being subject to outside pressures and under the control of top management within these systems (Jarrahi *et al*., 2021: p. 5; Krzywdzinski *et al*., 2025: p. 5; Lee and Edmondson, 2017). Based on the readings of this literature we believe it is crucial to better understand and theorise middle management's positionality within the power relations of such systems, notably addressing the ways in which middle managers respond to the demands of technological oversight and negotiate their evolving position in the organisational hierarchy.

Middle management's resistance within coercive systems

To conceptualise this dynamic we apply Scott's concept of infrapolitics, a useful lens for studying the hidden, everyday resistance within coercive systems, often through subtle actions like gossip, foot-dragging, or coded language (Scott, 1990). Unlike direct political protest or collective action, infrapolitics operates 'below the surface' of formal power structures, relying on anonymity and ambiguity (Fernandez *et al*., 2018), which allows to picture positionality of those who cannot openly engage in opposition and dissent, due to reprisals. Keeping these specific aspects of life and practice sheltered, both 'for' and 'from' power, offers some protection from external control, restrictive norms, and public scrutiny (Brown, 1996). Infrapolitical discourses and actions, including silence of political value (Brown, 1996), are signs of 'exercising subjectivities, sensibilities, and modalities of agency that elude, disrupt, and sometimes challenge the structures and disciplinary logics of the evolving division of labor' (Gregory, 2004: 287). At the individual level, infrapolitics involves subtle and ambiguous acts that can go undetected while still subverting expectations. These seemingly trivial acts are not necessarily inconsequential. While some critiques suggest that individual infrapolitics functions as 'decaf resistance' that does not fundamentally alter power relations (Contu, 2008; Thompson, 2016), Scott (2005) points out that the accumulation of many small acts of resistance can generate broader structural change.

In contemporary literature, infrapolitical analyses have pointed at the numerous functions of these actions. Previous theorisations have shown how empirical concentration on infrapolitics can reveal the importance of grassroots resistance, for instance, to uncover an affective solidarity as an organising principle in feminist resistance against sexism (Vachhani and Pullen, 2019); or through emotional resistance, manifested as anger, against explanatory policy frameworks, such as job-activation paradigms executed by state power (Peterie *et al*., 2019). Cioce *et al*. (2024), link infrapolitics to industrial relations, outlining how informal cultures of resistance might help to formulate collective interests; integrate workers using

symbols of inequality and exclusion; in other words, they constitute 'architectures of resistance' by, for instance, initiating actions later picked up by the unions (also Geary and Gamwell, 2019).

Our goal of studying infrapolitics within the workplace context is linked to identifying its relationship to the systems of power within the capitalist enterprise. To avoid idealising resistance in infrapolitical actions, we view infrapolitics as a sign that power systems are fragile and as expressions of the human spirit's creativity and determination to resist subjugation. In response, Abu-Lughod (1990) postulates there is a need to de-romanticise resistance and treat it as a diagnostic of power; as she puts it, 'where there is resistance, there is power' (p. 42). In Foucauldian terms, acts of resistance, including infrapolitics, are mutually linked to power (Abu-Lughod, 1990; Foucault, 1978). This mutuality is visible in how algorithmically managed power produces co-existing, alienating consequences, that are negative, such as repression and exploitation, and positive, such as becoming sellers of labour, consumers, individuals deserving of respect, and holders of legal rights (Miszczynski and Zanoni, 2025). Our theoretical interpretation takes into account these contradictory details of infrapolitical resistance to trace the conflicting power dynamics that are foundational to the contemporary model of capitalist workplace, following an assumption that power and resistance are inherently connected to and activate each other (Hollander and Einwohner, 2004; Peterie *et al*., 2019; Vinthagen and Johansson, 2013).

In our approach, the central form of managerial resistance is based on individual, quiet (if not silent) actions shared among middle managers, labelled as 'individual infrapolitics' (Mumby *et al*., 2017) to distinguish them from more collective and overt forms. These individual forms have been considered in the literature, for instance, through the study of how managers engage in discursive identity work, constructing alternative professional narratives that challenge dominant corporate ideologies (Balogun *et al*. 2011; Courpasson and Thoenig,

2010; Courpasson *et al*., 2012; LaNuez and Jermier, 1994). Some engage in 'la perruque' (empty labour), using company time and resources for personal projects as a way of reclaiming autonomy over their labour (Fleming and Sewell, 2002). Acts of resistance also take the form of quiet appropriation, by which managers subtly repurpose corporate policies to benefit employees rather than strictly enforcing top-down directives (Bloom and White, 2016). For capitalists, such forms remain difficult to suppress precisely because they are disguised and dispersed. However, they also create a shared consciousness of resistance within managerial ranks. Over time, the solidarity forged within the hidden transcripts can embolden resisters to escalate their dissent into more coordinated and open challenges to corporate authority (Courpasson *et al*., 2012; Ybema and Horvers, 2017).

Undertaking a study of these low-profile forms of resistance captures the dual position of middle managers as both enforcers and victims of the system. While numerous scholars have pointed out the governmental power wielded against frontline workers (Jarrahi *et al*., 2021:5; Krzywdzinski *et al*., 2025; Lee and Edmondson, 2017), few studies have investigated if and how middle managers contest this form of subjectification. In this article, we pose two central research questions to illustrate how power dynamics within Amazon workplace are mutually shaped by both compliance and covert pushback:

(1) How do middle managers navigate the tension between their public roles, aligned with corporate directives, and their perspectives on managerial autonomy?

(2) In what ways do middle managers resist, reinterpret, or negotiate algorithmic control when implementing directives from senior management?

Methodology

Our study of middle management's infrapolitics was conducted through a series of in-depth interviews with middle managers in Amazon warehouses in Poland, carried out in two

separate phases alongside a more comprehensive examination of those warehouses. In our empirical analysis of Amazon's corporate structure, we placed the middle management category between frontline employees, termed 'associates', and top management following existing definitions of this job category (Gjerde and Alvesson, 2020; Mintzberg, 1989; 2009; Watson and Harris, 1999), placed on the Amazon hierarchy on levels 4 to 6. In our case these positions reflect L4: safety, entry level area managers, entry-level human resources (HR) staff; L5: experienced area managers; and L6: operations managers, managers overseeing shifts and departments.

Our interviewees came from three layers of middle management, reflecting the non-homogeneous nature of this cohort. Twenty-six middle managers took part in the research: 17 men and nine women. Since our research was conducted in two phases, in our data interpretation we were sensitive to Poland's post-pandemic conditions: the exponential growth of Amazon network as part of Amazon's austerity plan in the more expensive region of Western Europe. The managers ranged in experience from newly hired graduates to individuals with over seven years of tenure. The selection of participants was based on convenience (Brewis, 2014), mostly driven by access to and willingness of participants recruited through snowballing and informal networks. We recognise the inherent risks of this sampling technique, such as the over-representation of more frustrated, unhappy interviewees (Etikan *et al*., 2016; Landers and Behrend, 2015). To address these potential biases, in our analysis we actively sought out and foregrounded 'negative cases' that did not fit the dominant narratives of frustration or resistance, using them to refine and qualify our interpretations. We also triangulated interview data with internal and publicly available documents and information on dashboards (for example on HR, safety and productivity), as well as with our broader observations from the examination of the Polish warehouse network, to check the consistency of managers' accounts. Finally, we systematically compared patterns

across levels 4 through 6 and across warehouses to identify which interpretations were specific to particular cohorts or sites and which recurred more generally across the organisation.

Table 1: Research overview

Phase	Timing	Level	Gender	Total interviews	Tenure
[1]	2018-2019	L4: 8 L5: 3 L6: 3	9 women 5 men	14	0-2 years: 5 2-5 years: 8 5+ years: 1
[2]	2023-2025	L4: 3 L5: 4 L6: 5	8 men 4 women	12	0-2 years: 2 2-5 years: 10 5+ years: 0

Given the sensitive nature of the data, confidentiality was a high priority, particularly as the interviews involved personal reflections and narratives that touched on dissatisfaction or subtle resistance to corporate policies. Given the small number of middle managers in Poland's Amazon warehouses, we fully anonymised the data, removing all personal information related to their positions and the period of data collection (Surmiak, 2018). In this paper we refer only to interviewees' general position in the organisational structure, without mentioning the warehouse that employed them at the time of the interview, or the length of their tenure at Amazon. For increased anonymity, we gave ourselves the option of changing

an interviewee's gender profile and withholding their age. During the data collection, we obtained informed consent from all participants, including permission to record the interviews. To safeguard anonymity in both data analysis and the transcribing process, each participant was assigned a number and pseudonym, which were consistently used throughout our analyses.

As researchers, we are aware that our positionality and linguistic choices shaped both the production and the interpretation of the data. Interviews were conducted in Polish, and all excerpts quoted in this article are our translations into English. We treat translation as an interpretative act: where key concepts or idiomatic expressions did not have straightforward equivalents, we discussed alternative renderings within the team and opted for formulations that preserved the managers' tone and evaluative stance rather than strictly literal phrasing. We also remained attentive to the ways in which fear of reprisal might have influenced who agreed to participate and how candid they were willing to be. During recruitment and interviewing we reiterated that participation was voluntary, that Amazon would not be informed about who took part, and that respondents could skip questions or withdraw from the study at any point. All interviews took place outside work time and outside of company premises, and we avoided collecting identifying organizational details in order to reduce perceived risks. We interpret the findings as situated narratives produced under these conditions rather than transparent reports on an underlying reality.

Individual in-depth interviews were chosen as the primary method for data collection because interviews allowed for a deeper exploration of the complex dynamics and tensions experienced by middle managers (Miszczynski, 2025). This approach captured the subtle ways in which power is negotiated and resisted within the corporate structure, offering insights that may not surface in more structured or quantitative methods. Through open-ended questions concerning their personal and professional trajectory, work and experience, the

work process and the technology used in the workplace, the relations with co-workers and employment status and financial situation, we sought to identify both explicit and implicit forms of resistance, as well as the ways managers tacitly adapt to the organisational demands placed on them. We took care not to prompt or encourage the participants to express resistant narratives artificially. At the start of each interview, participants were informed that the research was focused on Amazon warehouses, but we intentionally withheld complete details of the study's aims to minimise the possibility of bias or demand characteristics influencing their responses.

The data analysis followed an emergent coding process. To make sense of the interview transcripts, we engaged in a systematic and detailed iterative process of reading and re-reading, identifying recurring themes, actions, and reflections (Flick, 2013; Saldaña, 2021). A prominent theme that surfaced early in the analysis was resistance to technology, though it had not been a predetermined focus of the study. By sorting the transcripts, we extracted thematic areas pertaining to power dynamics and resistance, particularly as they intersected with resistance to technology. From this analysis, we derived hidden transcripts—those private narratives that resist the public, dominant practices of Amazon —adding depth to our understanding of how these managers navigate their roles within a highly controlled corporate environment (Ye and Zhao, 2024). In our study, we capture the tension encapsulated in the middle managers' role, where they are both the controlled and the controllers. By focusing on three aspects of middle managers' jobs derived from algorithmic governance, we trace the infrapolitics that help managers balance and defuse some of the tensions inherent in their role as both resistors and resisted.

Context description: Post-socialist context of global operations of Amazon

Engaging in a study of Amazon in Poland has required recognition of our own positionality as researchers, given both the intellectual tradition that our work falls into as well as the global and contexts of the phenomenon. Firstly, by conducting academic research and publishing it in peer-reviewed journals, we recognise the epistemic asymmetries, originating in the intellectual and institutional traditions of the Global North, and linked to the ways in which peripheral regions, such as post-socialist Europe, are studied, interpreted and made comprehensible to predominantly Anglophone academic audiences. In response, we approach our empirical material not merely as data extracted from a 'field', but also as situated knowledge that demands careful ethical and political engagement. We fully recognise that our backgrounds (rooted in post-socialist Poland and Western academia), play a significant role in forming our interpretations.

Secondly, we recognise how Polish warehouses are used for labour arbitrage in the European network at Amazon, offering a lower-cost alternative, and often serving foreign, usually German, markets. As a result, our aim is not to universalise the experience of Polish middle managers, but rather to treat it as an extreme case study and foreground the specificity of their position within transnational circuits of capital and control (Flyvbjerg, 2006; Jahnukainen, 2010; Seawright, 2016). This reflexive stance also shapes our methodological choices to respect both the participants' narratives and the geopolitical complexity of the context in which those narratives unfold. In the literature, Amazon's warehouse network stands out as an extreme case of algorithmic management, with software systems assigning tasks, surveilling workers, and dictating the pace of work (Barthel, 2023; Delfanti, 2021; Staab and Nachtwey, 2016). The literature describes how Amazon warehouse employees are motivated by pressure and coercion (Barthel, 2023; Delfanti, 2021; Vallas and Kronberg, 2023). There's a strong emphasis on meeting quotas and targets, and workers may be

penalised for not meeting them, sometimes under a ‘three-strikes-and-you're-out’ policy (Birken and Taylor, 2018).

Under this algorithmic governance, centralised digital tools and a specific workplace culture reinforce managerial control. Amazon's management relies on data analytics for decision-making (Birken and Taylor, 2018). Programmes like the Asset Management Programme measure speed, productivity, accuracy, and errors in real time, providing the basis for supervisory intervention. Performance and break times are constantly tracked through electronic devices. Managerial decision-making presumably relies on big data, generated and managed by algorithms that use it to plan processes, set volumes and determine capacities. Due to the suppression of workers' autonomy, as they mechanically perform their tasks by following the scanner's prompts, the process is marked by asymmetrical access to information, with black boxing of computations and human interpretation of algorithms (Miszczynski and Klimek, 2023; Rosenblat and Stark, 2016). Technical, data-driven rationalities support the ‘appetite for the labor of others’ (Delfanti, 2021), as they are designed to maximise productivity and exploit the workforce to fuel growth and generate profit. Below, we review the position of middle managers in this process.

Findings

Infrapolitical data bending

Given its dependence on technology, some of Amazon’s managerial functions are automated, relying on the use of algorithmic data to assess performance, as reported in the literature (Barthel, 2023; Delfanti, 2018; 2021).The highest metric is the performance rate, assessed both individually and collectively (e.g. per shift), as a key point of reference for a manager’s assessment (Zanoni and Miszczynski, 2024). The automation of managerial functions also reinforces a culture of compliance. Behind the promise of individual

emancipation based on meritocratic rules dictated by algorithms lies a complex system of control that ultimately strengthens existing power dynamics, with data serving the corporate drive to multiply profits (Miszczynski and Zanoni, 2025). In the context of centralised computations and hidden metrics spreading across the organisation, almost all of our interviewees shared their own private questioning of the reliability of predictive systems, pointing out inconsistencies and contradictions. One middle manager described the fragmented nature of these technologies:

> So, as I said, there are three or four systems for predicting deliveries and unloading, which don't exactly 'see' each other, but there are financial links between them that don't align. It's just… I might as well pull out a crystal ball and pick something at random. (L6 #2)

The scepticism, like that of other interviewees, is often informed by years of operational experience and becomes a resource for subtly undermining algorithmic governance. Rather than treating predictive systems as neutral tools, other middle managers actively reinterpret, manipulate, and selectively ignore the data to regain a sense of control, while formally acquiescing to this power.

The automation of managerial decision-making has led to the development of hidden practices in which managers bend corporate metrics and predictive outputs to fit their own local needs. Instead of relying exclusively on the employer's systems, some of our interviewees maintained their own spreadsheets and calculations (L6# 1; L4#13), so they could bypass rigid algorithmic constraints and adjust for factors the system fails to capture. This practice enables them to stage a quiet resistance: outwardly conforming to data-driven directives while covertly implementing alternative methods to ensure warehouse functionality expressed in the format of raw data (L6 #1; L6 #2; L4 #7; L6 #15; L6 #17).

This subtle subversion of prescribed data usage allows middle managers to resist algorithmic authority without resorting to open confrontation. While the official objective remains the same—ensuring profitability and efficiency—their strategies for achieving it are distinctly shaped by experiential knowledge and tacit defiance. While being subversive, they operated in favour of capital. Middle managers who appear to comply with algorithmic decision-making often privately reshape and manipulate the data to align with their own understanding of operational predictions, which might be closer to reality. As one of them stated: 'this result [about workers], does not really distinguish the merit and lowers the potential benefits [refers to quantified results]' (L6 #14). Under pressure to meet performance targets imposed by top management, middle managers resist the totalising logic of algorithmic oversight by meeting those demands on their own terms. One informant described this tension, noting that algorithmic predictions frequently fail to account for external conditions:

> Really everything has an impact on e-commerce. For example, sunshine, that's one of the more interesting things that has a very big impact. (...) When it was raining for weeks in the summer in Germany, everyone knew that you had to roll up your sleeves, call the agencies, that you had to prepare overtime, because Germans were going to start ordering. And they actually did, didn't they? And they [Amazon headquarters] have algorithms. They've got a whole team that deals exclusively with customer data around the world. They have a whole team sitting in Seattle, (...) And they can't connect the dots [relationship between the weather and the volume of orders]? And we know that. (L6 #2)

Through their situated knowledge, middle managers tactically reinterpret or even distort official data to create narratives that justify adjustments to operations, reinserting situated judgement of the algorithm while often formally legitimising the computation-based decision

making (L6 #16). This process is reinforced by the ability to work silently around imposed constraints that they are not allowed to question. As one interviewee explained:

> The error rate can be 40 or 50%, and often, I operate outside these predictions instead of wasting energy discussing and proving something isn't right. We do it manually inside the team and we do it without any knowledge or questions from the higher managers. There's a plan, and we adjust by either taking more leave or working overtime to cover any shortfalls. Any discrepancies in the original plan can always be framed with a good, cohesive narrative. (L6 #17)

Such practices demonstrate how middle managers bend data not only to sustain operations but also to resist algorithmic control. They avoid overtly rejecting corporate metrics and instead engage in strategic compliance—performing adherence while subtly reconfiguring data to serve their purposes.

Beyond technical manipulation, middle managers also ridicule senior management's reliance on predictive systems. As one informant shared: 'We used to laugh that when the higher managers came in and said there wouldn't be any work and to send people on vacation, we already knew there'd actually be a ton of work – and vice versa' (L6 #14). This quiet resistance again points to the human management of performance metrics. With an overwhelming array of sometimes contradictory indicators, managers selectively prioritise and disregard metrics to avoid sanctions from above. One informant noted: 'There are too many metrics, and sometimes one metric contradicts another. Everything is required just to make sure that it all "shows green" on the different boards' (L6 #15). Another echoed this sentiment: 'And here, unfortunately, everyone is afraid to talk about those uncomfortable, "pink" metrics, and everything has to be delivered no matter what, but that's just not possible' (L6 #22). These acts of subversion—manipulating metrics, constructing alternative narratives and opposing algorithmic logic—point at the persistence of managerial agency in Amazon's

automated structures. Even if this resistance is shielded by a veneer of compliance, the human element — often seen as a safeguard — it can inadvertently stabilise and humanise the digital exploitation governed by the algorithmic system.

Infrapolitical data bending shows that algorithmic governance reconfigures, rather than erases, middle managers' discretion, as they covertly rewrite centrally generated metrics in ways that keep warehouses functioning and, in doing so, quietly stabilise the very transnational control system they contest.

Affective buffering as infrapolitical resistance

In this technological context, middle managers' role is to drive performance by 'pulling' work. This generates a competitive atmosphere, characterised by a sense of gamification that pushes workers to maximise their output. But at the same time, Amazon's middle managers occupy a contradictory position: they simultaneously manage the emotional landscape of the shop floor and subtly resist and interpret top-down control. Tasked with ensuring that workers adhere to behavioural norms and performance expectations, they embody the role of 'representing Amazon to subordinates' (L6 #14). In alignment with the company's equality, diversity, and inclusion policies, they discipline, provide feedback, and uphold formalised behavioural standards. This role is reinforced by adherence to Amazon's formal code, or 'Leadership Principles,' which, as one manager explained, 'each of us knows by heart and we follow it as employees. […] It motivates us to work in the way the company expects' (L6 #22). Such frameworks constitute the public transcript that managers must outwardly perform to keep their positions and increase their prospects for advancement.

Middle managers, however, are not passive conduits of corporate authority. Instead, they engage in what can be described as affective buffering—working to cushion employees from the full force of algorithmic and procedural control, while exercising subtle forms of resistance. One interviewee described the public transcript as follows:

> I think there's also an element of control in all the frameworks the company establishes—there are rules for everything. From safety to procedures to how to solve problems. On one hand, this is helpful for those who might not have strong problem-solving skills. But on the other hand, it ensures that everyone operates in the same way. (L6 #23)

Here, the recognition of pervasive procedural mandates suggests a tension between corporate expectations and managerial autonomy. Rather than strictly applying the scripted logic, some managers creatively interpret corporate principles to align with their own values and maintain humane working relationships. As one informant commented on recruitment processes, they involve 'strict procedures and artificial frameworks' (L4 #21).

Affective buffering is apparent in the descriptions of how middle managers approach employee performance. Despite being officially tasked with enforcing algorithmically derived productivity targets, some avoid using raw numerical metrics in conversations with workers. According to one middle manager:

> If I'm going to talk to people about performance and those rates, we always try to do it without mentioning specific numbers, but instead with an example like, 'Tell me, Robert, why is your productivity 20% lower than that of the others working on the same line? What's the difference?' I, along with my managers, foster a culture of asking questions that don't judge the employee, even if we know they might be a bit of a slacker. The question is designed to put them at ease: 'Did you have any issues? Did something break down? If so, then why didn't you report it?' (L6 #1)

By shifting from hard data to contextual understanding, middle managers create a protective emotional space that mitigates the punitive aspects of surveillance within a data-driven performance regime. Rather than rejecting algorithmic control outright, managers give workers openings to justify their performance. This approach allows mamagers to reconcile

their power as enforcers with their own ethical considerations and workplace realities, instead of pure metrics.

> However, it is risky for middle managers to defy corporate directives. One recalled: It started when I disagreed with HR's approach to employees; I stood up for the employees a bit too often—I didn't think it was too often at all, but I took the employees' side, not the side of the rules. Because of that, I lost my backing from HR, so I wasn't warned that something was going on, and I couldn't prepare for the fact that someone was setting a trap for me. (L6 #16)

This passage reveals the risks of openly challenging corporate directives, reinforcing why middle managers frequently engage in more covert acts of defiance, such as appropriating corporate rhetoric for their own purposes. Another example:

> Let's take the example of annual or semi-annual evaluations. We often use these slogans [referring to company scripts] to defend someone or to reject a negative evaluation of someone. We would say, for example, that this person demonstrated this, this, and this, based on the Leadership Principles, in such and such a way, which is why we believe they could be promoted. (L4 #7)

Here, corporate language is repurposed as a shield, enabling managers to challenge rigid productivity metrics and advocate for workers without appearing insubordinate. These practices highlight 'quiet appropriation' among middle managers (Bloom and White, 2016), cloaking their resistance and actions in the language and categories of corporate organisation to subvert rigid performance assessments as subtly as possible.

Everyday evaluations are also shaped by affective buffering, as managers selectively question algorithmic data, overruling it with the human assessment of employee potential and traditional, managerial support. As one manager reflected:

> And we also have the ability to treat each situation individually. We can discredit those standards and reports, justifying a worker by technological issues. For example, if an employee comes and says they couldn't work because their computer broke, we don't just go strictly 'wrong, wrong, wrong.' Instead, we can listen and give them an opening, a way out. (L6 #16)

By listening empathetically and making discretionary adjustments, middle managers are reinserting their situated judgement. These infrapolitical acts of resistance help preserve human relationships in a dehumanising environment, but managers acknowledge their limits. As one admitted: 'The extra amount of work and explaining makes it impossible to sustain this approach in the long run'. (L6 #14)

Middle managers also shape employee development in ways that bypass formal corporate scripts, and instead take over part of the initiative. One explained:

> An older person can certainly load packages into a container but they're unlikely to handle work with a touchscreen scanner that has font too small for them to read easily. So, based on such abilities and the level of trust in a given person, we assigned positions. We had a principle, though it was more an internal rule within our team, that we always strive to develop our employees. (L6 #17)

Such practices, even though highly granular, challenge the impersonal logic of automated workforce allocation by privileging trust, intuition, and care. Similarly, managers invest in employees' career progression despite corporate pressures to prioritise productivity:

> I love developing managers. In the last six months, two managers from my team are getting promoted, so that also gives me a boost, knowing that what I'm doing makes sense. And honestly, what people higher up think—it really doesn't concern me at all anymore. (L6 #22)

These efforts demonstrate how middle managers struggle to maintain their own professional and ethical standards. While their quiet defiance does not dismantle Amazon's algorithmic control, it does create pockets of care and discretion within an otherwise inflexible system. By engaging in these acts of affective buffering and infrapolitical resistance, middle managers struggle to sustain their professional identities and protect workers from the full weight of algorithmic discipline. In doing so, they illuminate the dual nature of their role: as agents of corporate governance and as human challengers of its dehumanising tendencies.

Affective buffering reveals that middle managers act as human shock absorbers within transnational algorithmic regimes, softening the punitive edge of data-driven control through discretionary care while reproducing its legitimacy by translating corporate scripts into seemingly humane everyday practice.

Infrapolitics of performative compliance

Valued for their effectiveness, Amazon employees are expected to celebrate success and engage in a series of affirmative actions, which cultivates a cultural dimension meant to perpetuate the idea of Amazon as a special workplace (Zanoni and Miszczynski, 2024). The role of management is to create a sense of community by promoting a myth of individual impact on something larger and more significant. Posters with affirmations like 'Work hard. Have fun. Make history' reinforce this narrative (Delfanti, 2021). It is the responsibility of middle managers to enact and reproduce this narrative about Amazon's work environment, one that conveys a sense of a unique workplace and community spirit. To support this goal, they engage in practices that celebrate performance successes, such as sharing 'success stories' and making symbolic gestures like sparking applause to cultivate enthusiasm. These practices constitute performative compliance—ritualised displays that signal alignment with corporate ideology.

A highly scripted ritual performed by the middle managers are the daily 'stand-ups'. These meetings take about five minutes at the beginning of each shift and immediately after the lunch break. Workers are encouraged to celebrate productivity milestones. At the same time, their managers must follow a script of acknowledging those milestones and motivating employees to reach the next ones. Yet this ritualistic enthusiasm often masks the managers' ambivalence:

> It's always the same script: acknowledge the hard work, celebrate 'small wins,' push the targets. But sometimes, I stand there and think—who am I doing this for? The workers are just waiting for it to end […]. All that matters is final delivery, but I have to call it 'power hour'. (L6 #14)

Here, the act of leading stand-ups illustrates performative compliance, while the manager's inner critique and detached delivery hint at affective withdrawal through a subtle undermining of corporate ideology.

Other managers identify other elements that they find culturally incompatible, often remarking about their foreign, American roots. For example, one way of valuing effort is by giving high-performing workers '*Bezosy*' (playing on the name of Amazon founder Jeff Bezos), tokens that can be exchanged for gadgets shown in the warehouse display case. In an interview, one middle manager expressed her aversion to the tokens, reflecting, 'But if I don't hand them out, it looks like I'm not "engaging" enough with the team.' (L5 #5). Though they comply with these rituals, many managers view them as culturally hollow. They also dismiss posters ranking Amazon as a Number 1 employer, as 'propaganda' (L5 #6).

Interviewees linked middle managers' performative compliance to senior management and as necessary to fulfil the requirements of their job. One interviewee experienced this pressure in the course of regional and international meetings. He was implicitly discouraged

from expressing concerns about the organisation and instead made to feel obliged to present a façade of a flawless warehouse.

> At the end [of meeting], there's a Frequently Asked Questions session. So, I asked two or three questions, and the next day I got a reprimand for asking questions from [anonymised location] and supposedly showing us in a bad light. That's exactly how it's perceived. There's a lot to address. When we're on European calls and difficult topics come up, the French and British speak openly, saying, 'This can't be done, we need this much time because of ABCD.' But we're forbidden from doing that, because, in the eyes of those people, it's a sign of weakness and uncertainty. Here [refers to his warehouse], everything has to be the best, tip-top. (L4 #13)

Silence thus becomes both a tool of compliance and a protective strategy, and as this department manager points out, the distribution of power is uneven, with counterparts from Western Europe having more space for error and greater liberty. Another manager reflected:

> I also unfortunately learned something I never wanted to: that when something doesn't quite play out well for me in meetings, I just keep quiet. Otherwise, I'll only get stressed out, make enemies, and if the senior management team is sitting in silence, and I'm the only one raising a rather uncomfortable question, even though I try to be constructive, then I think, what's the point? (L4 #7)

These practices of silence and cautious performance demonstrate how managers reconcile competing pressures: publicly aligning with corporate values while privately resisting them. Their resistance remains covert, often camouflaged by organisational expectations. In moments of disagreement with senior leadership, resistance becomes more visible—albeit still muted.

One of the central concerns that touches on performative compliance is managers' omnipresent precarity. An example of this tension is the slogan 'Accomplish more with less',

which some of our interviewees saw a metaphor for employee obsolescence (L4 #4, L6 #23). For example:

> When I joined the company, I joined a team of about 10 people. Out of those 10, I'm the only one left. Along the way, they laid off so many people that it's hard to even talk about. This includes my (former) manager. Then they laid off the person who replaced him. The situation became so bad that the next manager left, and the next two people after him, the only ones at level five, also left, and they were not replaced. (L4 #21, area manager)

Middle managers privately express frustration at the disconnect between the official narrative and operational realities, while experiencing stress, guilt, or emotional exhaustion. They're pressured to meet expectations while navigating their own precarities, such as the assignment of new tasks peripheral to their core responsibilities, that expose the performative aspect of their role. One interviewee complained about this misalignment:

> We work in a warehouse with a high turnover of materials, three to six million items received weekly, and yet we, as managers, are given tasks to supervise the cleaners as they dust. Something's definitely off here, isn't it? (L4 #12)

This illuminates the disparity between corporate rhetoric about managerial empowerment and the reality of their work, reinforcing managers' disillusionment with Amazon's cultural messaging.

Ultimately, middle managers both perform compliance and enact individual infrapolitics. While they recognise the feeling of being trapped by the system — caught between own precarity, empathy for workers and loyalty to corporate directives, their performative compliance is high and rarely is manifested in other forms than silence and temporary slow-downs. As one interviewee summed it up, 'I just grit my teeth and did it his way, in a kind of Italian strike [while talking about disagreeing with supervisor]' (L4 #3). This

kind of foot-dragging is an ambiguous form of defying a coercive system while subtly questioning its legitimacy.

The infrapolitics of performative compliance demonstrates how, under conditions of managerial precarity, ritualised enthusiasm, strategic silence and 'slow' forms of work allow middle managers to symbolically endorse Amazon's transnational algorithmic order while only minimally disturbing its underlying structures of control.

Discussion and Conclusion

This study set out to advance our understanding of power and resistance in the process of algorithmic management. We drew on Sott's (1990, 2008) concept of infrapolitics, to study how power and resistance are not oppositional forces but deeply entwined processes, exemplified in the middle management of Amazon's warehouses in Poland. As we have shown through this extreme case study, middle managers constantly engaged in an active negotiation of their roles, a negotiation that goes beyond simple discretion and assumes forms of resistance, often, paradoxically, in favour of capital.

First, with our study we uncover the forms of everyday resistance. Cross-border data centralization exerts panoptic control by narrowing managerial discretion, fragmenting knowledge, and enforcing performance through opaque data metrics. Yet, middle managers resist not through open defiance but via infrapolitical acts—such as massaging the data, subtly subverting slogans, or using their managerial discretion to shield workers from algorithmic rigidity. Since a rebellious or oppositional act loses its critical power when it is rendered functional to the continuity of domination—what Contu (2008) describes as resistance that is immanent to, rather than outside of, capitalist power. In the studied warehouses, middle managers' micro-resistances—such as bending algorithmic rules or masking errors—do not

challenge the logic of algorithmic control but instead help it adapt and persist. As Scott (1990) argues, infrapolitics can give momentary relief without altering structural conditions, and in this case, the acts meant to reinsert situated judgement end up making it more resilient. Instead of disrupting managerial regimes, these oppositional practices are reabsorbed into the system's operational logic, illustrating how power can appropriate and neutralise dissent by turning it into a resource for governance. The mechanisms we identify are not universal but conditional and inscribed into the case's post-socialist context and with middle managers' functions as "the algorithm's middlemen" in a stabilising, buffering sense—precisely because those boundary conditions for contestation are weak.

Second, by operating on categories of power and resistance, we situate middle managers as both agents and victims of algorithmic control. This interpretation, based on identification of tension of these two dimensions, fits into the debate on the future of the managerial class—which in the literature appears increasingly precarious and internally fractured. As Krzywdzinski *et al*. (2024) argue, algorithmic governance introduces a new logic of control that not only disciplines frontline workers but also reconfigures managerial authority, reducing it to a form of supervised coordination. Middle managers, once seen as key nodes of discretion and organisational knowledge, are increasingly embedded in systems that automate decision-making, monitor their performance, and depersonalise their interactions (Hallier and James, 1997; Van Doorn *et al.*, 2023). While they retain some agency—as enforcers of algorithmically generated directives—they are simultaneously dispossessed of traditional forms of authority, tasked with executing logics they neither designed nor controlled. This dual positioning (Mintzberg, 1989) produces a profound affective and moral burden, as noted in the study: managers are compelled to discipline others while experiencing surveillance, stress, and ethical dissonance themselves. Their role becomes emblematic of a broader tension in digital capitalism, where human labour is both

necessary for and subordinated to algorithmic infrastructures. Critically, this raises questions about the long-term sustainability of the managerial role under such governance regimes. If middle managers are stripped of autonomy and reduced to compliance agents, the legitimacy and desirability of their role may erode—leading to disengagement and quiet resistance, or eventual structural displacement (Ogbonna and Wilkinson, 2003). At the same time, the contradictions they embody may serve as pressure points within the system, revealing how even those tasked with enforcing algorithmic rule are vulnerable to its dysfunctions, and thus capable—even if only to a limited extent—of subverting it from within.

At the same time, sticking to a neutral or silent stance enables managers to navigate their own precarity, such as avoiding conflict or ethical confrontation that might jeopardise their position. As Contu (2008) and Mumby *et al*. (2017) suggest, the refusal to speak or act is never apolitical; it is itself a form of situated practice that reproduces dominant power structures. Discretion, then, ceases to be a space of ethical judgement and becomes instead a tool of moral distancing—protecting not workers, but the appearance of order within a fundamentally exploitative system. Alvesson and Sveningsson's (2003) insights into identity work and managerial ambivalence, this approach reflects a performative detachment that allows individuals to disidentify from the consequences of their actions while continuing to participate in them. This form of infrapolitics thus becomes a mechanism through which responsibility is fragmented and moral accountability is deferred, especially in environments where algorithmic systems depersonalise decision-making.

Finally, the mechanisms that we identified play an important role in the wider context. They absorb the mispredictions of predictive systems while adhering to the metrics provided by them. When managers override flawed forecasts, they enhance the system's apparent reliability. From the vantage point of central management, these local fixes are read as evidence of **robustness and absorptive capacity**, rather than as signs of fragility; buffering

thus stabilises algorithmic governance by preventing breakdowns from becoming visible in performance metrics. However, the same practices can, in principle, come together into patterned workarounds that begin to contest the regime. Here, infrapolitics could play a central role in more than local shock absorption: when managers repeatedly share scripts for gaming metrics, normalise the disqualification of certain indicators as 'unrealistic,' or coordinate slow-downs and 'Italian strikes' across shifts, they not only accommodate but also redefine how control is exercised. In such cases, patterned workarounds may lead to the de facto re-specification of KPIs or to the formalisation of discretion (when recurring exceptions are eventually recognised, routinised, or encoded into procedures).

The ethical stakes of middle management under algorithmic governance extend beyond questions of suffering or moral discomfort—they point to a deeper complicity embedded in acts of care themselves. While emphasising the labour and emotional strain managers endure, this study also prompts a more difficult reflection of the role of their humanising interventions. For example, when managers soften the effects of algorithmic decisions—by bending rules, cushioning performance feedback, or shielding workers from punitive consequences—they may act from empathy or moral concern. Yet these gestures, rather than challenging the system, merely paper over its violence and rigidity (Bloom and White, 2016). Thus, discretion can become a mechanism of stabilisation: it can make algorithmic rule appear flexible, tolerable, and even ethical, thereby muting potential resistance (Peterie, 2019). This raises a critical ethical dilemma—whether the human presence in algorithmic systems serves as a moral alibi, lending legitimacy to forms of governance that would otherwise appear intolerable. The challenge, then, is not simply to recognise the moral labour of managers, but rather to interrogate how that labour is co-opted into reproducing the very structures it attempts to soften.

The mechanisms we identify are not universal but conditional. Our extreme case is shaped by a post-socialist, labour-arbitrage context with weak sectoral bargaining, low union density and limited formal channels to contest algorithmic metrics. In the Polish context, where formal labour resistance remains weak as a result of historical, political, and economic factors, these dynamics take on an even sharper edge. The lack of a strong union presence or collective bargaining power (Czarzasty and Mrozowicki, 2023; Gardawski *et al.*, 2012) means that middle managers are often the frontline negotiators between algorithmic demands and workers' everyday realities, yet their capacity for overt resistance is constrained. This intensifies the reliance on informal, discreet acts of discretion—small leniencies, subtle adjustments, or silent acquiescence—that may defuse some immediate tensions but ultimately fail to challenge the systemic logic of exploitation embedded in Amazon's warehouses. Such environments of low formal resistance amplify both the ethical and political significance of managerial infrapolitics and its risks: these micro-interventions are co-opted by the system to project an image of fairness and adaptability, thereby helping entrench algorithmic governance precisely where formal channels for contestation are at their weakest. Consequently, understanding the Polish case highlights how the intersection of weak institutional resistance and algorithmic management engenders a governance model reliant on the emotional labour and complicity of middle managers, raising urgent questions about the prospects for meaningful change in similarly precarious labour markets. Our study also yields additional insights relevant to the European Union's single-market dynamics. While it facilitates the construction of integrated algorithmic infrastructures across heterogeneous institutional contexts, it also supports labour arbitrage logics based on cross-site benchmarking and site allocation.

Taken together, our work points to the need for interventions that move beyond treating middle managers as either mere conduits of corporate control or as incidental

casualties of algorithmic governance. Recognising their role as both enforcers and informal mediators opens space for HR policies that value and institutionalise the situated, interpretive labour currently performed covertly and without structural support. For trade unions and works councils, extending representation to this intermediate layer could bridge the artificial divide between 'labour' and 'management,' building coalitions capable of contesting the operational logics of algorithmic governance. For policymakers, including those involved in emerging EU-level frameworks for algorithmic accountability, the challenge lies in designing regulatory regimes that address the ethical and organisational risks of algorithmic control across the hierarchy, ensuring that managerial discretion is not reduced to an unacknowledged form of moral and emotional buffering. Addressing these gaps is critical; without such measures, the infrapolitical practices we document will remain trapped in a cycle where human ingenuity buffers the system's dysfunctions, inadvertently stabilising the very regimes they seek to undermine.

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