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Ethical and Emotional Intelligence in Algorithmic Management

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Abstract

Views on algorithmic management of organisations have emerged as an important subject of contemporary organizational governance, as both artificial intelligence, machine learning, predictive analytics and automated scheduling, performance monitoring, recommendation systems and data-driven decision-support mechanisms increasingly take on functions traditionally considered to be done by human managers. Organizational opportunities arise from the use of algorithmic management, with regards to quicker decision-making, ongoing performance measurement, coordinating the workforce, and resource allocation based on data. Concurrently, algorithmic decision systems raise issues of fairness, transparency, accountability, privacy, autonomy, discrimination, psychological well-being and quality of human relationships in the workplace. These concerns are best addressed from the complementary conceptual frameworks of ethical intelligence and emotional intelligence. While emotional intelligence focuses on identifying, understanding and regulating emotions in managerial relationships, ethical intelligence puts into perspective the values of fairness and responsibility, dignity and transparency, and accountability.

This research proposes an integrated conceptual framework of the relationship between ethical intelligence, emotional intelligence and algorithmic management. The method used is secondary data synthesis with structured literature review on the peer reviewed literature that has been found and institutional evidence related to responsible artificial intelligence, algorithmic management, artificial intelligence in human resource management, and intelligent decision-support systems. Systematic reviews of 107 empirical studies with responsible AI in HRM, 167 peer-reviewed studies on algorithmic management at work, 93 studies on the ethics-based auditing of AI in the workplace, and 45 studies on intelligent decision-support systems and ethical decision-making have been published so far. Throughout, the OECD evidence on managerial perceptions of algorithmic management is added. The numerical analysis reveals that there is a lack of uniformity in ethical governance in the literature. Of 107 empirical HRM studies, 63 of these studies failed to explicitly use a responsible AI principle. OECD evidence showed that 28% of managers with algorithmic management noted that accountability was unclear, 27% noted issues of explainability and 27% noted inadequate protection of physical and mental health of workers. The findings suggest that technical performance is not enough to serve as a basis for governance when using algorithms to manage the trading process.

The analysis suggests that the inclusion of the concepts of ethical intelligence and emotional intelligence in algorithmic management should be done in conjunction with human oversight, explainability, procedural justice, privacy protection, affect-sensitive communication, employee participation and accountability mechanisms. The framework created thereby moves algorithmic management beyond the mere computational towards a socio-technical governance system. Researchers will learn how to integrate the normative and affective aspects of managerial authority into the study of algorithmic managerial authority and how to apply the concepts and theories developed in managerial studies to practical management scenarios.

Keywords: algorithmic management, artificial intelligence, ethical intelligence, emotional intelligence, responsible AI, workplace AI, algorithmic governance, employee well-being, human resource management, organizational ethics, explainability, human oversight.

I. Introduction

The use of AI in organization processes is becoming more and more prevalent, and had previously relied on the judgment of management. Ranking of applicants, estimation of employee turnover by a predictive model, allocation of tasks through a platform, determination of work schedule through software, generation of productivity score through a performance system, and decision support through a tool with recommendations about promotion, compensation, and workforce allocation are all possible outcomes of the use of recruitment systems. These applications have changed the nature of the technology and managerial control. Algorithmic management is the management through computational systems of coordinating, monitoring, evaluating and influencing work activities. The functions performed by such systems include monitoring, goal setting, performance management, scheduling, compensation and job termination.

The emergence of algorithmic management has brought about a major research challenge as algorithmic events are not only technical decisions of organizations. Recruitment, promotion, performance, disciplinary, workload, dismissals are decisions that impact employee dignity, economic security, identity and psychological experiences. Algorithmic systems can analyze vast amounts of information and find statistical patterns at a scale that is beyond the ability of the normal humans to process information. But efficiency in computation doesn't guarantee ethical legitimacy. A system can make a statistically efficient decision and have socially harmful, opaque or discriminatory side-effects.

These concerns are seen in the research on responsible artificial intelligence in human resource management. These worries are manifested through research in responsible artificial intelligence in human resource management. From the 107 empirical studies that were identified, six main categories of responsible principles of AI emerged: bias and discrimination, perceived justice and trust, privacy, explainability and transparency, human role, and those studies that didn't report on a responsible principle. Importantly, in 63 of the 107 studies, the responsible AI principle was not clearly applied. The discovery highlights a significant disconnect between the growing adoption of AI in HRM and its structured integration of principles of responsible governance.

An algorithmic management also gives rise to a unique emotional element. Traditional managers communicate verbally, having to watch and interpret contextual aspects in conjunction with their relationship with employees. Emotion cues are verbal and non-verbal and can be identified by human managers for signs of frustration, anxiety, conflict, disengagement and uncertainty. Algorithmic systems typically work on the basis of programmed or learned representations of employee behavior. This is especially relevant if the algorithmic decision is likely to impact the emotionally charged results of a decision, like performance ratings, promotion, or termination or changes in working conditions.

Theoretically, emotional intelligence offers an explanation for this dimension. Emotional intelligence is the ability to perceive, process and manage emotions in interpersonal relationships. It helps in communicating, conflict handling, quality of relationships, leadership effectiveness, and employee support within the management domain. Textual, behavioral and interactional information related to emotion can be processed by an algorithmic system, but such processing does not imply emotional understanding. It's possible for an algorithm to detect language signals that could indicate dissatisfaction but lack the contextual and relational capability needed to make proper managerial decisions.

Ethical intelligence solves a related, but distinct issue. Ethical intelligence is about knowing what ethical issues are, knowing what ethical principles are in conflict, knowing what will result from the action, knowing and applying moral standards and being responsible for moral decisions. In algorithmic management, ethical intelligence demands that organisations make sure a decision made by their algorithms is acceptable, fair, understandable, and aligned with the responsibilities of the organisation toward their employees.

The ethical and emotional intelligence discussion is thus of direct interest in algorithmic management. Ethical intelligence defines the moral context in which decisions made by algorithms can take place. The interpersonal and affective implications of managerial decisions are addressed by EI. Both constructs together offer a more comprehensive governance construct than technical accuracy.

Recent studies have confirmed the significance of this integration. A systematic literature review of WMAM, which included 167 peer-reviewed publications, focused on the surveillance, supervision, supplementary and complementary configurations and on the reactions of employees in cognitive, emotional and behavioral

dimensions. Based on the review, the algorithmic systems may be experienced differently by the employees depending on the level of autonomy, transparency, fairness, explainability and involvement of human beings. The core research question is thus the lack of integration of ethical and emotional aspects in algorithmic managerial system. Previous studies have focused on algorithmic bias, algorithmic transparency, privacy concerns, fairness, and employee autonomy and organizational performance. Emotional intelligence and human centered management have been studied elsewhere. A hybrid model, however, that fuses ethical intelligence and emotional intelligence and then links these to algorithmic management is much less developed. The research is aimed at filling this gap by focusing on four research objectives. The first is to analyse the link between algorithmic management and the ethical governance. The second goal is to explore how managerial decisions with algorithms have emotional consequences. The third aim is to distillate quantitative evidence on ethical and trustworthiness issues. The fourth goal is to establish a comprehensive framework for the ethical and emotional intelligence algorithmic management.

2. Conceptual Background

2.1 Algorithmic Management

Algorithmic management is a shift in the ways that work is coordinated in the organization. Traditional management is significantly based on the discretion of humans, the observation of managers, interpersonal communication and hierarchy. Algorithmic management moves some of these activities to computational systems.

The algorithms can track the work activity, schedule tasks, assess work performance, make recommendations and detect any deviations from the targets of the organization. The six management functions found within the literature are: Monitoring, Goal setting, Performance Management, Scheduling, Compensation, and Job termination. These functions show that algorithmic management is not just about automating administrative functions but also about managing managerial functions.

The attractiveness of algorithmic management for the organization comes from several attributes. Computational systems can process massive amounts of data in a short time, apply the same rules to a large base of employees, create ongoing performance indicators, and assist in decision making in geographically dispersed workplaces. They can enhance the coordination in the organization and bring down some management inconsistencies.

But standardization can create new levels of rigidity. Human managers can understand of exceptional conditions, circumstances of context and situational factors. Alternatively, an algorithm can categorize behavior based on data available and models made. Sometimes the data may be incomplete and the final decision may be wrong, even if it is correct in the calculations.

2.2 Ethical Intelligence

Ethical intelligence gives a moral or moralizing quality to organizational decision making. Ethical intelligence in algorithmic management means fairness, nondiscrimination, privacy, transparency, accountability, dignity and human oversight.

The principles are not consistently reflected in empirical organizational research, as demonstrated by responsible AI research. The systematic review revealed considerable variation in the use of responsible principles in 107 empirical studies. Common points of concern are bias and discrimination, perceived justice and trust, privacy, explainability and transparency, and human involvement.

Ethical intelligence, therefore, is not just about meeting the technical standard. An algorithmic management system that is responsible must have organizational support to identify who is answerable for the decisions, who has the authority to voice objections to decisions, how data is gathered and applied, and when it is necessary to involve people in the process.

2.3 Emotional Intelligence

Emotional Intelligence involves the recognition and response to emotions. In organisations, it has an impact on leadership practices, communication, conflict management and interpersonal relationships. Its usefulness is enhanced where management actions impact on the employee's identity, motivation and psychological experience.

Algorithmic management creates an emotional-intelligence gap because computational systems typically don't have all the contextual abilities of human interpersonal interactions. A recent study on algorithmic management found that the workers often feel that the algorithmic systems lack empathy and interpersonal skills, especially when the algorithmic system is performing management tasks that involve social interaction. Algorithmic

decision making that involves performance reviews, promotion and hard feedbacks can then result in greater negative responses than mechanically oriented decisions.

Algorithms don't need to be emotional; in fact, the problem is that they are not. Words could be used to capture patterns of emotion through natural language processing, sentiment analysis and affective computing. The problem is that the information has to be interpreted and used responsibly. Emotional signals are context dependent and their computational representation can lead to errors or wrong managerial conclusions.

2.4 Relationship between Ethical and Emotional Intelligence

Ethical intelligence and emotional intelligence are two managerial skills that are different, but not mutually exclusive. Ethical intelligence deals with what to do, and emotional intelligence is about how things are going to impact people and how interpersonal responses should be managed.

Both are needed for algorithmic management. A technically valid productivity score can be produced by a performance algorithm. In the context of ethical intelligence, it is necessary to investigate if the score being obtained is fair, relevant and non-discriminatory. In the case of emotional intelligence, the information about the performance needs to be taken into account regarding how it will be communicated, interpreted and put into use within the employee development process.

Together, they create a human-centered governance model where algorithms offer analytical power, and humans have the final say in context and moral choices.

3. Literature Review

3.1 Responsible Artificial Intelligence in Human Resource Management

There are some common governance issues recognized in the literature on responsible AI in HRM. Bujold et al. analysed 107 empirical studies and concluded that principles of responsible AI were not always reflected in research and practice. The absence of responsible principles, bias and discrimination, perceived justice and trust, privacy, explainability and transparency, and the human role are the six categories that emerged from the review that are useful to evaluate algorithmic management.

3.2 Algorithmic Bias and Discrimination

One of the most widely studied ethical issues in AI-powered HRM is bias. Recruitment and performance algorithms can reproduce historical patterns contained in training data. Where a protected characteristic is not included, related characteristics can be considered indirect proxies.

3.3 Transparency and Explainability

Transparency relates to whether or not relevant parties can understand how an algorithmic system works and what information it relies on and how the decisions can be challenged. Explainability refers to the ability to offer understandable explanations for a specific recommendation or decision.

3.4 Accountability

The use of algorithms in decision-making raises a potential accountability problem. When a system decides to make a wrong call, blame may be shared among the software developers, the data source, and the managers/organizational leaders.

3.5 Employee Well-Being

Algorithmic management can impact workload, autonomy, level of monitoring, and psychological experience. Performance metrics can be continually monitored and algorithmic systems that optimize productivity may do so inadvertently by increasing the intensity of work.

3.6 Algorithmic Decision Support and Ethical Decision-Making

Intelligent decision supporting systems can affect human ethical decision making with respect to how information is presented, prioritized and interpreted. Systematic review of 45 articles resulted in the identification of two types of intelligent decision support: process-oriented and outcome-oriented, and the identification of various relationships (processes) through which intelligent decision support can affect the human ethical decision-making process.

3.7 AI Auditing

AI auditing has been introduced as a governance tool to review for ethical compliance of algorithmic systems. A literature review of 93 works revealed significant variation in the way that ethical principles are defined in the context of AI auditing. Researchers, developers, regulators, auditors and users are recognized as key stakeholders.

3.8 AI Governance

AI governance is the institutional mechanisms through which ethical principles are put into practice. A review of AI governance literature reveals a need to find, evaluate and reduce the risks of AI systems.

4. Research Gap

There has been a wide variety of research on algorithmic bias, transparency, privacy, fairness, employee autonomy, and AI governance in the literature. There are two streams of research on the topic: one on emotional intelligence and another one on leadership and interpersonal management. There is still a significant lack of conceptual understanding to link ethical intelligence to emotional intelligence in algorithmic managerial systems.

5. Research Objectives

The study investigates the use of ethical intelligence and emotional intelligence in algorithmic management.

- The first goal is to recognise the key ethical issues with algorithmic management.
- The second is to analyze the emotional aspects of algorithmic managerial choices.
- The third goal is to aggregate numerical data from existing empirical literature and institutional data.
- The fourth goal is to create an integrated algorithmic capability – ethical intelligence – emotional intelligence – organizational outcome framework.
- The fifth is to identify governance mechanisms that will lower the ethical and emotional risks of algorithmic managerial systems.

6. Methodology

6.1 Research Design

The research design for the study is of structured secondary-data research. The methodology incorporates systematic reviews from peer-reviewed journals, institutional evidence and empirical literature on algorithmic management, responsible AI, AI in HRM, AI governance and intelligent decision-support systems.

The approach is suitable since the research question involves multiple domains of concepts, and not estimation of a causal effect for a single organization. The analysis is qualitative-synthesis and quantitative-extraction from published sources.

6.2 Literature Sources

The evidence base contains published peer-reviewed articles on responsible AI in HRM, algorithmic management in the workplace, AI ethics, AI auditing, AI governance, and intelligent decision-support systems. The quantitative evidence is gathered from reviewing 107 empirical HRM studies, 167 peer-reviewed algorithmic-management studies, 93 studies on AI-auditing, and 45 studies on intelligent decision-support systems.

A systematic review of algorithmic workplace management was recently conducted which found 3,779 articles to be eligible for screening and 167 peer-reviewed articles to undergo full analysis.

6.3 Analytical Procedure

There are four phases to the analysis. At the first level, ethical constructs, such as fairness, bias, privacy, transparency, explainability and accountability are identified. The second phase reveals emotional constructs, such as empathy, employee response, psychological well-being, alienation and interpersonal sensitivity. The third stage is to extract numerical findings from the studies that were reviewed. The fourth stage combines all these constructs into a conceptual model of ethically and emotionally intelligent algorithmic management.

Artificial respondent level data were not created. Any numerical numbers given in the results section are secondary evidence from published sources.

6.4 Conceptual Model

The proposed model is made up of five interconnected layers. In the first layer, algorithmic capability, the technology includes monitoring, prediction, scheduling, evaluation and decision support. Ethical intelligence includes fairness, transparency, privacy, accountability and human oversight and is the second layer. The third level is emotional intelligence, which includes empathy, emotional recognition, communication sensitivity and relational sensitivity. The fourth layer is employee experience (trust, autonomy, dignity, well-being and organizational identification). The fifth layer is organizational performance; decision quality, productivity, retaining and sustainable organizational effectiveness.

7. Results and Analysis

7.1 Evidence Base

The evidence reviewed shows the quick advancement of research related to algorithmic management and responsible AI. The screening trajectory of the 3779 to 167 in the workplace algorithmic-management review shows the vastness of the literature base that was screened, as well as the selective nature of the literature that ended up in the evidence base.

Table 1. Evidence Base

Evidence category	Number of studies/records	Analytical relevance
Initial records in workplace algorithmic-management review	3,779	Broad research corpus
Final peer-reviewed algorithmic-management studies	167	Core algorithmic-management evidence
Responsible AI in HRM empirical studies	107	Ethical governance evidence
AI auditing studies	93	Governance and auditing evidence
Intelligent decision-support studies	45	Ethical decision-making evidence
AI bias/discrimination studies	64	Fairness and discrimination evidence

The body of evidence reveals that algorithmic management is not a technology-specific problem. It has an interdisciplinary research field that crosses information systems, human resource management, organizational behavior, psychology, ethics, employment relations and governance.

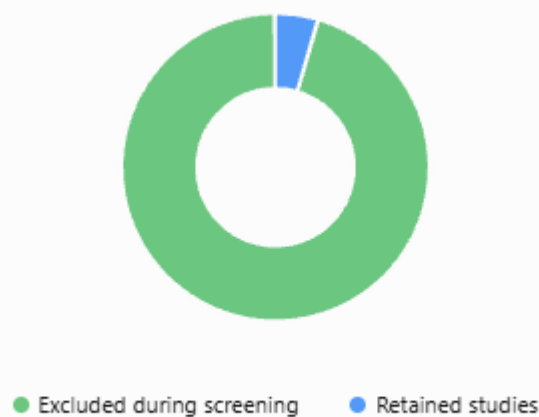


Figure: Literature screening composition

7.2 Responsible AI Principles

A review of 107 empirical HRM studies is one of the most clear-cut quantitative measures of gaps in ethical HRM governance. There were 63 studies that were not explicitly addressing a responsible AI principle. This equates to about 58.9% of the sample.

Table 2. Responsible AI Evidence

Responsible AI evidence	Studies	Percentage
Studies without a clearly reported responsible principle	63	58.9%
Studies with at least one clearly identified responsible principle	44	41.1%
Total	107	100.0%

The numerical distribution shows that the study of empirical research on AI-HRM is not always rooted in an ethical framework. Of particular interest is the 58.9% when a responsible principle is not clearly reported, which is important since HRM decisions have a direct impact on employment opportunities, compensation, performance evaluation and career progression.

It doesn't mean that all the 63 studies were conducted unethically. It suggests that there was a lack of clear application and/or reporting of responsible principles. This distinction is significant because not reporting ethically does not constitute an ethical failure, and reporting ethically does not necessarily mean you are doing so in a methodological way.

7.3 Managerial Trustworthiness Concerns

OECD evidence offers quantitative data on managerial views of algorithmic management. Of those managers who use algorithmic management tools, 28% indicated that they are concerned about having clear accountability. Twenty-seven percent indicated “some problems following algorithmic decisions or recommendations” and 27% indicated “some problems with the attention given to workers' physical and mental health.”

Table 3. Trustworthiness Concerns

Trustworthiness concern	Managers reporting concern
Unclear accountability	28%
Limited explainability	27%
Inadequate physical and mental health protection	27%

The numbers reveal the presence of both ethical and emotional issues. Ethical governance issues encompass accountability and explainability, and a direct employee well-being issue is protection of physical and mental health.

The range of the highest and lowest reported values is 1 percentage point. This means that the three concerns exhibit a similar level of managerial salience overall.



Figure: Trustworthiness Concerns

7.4 Governance Adoption

The OECD evidence further indicates that almost 90% of managers report that their firms have at least one governance measure for algorithmic management. Examples of governance mechanisms are risk assessments, software audits, implementation guidelines, ethics officers or ethics boards, complaints processes, and consultation with workers or their representatives.

What is important analytically is the fact that there are extensive governance measures and significant trustworthiness issues. Governance presence does not necessarily mean governance effectiveness. Policies can

be created without any meaningful employee involvement and no independent audit or accountability is established.

7.5 Emotional Dimension of Algorithmic Management

The literature search reveals that emotional reactions are one of the key factors that contribute to employees' reactions to algorithmic management. The 167-study review found that algorithmic systems have been described as being devoid of empathy or interpersonal understanding, especially when operating managerial tasks that demand social judgement. Algorithmic performance evaluation or algorithmic decisions regarding promotion and challenging feedback can have negative effects on staff.

The emotional-intelligence dimension is thus not just about the detection of emotions. It deals with the inclusion of contextual sensitivity in managerial decisions. In a computational system, a decrease in productivity may be detected, whereas a contextual interpretation may show that the issues are related to workload, family responsibilities, organizational conflict, lack of training or health related constraints. A human decision-maker is needed to consider these contextual possibilities before making consequential decision(s).

Table 4. Algorithmic Management Functions, Risks and Human Capabilities

Algorithmic management function	Ethical risk	Emotional risk	Required human capability
Recruitment	Bias and discrimination	Candidate anxiety and perceived rejection	Ethical screening and empathetic communication
Performance evaluation	Opacity and unfairness	Stress and reduced dignity	Explainability and contextual interpretation
Scheduling	Privacy and autonomy	Work-life conflict	Fairness assessment and sensitivity to constraints
Promotion	Bias and unequal opportunity	Organizational distrust	Procedural justice and interpersonal judgment
Compensation	Data errors and inequity	Motivation decline	Accountability and communication
Termination	Accountability gap	Emotional distress	Human review and compassionate communication
Workplace monitoring	Privacy and surveillance	Psychological pressure	Proportionality and employee dialogue

7.6 Human-AI Complementarity in Responsible Algorithmic Management

The findings indicate that responsible algorithmic management should not be understood as a choice between fully automated decision-making and completely human-led management. Instead, the evidence supports a complementary model in which AI provides analytical capability while managers retain responsibility for interpretation, accountability and employee-centred judgement. The reviewed evidence shows that AI can process large volumes of workforce data, identify patterns, support recruitment decisions, monitor performance and assist with scheduling. However, these capabilities do not remove the need for human oversight, particularly when decisions have significant consequences for employees.

The combination of the findings from Sections 7.2–7.5 demonstrates three interconnected requirements: technical capability, ethical governance and emotional intelligence. Technical capability enables AI systems to generate predictions and recommendations; ethical governance establishes transparency, accountability, fairness and auditability; while emotional intelligence enables managers to interpret employee circumstances and respond appropriately to individual needs. Therefore, the effectiveness of algorithmic management depends not only on the accuracy of an AI system but also on how managers interpret and act upon its outputs.

Table 5. Human-AI Complementarity Framework

Management dimension	AI contribution	Potential limitation	Human managerial role
Recruitment	Candidate screening and pattern identification	Algorithmic bias and lack of contextual understanding	Review decisions, assess fairness and communicate empathetically
Performance management	Continuous performance data analysis	Over-reliance on quantitative indicators	Interpret contextual factors and provide constructive feedback
Employee engagement	Identification of workforce trends and sentiment patterns	Emotional context may be misinterpreted	Apply empathy, active listening and interpersonal judgement
Workforce scheduling	Optimisation of shifts and resource allocation	May overlook personal constraints	Balance organisational requirements with employee well-being
Promotion	Identification of potential and performance patterns	Historical data may reproduce existing inequalities	Apply procedural justice and independent human review
Compensation	Data-supported pay and reward analysis	Data inaccuracies may create inequitable outcomes	Verify information and maintain accountability
Employee monitoring	Detection of productivity and behavioural patterns	Privacy concerns and psychological pressure	Ensure proportionality, transparency and employee dialogue
Termination decisions	Identification of performance or compliance concerns	Significant accountability and fairness risks	Conduct human review and provide reasoned, compassionate communication

The framework demonstrates that AI capability and human judgement perform different but complementary functions. AI is particularly valuable where large datasets, repetitive processes and pattern recognition are involved. Human managers remain important where decisions require contextual interpretation, ethical reasoning, empathy and consideration of individual circumstances. This distinction is particularly significant in HRM because employment decisions can directly affect employees' careers, income, dignity and psychological well-being.

The findings also suggest that governance adoption should be evaluated beyond the existence of formal policies. The evidence that almost 90% of managers report at least one governance measure, alongside the reported concerns regarding accountability, explainability and employee well-being, indicates a potential gap between governance presence and governance effectiveness. Consequently, organisations should assess whether governance mechanisms actually influence managerial decisions, provide meaningful employee safeguards and enable challenges or appeals when algorithmic decisions are disputed.

Overall, the analysis identifies a transition from AI-enabled management to responsible human-AI management. In this model, AI should function as a decision-support mechanism rather than an unquestioned substitute for managerial judgement. Effective implementation requires managers to possess not only digital and analytical competencies but also ethical reasoning, emotional intelligence, communication skills and the ability to critically evaluate algorithmic recommendations. This integrated capability provides a stronger basis for balancing organisational efficiency with fairness, transparency, employee autonomy and workplace well-being.

8. Discussion

8.1 Ethical Intelligence as a Governance Capability

The results confirm the manifestation of ethical intelligence as an organizational trait, not as an ethical disposition of one's personality. Algorithmic management calls for institutional mechanisms by which ethical values can be made operational.

An algorithm must be defined as fair before it is put into use. It is necessary to introduce transparency into the design of a system. Decision making responsibility should be allocated to specific decision makers. Only information about employees that can be collected and processed with their consent for privacy reasons. Human oversight needs to be established to decide what decisions cannot be made totally with an automated system.

It is evident that empirical studies of HRM are not yet systematically integrated with ethical principles of responsible AI, as 58.9% of these studies did not report a responsible AI principle clearly.

8.2 Emotional Intelligence as a Human Oversight Mechanism

Emotional intelligence offers a way to maintain interpersonal sensitivity in algorithmically run organisations. While algorithms might help identify performance patterns, human managers can interpret the emotional and contextual impacts decisions have.

It's especially significant with the integration of emotional intelligence when making key decisions. Identity, status and financial implications are associated with termination, promotion and disciplinary action, and criticism of performance. Decisions like these must be communicated by taking the employee as a human being and not just a number.

Emotional intelligence is thus a boundary condition for automation. Some decisions may be routine and low impact, so they can be automated, but other decisions may have a high emotional barrier, and a higher degree of human participation is required.

8.3 Algorithmic Transparency and Trust.

There is a strong relationship between transparency and trust. When employees understand the criteria for the algorithmic decision and important mechanisms for correcting the decision, they are likely to be more accepting.

The fact that 27% of managers said they had issues with the logic behind algorithmic decisions shows that explainability is still one of the practical governance challenges.

Transparency ought to, therefore, be active in several layers. Technical transparency relates to the model structure and to data. Governance and accountability are aspects of organizational transparency. Transparency issues relate to employees involve explanations of decisions that impact individual employees which are understandable.

8.4 Accountability and Responsibility

The managerial worry about the lack of clarity regarding accountability is the highest of the three reported trustworthiness concerns explored here.

Even if algorithms make recommendations, it is important that accountability is placed on the actors or the organization. Organizations should not pass responsibility to software using algorithmic systems. It is important that decision-makers are identifiable, especially in situations where decisions involve changes to employment status, pay or promotion.

Named decision owners, audit trail, review process, and appeal process, along with documentation of algorithm choices, are all part of an accountability architecture.

8.5 Human Oversight and Decision Boundaries

Human oversight does not mean it is a symbolic approval step. To effectively challenge algorithmic recommendations, human oversight needs to have enough authority and information, and enough competence. A manager who is able to approve an algorithmic decision without looking at the data does not offer any meaningful oversight. To effectively oversee, explanations, alternative information, contextual employee data and mechanisms for reversing inappropriate outcomes should be available.

Existing research on intelligent decision-support systems shows that AI can impact human ethical decisions as it can manipulate how information is provided and understood. Human oversight needs to be cognizant of the automation bias and of the technical system performance.

8.6 Employee Participation

Another governance mechanism is worker participation. Consultation may be able to uncover risks that technical developers may not be able to do. Staff have knowledge of practices that are present in the workplace but not included in the organization's datasets, nor in the context of informal processes.

According to OECD, a governance mechanism adopted by companies with algorithmic management is worker consultation. Employee involvement is important prior to deployment and following implementation as it is possible for employees to help in defining acceptable monitoring, performance criteria and decision boundaries.

9. Proposed Framework for Ethically and Emotionally Intelligent Algorithmic Management

This study designed the integrated framework of six stages.

Ethical system assessment is the first stage! Organizations assess fairness, discrimination, privacy, transparency, accountability, and potential impacts on employee autonomy prior to their deployment.

The second stage is the emotional-impact assessment. Emotionally consequential decisions are identified by organizations and are required to have human involvement.

The third step is making algorithmic decisions. The system processes organizational data to produce predictions, classifications, and/or recommendations.

The fourth level is the human ethical review. A responsible manager reviews the recommendation in relation to organizational policies, fairness, contextual information and employee rights.

Emotionally intelligent communication is the fifth stage. Interpersonal communication is used in context-appropriate and respectful ways when making decisions. Automated notifications can assist in the administrative process, but should not be a substitute for human communications for high impact decision making.

The 6th step is to monitor the decision. Bias, employee response, appeals and well-being effects and organizational consequences are examined.



Figure 2. Ethical and Emotional Governance Cycle

10. Theoretical Implications

The research advances the scholarship of algorithmic-management by moving beyond the traditional technology-centric view of algorithms and towards a socio-technical perspective of algorithmic-governance. The socio-technical approach aligns with the more recent findings that the outcomes of algorithmic management are a function of the interaction between technological configuration and employee autonomy. Incorporating ethical intelligence adds a moral layer to algorithmic management. Ethical intelligence is what governs the principles against which algorithmic authority should be held.

The incorporation of emotional intelligence adds a relational aspect to this. Emotional intelligence is used to interpret and communicate algorithmically supported decision making in human relationships.

The resulting framework can be represented as:

Algorithmic capability + Ethical intelligence + Emotional intelligence = Responsible algorithmic management

The relationship is not to be taken as a simple additivity equation. The governance conditions of ethical and emotional intelligence are factors that influence the use of algorithmic capabilities.

11. Managerial Implications

For algorithmic management, it is important to have clearly defined decision boundaries. Certain employment decisions ought to be reviewed by humans when they are of high impact. A human should have the right to reject or change the algorithm suggestions.

Organizations should also define algorithmic accountability structures. For each major algorithmic system, there should be a clear owner of the system who has responsibility for performance, ethics, documentation and employee complaints.

Explanations should be created for important algorithmic decisions that are communicated to employees. Technical descriptions are not enough. Explanations should be delivered in a manner that conveys the factors in an understandable organizational language.

Routine bias and fairness audits should be done by organizations. These audits should include measures of outcomes by relevant employee groups and test whether historical trends are replicated by automated decisions systems.

Emotional impact should be incorporated in AI impact assessment. Organizations have a responsibility to recognize decisions that can have a negative impact on employee dignity, identity, motivation and/or psychological state, and boost human involvement when necessary.

Managers need to be educated on AI literacy and emotional intelligence. Technical literacy helps managers comprehend limitations of the algorithms. The emotional intelligence helps managers to understand the reactions of their employees and make the right decision.

12. Limitations

The research uses secondary information and does not include original, employee-level survey data. So, the numerical results are not the results of a new statistical sample but the published evidence.

Different definitions, as well as different approaches to measuring algorithmic management, ethical AI and responsible AI is found in the reviewed literature. Caution should be used in direct statistical comparisons across studies.

The 107-study responsible AI review and 167-study algorithmic-management review represent different research populations and research designs. The numbers they produce cannot be added together as if they belong to the same data set.

The emotional-intelligence element is not as quantitatively developed as the ethical-governance element. This is a limitation that can be overcome in future empirical studies through the use of sound emotional-intelligence scales, employee surveys, experimental and organizational studies with a longitudinal design.

13. Future Research Directions

Future studies need to test empirically the proposed relationship between employee outcomes and the ethical intelligence and the emotional intelligence. Perceptions of ethical governance and managerial emotional intelligence can be assessed in large-scale employee surveys for trust in algorithmic systems.

An experimental study can then be used to make comparisons between algorithmic decisions that are conveyed solely through automated channels and decisions which are conveyed through human managers via emotionally intelligent communication.

Longitudinal studies can investigate the impact of algorithmic monitoring over time on employee well-being. These studies can clarify the differences between short- and long-term consequences of efficiency and autonomy, as well as organizational identification and retention.

Additional studies are also needed on the sectoral differences. Work structures, employee–manager relationship differ, which may result in different ethical consequences and emotional effects in algorithmic management in logistics, healthcare, banking, manufacturing, education and professional services.

Further research is needed into the impact of generative AI on algorithmic trading. The use of generative AI raises new issues around automation of communication, performance feedback, employee monitoring, managerial decision making, and responsibility.

14. Conclusion

Algorithmic management is transforming the way that organizations coordinate, evaluate and govern their employees. Computational systems can offer significant advantages in information processing, coordination of the workforce, analysis and decision support. But algorithmic skills do not create ethical rightness and emotional goodness.

The findings of this study show that ethical governance is still lacking. In the 107 empirical studies reviewed there were 63 studies that did not clearly report a responsible AI principle in HRM. This is equivalent to 58.9% of all the samples reviewed. OECD evidence also shows 28% of managers who used algorithmic management said that poor accountabilities were an issue, and 27% said the issue was explainability, and 27% said that there was insufficient protection of workers' physical and mental health.

The results present a solid linkage between algorithmic governance, ethical responsibility and employee well-being. It is also clear from the evidence that algorithmic management is not as simple as a mechanism of efficiency. It is a type of organizational power that impacts employee autonomy, trust, dignity and work relationships.

Ethical intelligence will be the governance basis to set up fairness, transparency, accountability, privacy and human oversight. Emotional intelligence is the relational component that is needed to identify employee reactions, deliver challenging information and maintain context sensitivity. These features combine to offer a more holistic view of responsible algorithmic management.

The proposed framework places algorithms in a human-governance framework, as tools to assist decision-making processes, not as replacements for managerial responsibility. Low impact and routine decisions can be automated more than ever, while high impact decisions such as compensation, promotion, discipline and termination decisions, need stronger ethical evaluation and emotionally intelligent humans.

The main idea is that algorithmic management must be sustainable and this sustainability is achieved by simultaneously developing three competences: the computational intelligence to be efficient, the ethical intelligence for normative legitimacy and the emotional intelligence for human-centered interaction. Those that embed these in their systems can create algorithmic management systems that marry technical performance with fairness, accountability, employee dignity and organizational sustainability..

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