




The Influence of Algorithmic Management on Employees Perceptions of Organisational Justice - A Conceptual Paper

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ABSTRACT

Background: The use of algorithms in organizations has become increasingly common, with many companies transitioning managerial control from humans to algorithms. While algorithmic management promises significantly efficiency gains, it overlooks an important factor of employees' perception of fairness towards their workplace. Employees pay close attention to how they perceive justice in the workplace; their behavior is shaped by these perceptions.

Purpose: This study aims to explore how algorithmic management systems can be designed to balance efficiency with transparency and fairness. So, to foster a sense of justice, organizations should design algorithmic systems in such a way to ensure a transparent decision-making process where employees clearly understand how decisions are made and can trust the outcomes.

Method: A review of literature on algorithmic management and workplace fairness was conducted, focusing on the impact of transparent decision-making processes, equitable resource distribution, and constructive feedback mechanisms on employee trust and engagement.

Results: Providing timely and constructive feedback and equal distribution of resources can foster a strong sense of fairness, making employees valued and connected to the organization. This will enhance employee trust, engagement, and overall organizational performance, as workers will be more likely to align with the company's goals when they are treated fairly.

Conclusion: Organizations should prioritize fairness and transparency in the design of algorithmic management systems. Treating employees fairly not only strengthens their connection to the organization but also aligns their efforts with its objectives.



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1. Introduction

The influence of automation on jobs, both in terms of overall employment and in terms of occupational structure and skills required, has been a key topic of discussion in the debate about the consequences of the digital transformation on work and employment. The data that digital technologies can create, collect, store, process, convey, and express is the most obvious and immediate outcome of the digital revolution. Therefore, this transition affects not just the type (jobs and abilities) and quantity (total employment) of labor that people must undertake (both now and in the future), but maybe even more importantly, it affects how this labor is arranged, carried out, tracked, and assessed (Baiocco *et al.*, 2022). Consequently, these software algorithms are used now a days to automate human resource management (Cheng & Hackett, 2021; Lamers *et al.*, 2022). Algorithmic

management can be considered a continuation of historical trends in standardization and regulation in the administration of work, reflecting earlier types of scientific management. Eliminating human interaction improves the effectiveness of decision-making (Jarrahi *et al.*, 2019; Mohlmann & Zalmanson, 2017; Walker *et al.*, 2021) and enables businesses to organize and grade employees on a broad basis (Kellogg *et al.*, 2020). Because of this, firms have found that employing algorithms to automate HRM functions has been quite profitable (Lamers *et al.*, 2022). Nevertheless, workers' interests are sacrificed in the process, which leads to an exceedingly high turnover rate of workers' (Viscelli, 2016; Bujold *et al.*, 2022). A number of negative effects of AM on workers have been reported by research, including stress (Anwar & Graham, 2020; Bujold *et al.*, 2022; Curchod *et al.*, 2019), dissatisfaction, a sense of dehumanization (Guendelsberger, 2019; Bujold

et al., 2022; Lee, 2018), and a feeling of injustice (Geissinger *et al.*, 2021; Bujold *et al.*, 2022; Newman *et al.*, 2020). The phrase “organizational justice” can be defined by taking into account the opinions of workers regarding the choices and actions of equitable management, which may thus have an impact on how staff members perceive management (Yean, 2016).

This paper offers a conceptual framework examining how algorithmic management influences employees’ perceptions of justice. The paper is structured into several sections. Section 2 introduces the concept of organizational justice and algorithmic management, followed by subsections that explore the effects of algorithmic management on different types of organizational justice. Section 3 discusses the strategies that organizations driven by algorithmic management can adopt to enhance the employees’ perception of justice. Finally, Section 4 presents the conclusion and ending.

2. Organizational Justice and Algorithmic Management

The concept of “organizational justice” refers to how employees feel about a company’s fair distribution of resources (Greenberg, 1986; Yean, 2016). “Justice” refers to “fairness” and involves making ethically right decisions through administrative actions that comply with the law, moral principles, and/or religious principles. Organizational justice elements include both monetary and non-monetary rewards such as equitable incentives and compensation, equal growth, organizational support, and performance evaluation processes.

In the workplace, workers frequently assess whether their compensation is in line with what their coworkers are paid or with what they have contributed to the organization (Adams, 1965; Leventhal, 1976). Workers consider representation, objectivity, consistency, and correctness into account when evaluating the ability of organizational representatives’ to fairly represent their interests and viewpoints in the decision-making process (Greenberg, 1986; Leventhal, 1980; Thibaut, 1975). Lastly, workers think about how bosses and other authority figures treat them poorly when enforcing rules (Bies & Shapiro, 1987; Judge & Colquitt, 2004; Greenberg, 1993), which creates a sense of injustice among employees.

In the advent of digitalization, technological developments (Tao *et al.*, 2021) have drastically changed every aspect of human civilization (Su *et al.*, 2020), including organizational structures and business administration (Horvath & Szabo, 2019). Researchers are becoming more interested in the influence of technological innovations on workforce management, especially with

regard to algorithmic management, which represents one of the most transformative technological shifts currently in use (Kellogg *et al.*, 2020; Cascio & Montealegre, 2016; Park *et al.*, 2022; Tambe *et al.*, 2019). In today’s platform economy, algorithmic management is essential due to the automation potential of intelligent algorithms, which facilitates network effects, operational scalability, and organizational support.

Lee (2018) was the first to introduce this concept of “algorithmic, data-driven management” to indicate novel approaches to work distribution, dissemination of data, and driver performance evaluation in the ridesharing industry. Algorithmic management, according to Duggan *et al.* (2020), is a governance system that gives authority to the self-learning algorithms to formulate and execute actions that have an impact on organizations’ operations, hence minimizing personnel involvement and labor process monitoring. Thus, algorithmic management automates HR-related services and processes that are traditionally overseen by human managers (Duggan *et al.*, 2020).

Although algorithmic management has been shown to boost employee productivity, it also has an adverse effect on working conditions. It can reduce employee autonomy, alter remuneration structures, raise safety concerns, and make gig employment more precarious (Parent-Rocheleau & Parker, 2022; Gregory, 2021; Wood, 2021). Additionally, some writers contend that gig employment and mental health problems are related (Glavin *et al.*, 2021; Keith *et al.*, 2020; Lesala Khethisa *et al.*, 2020). Algorithmic management challenges organizational support with justice because automating managerial decisions to maximize output demands a degree of inspection, control, and task division that leaves little room for worker participation (Bucher *et al.*, 2021; Hill, 2021; Newlands, 2021; Rosenblat, 2018). This research will provide a conceptual framework of how algorithmic management impacts the justice perception of employees.

Workers see algorithmic management approaches as equitable when they are provided with knowledge, allowed to make their own decisions, or allowed to independently complete tasks linked to the main task, which reduces their workload. Two criteria are used to identify these three categories of algorithmic management practices that support equity: worker agency, which evaluates the degree to which algorithmic management practices guarantee workers’ autonomy and decision-making power (high vs. low), and transparency, which evaluates the degree to which algorithmic management practices guarantee workers’ access to information.

The extent to which workers feel that their “organization values their contributions and cares about their well-being” can be well explained by organizational support theory, which is also known as perceived organizational support, or

POS (Rhoades & Eisenberger, 2002; Jabagi *et al.*, 2020). Remarkably, literature indicates a favorable correlation between employees' evaluations of their organizations' support and work performance, faithfulness and dedication, professional well-being, organizational citizenship behavior (OCB), and lower rates of misconduct and attrition among employees. According to organizational support theory (Eisenberger *et al.*, 1986; Rhoades & Eisenberger, 2002), there is a perceived correlation between organizational support and three main forms of favorable treatment received from the organization: fairness, supervisory support, organizational rewards, and employment conditions.

The notion of fairness has its roots in the theory of organizational justice, which holds that procedural justice is a major factor in determining perceived organizational support, which involves both social and structural dimensions of justice in decision-making, such as interpersonal treatment and formal rules and policies. Frequent instances of equitable resource allocation indicate care for workers' welfare, improving perceived organizational support. Supervisors are perceived as the organization's representatives and in charge of overseeing and assessing performance, so they have a greater impact on perceived organization than the colleagues do. The allocation of resources and the provision of rewards are important functions of supervisors, making their support more influential than that of peers. As a result, the impact of supervisory support on organizations is significantly greater than that of team or colleague support. Job stability and training opportunities perceived as organizational positively impact perceived organizational support by informing employees that the organization values their continued membership. However, large organizations have a negative effect on perceived organizational support, as the codified policies may restrict the flexibility of addressing certain employee expectations. The training and organizational size variables may have moderate impacts with perceived organizational support, while job security and autonomy have the strongest relationship with perceived organizational support.

Organizational justice consists of three dimensions: distributive justice, procedural justice, and interactional justice. According to Colquitt (2004), it can be modeled using three branches: distributive justice, which deals with fairness in the distribution of resources; procedural justice, which deals with how workers view fairness in the process of allocating resources; and interactional justice, which deals with how people view fairness in the way they are handled in work processes. According to Cropanzo *et al.* (2007), four factors, such as distributive, procedural, interpersonal, and informational justice, influence the perception of employees working under algorithmic management. Transparency and anthropomorphism enhance informational and

interpersonal justice. Algorithmic fairness perception significantly impacts individual outcomes, like decision satisfaction and organizational referrals.

2.1. *Distributive Justice and Algorithmic Management*

Distributive justice, as defined by Adams (1963), is the notion that resources are allocated equitably (Adams, 1965; Leventhal, 1976). It focuses on how people interpret justice in relation to financial aspects of corporate operations, like compensation and benefits (Bujold *et al.*, 2022; Greenberg, 1990). A significant portion of the distributive justice study was based on the writings of Adams (1965), who suggested that the fairness of an outcome is evaluated using equity theory. Equity theory provides an explanation for these employee behaviors that stem from sentiments of unfairness (Adams, 1963; Adams, 1965). Equity theory states that employees compare their contributions and outcomes to those of relevant individuals in order to assess their own performance.

McFarlin and Sweeney (1992) defined outputs as what people gain out of their work and inputs as what they put into it. Since distributive fairness is a perception, the research shows that attaining it requires more than merely having a more precise and well-balanced distribution. The theory of uncertainty management (UMT) perceived organizational support that workers are inherently motivated to get knowledge in order to mitigate uncertainties regarding their employer's treatment of them (Van den Bos & Lind, 2002).

The notion of distributive fairness pertains to the degree to which individuals perceive an algorithm or the outcome of an algorithm to be equitable. Consequently, workers may misinterpret the allocation of resources (i.e., the contribution/resource ratio) in addition to possible technical limitations of algorithmic management if they retrieve information about resource distribution that is either irrelevant or insufficient (Kellogg *et al.*, 2020; Tambe *et al.*, 2019; Griesbach *et al.*, 2019). This can lead to biased decisions and decline in quality, among other potential issues (Crawford, 2021; Faraj *et al.*, 2018; Rosenblat *et al.*, 2017). Additionally, workers may experience opacity in various aspects of their work environment, regarding how the decisions are made (Danaher, 2016).

Both individual and group distributive fairness can be operationalized in computational situations. Individual distributive fairness is the degree to which an algorithmic outcome involving two or more parties is deemed equitable. Fairness views can be evaluated at the group level in relation to algorithmic results for various social groups, including men and women (Ebrahimi & Hassanein, 2019). Distributive justice perceptions at the group level can be

defined as opinions of how an immigration algorithm has affected individuals from various countries or racial groups fairly (Heaven, 2020; Kroll *et al.*, 2016).

The literature primarily demonstrates that algorithmic management transparency (i.e., awareness and understanding level) would maximize the advantages of algorithmic management and support the legitimacy of resource distribution while minimizing algorithmic confusion and false assumptions about the contributions and resources of each individual. As a result, distributive fairness would be seen more favorably.

2.2. Procedural Justice and Algorithmic Management

Procedural justice was recognized as a novel aspect of organizational justice by Thibaut (1975) after ten years of research by Adams (1965). Thibaut (1975) established the concepts of procedural justice, which are now widely accepted. If workers were given the opportunity to be involved in the process that resulted in the outcomes, they might think that the results were equitable. These results added another level of significance to conceptions of organizational justice.

A complete, procedural approach replaced a distributive one in the evolution of organizational justice (Bernerth *et al.*, 2006). According to Folger and Konovsky (1989), “distributive justice refers to the perceived fairness of the amounts of compensation employees receive; procedural justice refers to the perceived fairness of the means used to determine those amounts” is a crucial distinction regarding justice in work organizations. According to Leventhal (1980), procedural fairness is only upheld when staff members believe that the procedure is indiscriminate, ethical, transparent, and consistent. One type of procedural justice was characterized by Skarlicki and Folger (1997) as the equity of an organization’s formal procedures.

When there is a significant organizational shift, perceptions of procedural justice are especially helpful in forecasting attitudes and behaviors (Van den Bos *et al.*, 2001; Lipponen *et al.*, 2007). Some researchers have examined the connection between cynicism, justice, and change commitment (Bernerth *et al.*, 2017; Shah, 2011). Prior research on organizational change and justice has focused on layoffs, turnover, cynicism, and resistance (Brockner *et al.*, 1994; Daly & Geyer, 1994; Patterson *et al.*, 2002; Foster, 2010; Shah, 2011). However, Shah (2011) illustrates that public sector workers in emerging economies can cultivate perceived organizational support mindsets and behaviors for organizational transformation grounded in distributive and procedural justice.

The application of algorithms has been associated with procedural justice since it may diminish the credibility of procedures (Parkin, 2011; Citron & Pasquale, 2014; Danaher, 2016; Crawford & Schultz, 2014; Bovens & Zouridis, 2002). There could be several reasons for this, as procedural justice is effectively a catch-all term for assessments of representativeness, ethics, accuracy, consistency, prejudice suppression, and correctability (Greenberg & Colquitt, 2013). According to Colquitt *et al.* (2005), encouraging positive attitudes and behaviors among employees at work requires procedural justice. Furthermore, according to Colquitt (2001), procedural justice can have a significant impact on a number of crucial organizational variables, such as performance, work satisfaction, commitment, trust, organizational citizenship behavior, and disengagement.

The decisions rendered by human managers are considered more procedurally fair as compared to algorithmic results and are devoid of human qualities such as creativity and empathy. Algorithms are less useful in activities that require human judgment and are difficult to measure, especially in highly technological or complicated operations. Human connection and service delivery are considered fundamentally human and cannot be replaced by algorithms (Lee, 2018; Lipsky, 2010; Nagtegaal, 2021).

2.3. Interactional Justice and Algorithmic Management

Interactional justice was first conceptualized as a form of organizational justice by Bies and Shapiro (1987). They emphasized that the main focus of interactional justice is on how people relate to one another and perceive fairness. An employee’s perception of justice is influenced by how executors handle those procedures and interact with them. Greenberg (1993) made a distinction between interpersonal justice and informational justice as a result. In the first, there was debate over whether executors handled decisions with respect and consideration for their employees. The second question asked if executors provided workers with pertinent information, such as an explanation of why they used a particular distribution technique and why the distributive outcomes were what they were.

The ideas of interactional and procedural justice are closely related to modern social exchange theories (Cropanzano *et al.*, 2001; Martinez-Tur *et al.*, 2006). According to social exchange theory, people evaluate the socioemotional and financial implications of social interactions’ outcomes, as humans are inherently social beings. This socioemotional value is mostly concerned with the quality of interpersonal relationships, which encompasses things like people’s perceptions of dignity and organization support (Martinez-Tur *et al.*, 2006).

Individuals who perceived interactions as bidirectional were inclined to feel more “trusting” of upper management, while those who perceived interactions as one-way were less likely to have such feelings. If people believed they had been treated with decency, respected, and listened, they were more likely to feel trustworthy. However, those who were “mistrustful” were likely dissatisfied with their treatment (Saunders & Thornhill, 2003). Consequently, information is shown as a prerequisite for fairness in procedures, interpersonal relationships, and information (Colquitt 2001; Greenberg, 1993; Georgalis *et al.*, 2015). Additionally, Armenakis and Harris (2002) found that when empathetic communication was combined with relevant and accurate information, it increased employees’ support for altered decisions and outcomes. Given the established link between knowledge and resistance to change, it makes obvious that justice will act as a mediator. Employers may be able to influence employees’ opinions about changes by providing them with timely and accurate information about the changes (Oreg, 2006; Georgalis, 2015).

Previous studies (Lee, 2018; Newman *et al.*, 2020) indicate that a significant portion of the population thinks algorithmic management is unfair. Evidence shows that algorithmic management leads to diminished beliefs in interactional justice, reduced trust in an organization employing such managing practices, and lower trust in the managing agent itself. This finding aligns with earlier studies on real-world human-algorithm interactions (Lee, 2018; Newman *et al.*, 2020). Interestingly, participants reported feeling more valued and trusted after engaging with both the managing agent and the organization. However, despite these experiences of organizational support, the perception of a status gap between the human and algorithm persisted (Jago *et al.*, 2022). This suggests that while interactions can enhance the feelings of being valued and trustworthy, they may not fully bridge the inherent divide between human employees and the algorithmic systems.

3. Role of Organizations (driven by Algorithmic Management) to Increase Employee Justice Perception

As the wave of artificial intelligence becomes increasingly prevalent, it has entered the human resources department of the organizations. Companies often view algorithmic management as an effective decision-making tool but overlook its impact on employees. Organizations should consider the consequences of algorithmic fairness and provide equal weight to the fairness of individual responses as well as the algorithm’s ability to produce decision outcomes (Dolata *et al.*, 2022; Feuerriegel *et al.*, 2020).

Organizations can also minimize the adverse effects of breaching one justice component by addressing other justice dimensions. For instance, employers might mitigate candidates’ impressions of an unfair selection procedure by guaranteeing courteous and open correspondence with the candidate (Cropanzano *et al.*, 2007). In fact, several studies have suggested that procedural justice can be strongly predicted by an individual’s impressions of interpersonal and informational fairness (Colquitt, 2001; Cropanzano *et al.*, 2007).

Wilson *et al.* (2017) state that companies can minimize unintended consequences by first training employees on how to use algorithms for organizational tasks and then revealing to corporate leaders the “black boxes” of algorithmic systems—the ways in which these systems make judgments. Lastly, employees need to verify that algorithms are efficient and equitable (Jarrahi *et al.*, 2021).

Organizations opting for an algorithmic selection process for candidate selection should promote fairness and ensure an unbiased outcome. Justice perception among employees can be improved by combining computational and human skills and emphasizing different aspects of justice, such as objective processes, social standards, and courteous manners. Polite and open communication can help to reduce the impression of an unfair selection process.

Kane *et al.* (2021) literature on machine learning algorithms suggests that “optimize outcomes for large samples at the expense of individuals.” This reality emphasizes how important it is to put our acknowledged algorithmic management into practice in order to alleviate injustice for particular individuals and restore fairness. Delegating algorithmic management practices will empower staff members to resolve conflicts with clients by investigating these practices. Implementing algorithmic management practices that focus on collecting and analyzing evidence, as well as providing workarounds or alternative procedures for handling exceptions, is a particularly important strategy for combating perceptions of unfairness.

Organizations can foster a feeling of organizational justice by applying algorithms in such a way that they apply uniform rules and criteria, ensuring all employees are treated fairly and with consistency, and minimizing biases in promotion, task assignments, and evaluations. It also makes decision-making logic clear, so as to provide them with a clear understanding how and why certain decisions are made, so as to foster a sense of fairness in organizational procedures.

Organizations should also make sure that the rewards, tasks, and opportunities should be distributed fairly and based on performance data, leading to fairer outcomes that are aligned with employees’ contributions. Algorithms should be designed

well to treat employees impartially, without favoritism or bias, promoting respect and fairness in interpersonal interactions. Human managers can use the data provided by algorithms to ensure respectful and clear communication with employees about the decisions. Provided with detailed, data-driven feedback, it will enhance their perception of the decision-making process as transparent and fair.

4. Conclusion

Algorithmic management greatly improves workers' sense of justice with regard to distributive, procedural, interpersonal, and informational justice. Algorithms can encourage fair treatment and create a sense of fairness in the workplace by producing consistent and objective decision-making. Fair and open decision-making regarding promotions, awards, and assessments is closely linked to employee satisfaction and trust in the company. If the employees are unaware of the procedure of how the decisions related to them are made, it will result in employee mistrust towards the organization. So, organizations are needed to consider algorithmic transparency to foster the feeling of justice perception in the minds of employees. It is imperative that companies establish accountability frameworks, periodically assess the equity of algorithmic procedures, and uphold transparent channels of communication with staff members. This guarantees the full realization of algorithmic management's benefits, resulting in a more equitable workplace.

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Authorship Contribution

Shefali Sharma conceptualized the study, designed the literature review framework, and wrote the overall manuscript structure. Priyanka Sharma contributed to suggestions to the organizations, and manuscript revision. Rohit Sharma contributed to manuscript review. All authors contributed to and approved the final version.

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Conflict of Interest

No potential conflict of interest was reported by the authors.

References

- Adams, J. S. (1963). Towards an understanding of inequity. *The journal of abnormal and social psychology*, 67(5), 422. <https://doi.org/10.1037/h0040968>
- Adams, J. S. (1965). Inequity in social exchange. *Advances in experimental social psychology*, 2, 267-299. <https://cir.nii.ac.jp/crid/1571135651366420608>
- Anwar, M. A., & Graham, M. (2021). Between a rock and a hard place: Freedom, flexibility, precarity and vulnerability in the gig economy in Africa. *Competition & Change*, 25(2), 237-258. <https://doi.org/10.1177/1024529421998818>
- Armenakis, A. A., & Harris, S. G. (2002). Crafting a change message to create transformational readiness. *Journal of organizational change management*, 15(2), 169-183. <https://doi.org/10.1108/09534810210423080>
- Baiocco, S., Fernández-Macías, E., Rani, U., & Pesole, A. (2022). *The Algorithmic Management of work and its implications in different contexts* (No. 2022/02). JRC Working Papers Series on Labour, Education and Technology. <https://hdl.handle.net/10419/262292>
- Bernerth, J. B., Armenakis, A. A., Feild, H. S., & Walker, H. J. (2007). Justice, cynicism, and commitment: A study of important organizational change variables. *The Journal of Applied Behavioral Science*, 43(3), 303-326. <https://doi.org/10.1177/0021886306296602>
- Bernerth, J. B., Feild, H. S., Giles, W. F., & Cole, M. S. (2006). Perceived fairness in employee selection: The role of applicant personality. *Journal of Business and Psychology*, 20, 545-563. <https://doi.org/10.1007/s10869-006-9022-2>
- Bies, R. J., & Shapiro, D. L. (1987). Interactional fairness judgments: The influence of causal accounts. *Social justice research*, 1, 199-218. <https://doi.org/10.1007/BF01048016>
- Bovens, M., & Zouridis, S. (2002). From street-level to system-level bureaucracies: How information and communication technology is transforming administrative discretion and constitutional control. *Public administration review*, 62(2), 174-184. <https://doi.org/10.1111/0033-3352.00168>
- Brockner, J., Konovsky, M., Cooper-Schneider, R., Folger, R., Martin, C., & Bies, R. J. (1994). Interactive

- effects of procedural justice and outcome negativity on victims and survivors of job loss. *Academy of management Journal*, 37(2), 397-409.
<https://doi.org/10.5465/256835>
- Bucher, E. L., Schou, P. K., & Waldkirch, M. (2021). Pacifying the algorithm—Anticipatory compliance in the face of algorithmic management in the gig economy. *Organization*, 28(1), 44-67.
<https://doi.org/10.1177/1350508420961531>
- Bujold, A., Parent-Rochelleau, X., & Gaudet, M. C. (2022). Opacity behind the wheel: The relationship between transparency of algorithmic management, justice perception, and intention to quit among truck drivers. *Computers in Human Behavior Reports*, 8, 100245.
<https://doi.org/10.1016/j.chbr.2022.100245>
- Cascio, W. F., & Montealegre, R. (2016). How technology is changing work and organizations. *Annual review of organizational psychology and organizational behavior*, 3(1), 349-375. <https://doi.org/10.1146/annurev-orgpsych-041015-062352>
- Cheng, M. M., & Hackett, R. D. (2021). A critical review of algorithms in HRM: Definition, theory, and practice. *Human Resource Management Review*, 31(1), 100698.
<https://doi.org/10.1016/j.hrmr.2019.100698>
- Citron, D. K., & Pasquale, F. (2014). The scored society: Due process for automated predictions. *Wash. L. Rev.*, 89, 1.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: a construct validation of a measure. *Journal of applied psychology*, 86(3), 386.
<https://psycnet.apa.org/buy/2001-06715-002>
- Colquitt, J. A. (2004). Does the justice of the one interact with the justice of the many? Reactions to procedural justice in teams. *Journal of Applied Psychology*, 89(4), 633.
<https://psycnet.apa.org/doi/10.1037/0021-9010.89.4.633>
- Colquitt, J. A., Zapata-Phelan, C. P., & Roberson, Q. M. (2005). Justice in teams: A review of fairness effects in collective contexts. *Research in personnel and human resources management*, 53-94.
[https://doi.org/10.1016/S0742-7301\(05\)24002-1](https://doi.org/10.1016/S0742-7301(05)24002-1)
- Crawford, K. (2021). *The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. Yale University Press.
- Crawford, K., & Schultz, J. (2014). Big data and due process: Toward a framework to redress predictive privacy harms. *BCL Rev.*, 55, 93. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/bclr55&div=5&id=&page=>
- Cropanzano, R., Bowen, D. E., & Gilliland, S. W. (2007). The management of organizational justice. *Academy of management perspectives*, 21(4), 34-48.
<https://doi.org/10.5465/amp.2007.27868379>
- Cropanzano, Russell & Rupp, Deborah & Mohler, Carolyn & Schminke, Marshall. (2001). Three roads to organizational justice. *Research in Personnel and Human Resources Management*. 20. 1-113.
[https://doi.org/10.1016/S0742-7301\(01\)20001-2](https://doi.org/10.1016/S0742-7301(01)20001-2)
- Curchod, C., Patriotta, G., Cohen, L., & Neysen, N. (2020). Working for an algorithm: Power asymmetries and agency in online work settings. *Administrative science quarterly*, 65(3), 644-676.
<https://doi.org/10.1037/0021-9010.86.3.386>
- Daly, J. P., & Geyer, P. D. (1994). The role of fairness in implementing large-scale change: Employee evaluations of process and outcome in seven facility relocations. *Journal of Organizational Behavior*, 15(7), 623-638. <https://doi.org/10.1002/job.4030150703>
- Danaher, J. (2016). The threat of algocracy: Reality, resistance and accommodation. *Philosophy & technology*, 29(3), 245-268.
<https://doi.org/10.1007/s13347-015-0211-1>
- Dolata, M., Feuerriegel, S., & Schwabe, G. (2022). A sociotechnical view of algorithmic fairness. *Information Systems Journal*, 32(4), 754-818.
<https://doi.org/10.1111/isj.12364>
- Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM. *Human Resource Management Journal*, 30(1), 114-132.
<https://doi.org/10.1111/1748-8583.12258>
- Ebrahimi, S., & Hassanein, K. (2019). Empowering Users to Detect Data Analytics Discriminatory Recommendations. In *ICIS*.
<https://core.ac.uk/download/pdf/301383872.pdf>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied psychology*, 71(3), 500.
<https://psycnet.apa.org/buy/1986-31507-001>
- Faraj, S., Pachidi, S., & Sayegh, K. (2018). Working and organizing in the age of the learning algorithm. *Information and Organization*, 28(1), 62-70.
<https://doi.org/10.1016/j.infoandorg.2018.02.005>
- Feuerriegel, S., Dolata, M., & Schwabe, G. (2020). Fair AI: Challenges and opportunities. *Business & information systems engineering*, 62, 379-384.
<https://doi.org/10.1007/s12599-020-00645-0>
- Folger, R., & Konovsky, M. A. (1989). Effects of procedural and distributive justice on reactions to pay raise

- decisions. *Academy of Management journal*, 32(1), 115-130. <https://doi.org/10.5465/256422>
- Foster, R. D. (2010). Resistance, justice, and commitment to change. *Human resource development quarterly*, 21(1), 3-39. <https://doi.org/10.1002/hrdq.20041>
- Geissinger, A., Laurell, C., Öberg, C., Sandström, C., & Suseno, Y. (2022). The sharing economy and the transformation of work: Evidence from Foodora. *Personnel review*, 51(2), 584-602. <https://doi.org/10.1108/PR-08-2019-0450>
- Georgalis, J., Samaratunge, R., Kimberley, N., & Lu, Y. (2015). Change process characteristics and resistance to organisational change: The role of employee perceptions of justice. *Australian Journal of Management*, 40(1), 89-113. <https://doi.org/10.1177/0312896213501953>
- Glavin, P., & Schieman, S. (2022). Dependency and hardship in the gig economy: The mental health consequences of platform work. *Socius*, 8. <https://doi.org/10.1177/23780231221082414>
- Greenberg, J. (1986). Determinants of perceived fairness of performance evaluations. *Journal of applied psychology*, 71(2), 340. <https://doi.org/10.1037/0021-9010.71.2.340>
- Greenberg, J. (1990). Organizational justice: Yesterday, today, and tomorrow. *Journal of management*, 16(2), 399-432. <https://doi.org/10.1177/014920639001600204>
- Greenberg, J. (1993). Stealing in the name of justice: Informational and interpersonal moderators of theft reactions to underpayment inequity. *Organizational behavior and human decision processes*, 54(1), 81-103. <https://doi.org/10.1006/obhd.1993.1006>
- Greenberg, J., & Colquitt, J. A. (2013). *Handbook of organizational justice*. Psychology Press.
- Gregory, K. (2021). 'My life is more valuable than this': Understanding risk among on-demand food couriers in Edinburgh. *Work, Employment and Society*, 35(2), 316-331. <https://doi.org/10.1177/0950017020949568>
- Griesbach, K., Reich, A., Elliott-Negri, L., & Milkman, R. (2019). Algorithmic control in platform food delivery work. *Socius*, 5. <https://doi.org/10.1177/2378023119870041>
- Guendelsberger, E. (2019). *On the clock: What low-wage work did to me and how it drives America insane*. Hachette UK.
- Heaven, W. D. (2020). The UK is dropping an immigration algorithm that critics say is racist. *AI MIT Technology Review*.
- Hill, K. (2021). Algorithmic insecurity, schedule non standardness, and gig worker wellbeing. *Schedule Nonstandardness, and Gig Worker Wellbeing (January 25, 2021)*. <https://dx.doi.org/10.2139/ssrn.3773164>
- Horvath, D., & Szabó, R. Z. (2019). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities? *Technological forecasting and social change*, 146, 119-132. <https://doi.org/10.1016/j.techfore.2019.05.021>
- Jabagi, N., Croteau, A. M., & Audebrand, L. (2020). Perceived organizational support in the face of algorithmic management: a conceptual model. <http://hdl.handle.net/10125/64231>
- Jago, A. S., Carroll, G. R., & Lin, M. (2022). Generating authenticity in automated work. *Journal of Experimental Psychology: Applied*, 28(1), 52. <https://psycnet.apa.org/buy/2022-40063-001>
- Jarrahi, M. H., & Sutherland, W. (2019). Algorithmic management and algorithmic competencies: Understanding and appropriating algorithms in gig work. *Information in Contemporary Society: 14th International Conference, iConference 2019, Washington, DC, USA, March 31–April 3, 2019, Proceedings 14*, 578-589. https://doi.org/10.1007/978-3-030-15742-5_55
- Jarrahi, M. H., Newlands, G., Lee, M. K., Wolf, C. T., Kinder, E., & Sutherland, W. (2021). Algorithmic management in a work context. *Big Data & Society*, 8(2), 20539517211020332. <https://doi.org/10.1177/20539517211020332>
- Judge, T. A., & Colquitt, J. A. (2004). Organizational justice and stress: the mediating role of work-family conflict. *Journal of applied psychology*, 89(3), 395. <https://psycnet.apa.org/buy/2004-95165-001>
- Kane, G. C., Young, A. G., Majchrzak, A., & Ransbotham, S. (2021). Avoiding an oppressive future of machine learning: A design theory for emancipatory assistants. *Mis Quarterly*, 45(1), 371-396. <https://doi.org/10.25300/MISQ/2021/14606>
- Keith, M. G., Harms, P. D., & Long, A. C. (2020). Worker health and well-being in the gig economy: A proposed framework and research agenda. *Entrepreneurial and small business stressors, experienced stress, and well-being*, 1-33. <https://doi.org/10.1108/S1479-35520200000018002>
- Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of management annals*, 14(1), 366-410. <https://doi.org/10.5465/annals.2018.0174>
- Kroll, J. A., Barocas, S., Felten, E. W., Reidenberg, J. R., Robinson, D. G., & Yu, H. (2016). Accountable algorithms. *University of Pennsylvania Law Review*, 165(3), 633. https://scholarship.law.upenn.edu/penn_law_review/vol165/iss3/3/
- Lamers, L., Meijerink, J., Jansen, G., & Boon, M. (2022). A Capability Approach to worker dignity under

- Algorithmic Management. *Ethics and information technology*, 24(1), 10.
<https://doi.org/10.1007/s10676-021-09640-3>
- Lee, M. K. (2018). Understanding perception of algorithmic decisions: Fairness, trust, and emotion in response to algorithmic management. *Big Data & Society*, 5(1), 2053951718756684.
<https://doi.org/10.1177/2053951718756684>
- Lesala Khethisa, B., Tsibolane, P., & Van Belle, J. P. (2020). Surviving the Gig economy in the global south: How Cape Town domestic workers cope. *The Future of Digital Work: The Challenge of Inequality: IFIP WG 8.2, 9.1, 9.4 Joint Working Conference, IFIPJWC 2020, Hyderabad, India, December 10–11, 2020, Proceedings*, 67-85.
https://doi.org/10.1007/978-3-030-77887-1_6
- Leventhal, G. S. (1976). The Distribution of Rewards and Resources in Groups and Organizations. *Advances in experimental social psychology/Academic Press*.
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. *Social exchange: Advances in theory and research*, 27-55.
https://doi.org/10.1007/978-1-4613-3087-5_2
- Lipponen, J., Olkkonen, M. E., & Moilanen, M. (2004). Perceived procedural justice and employee responses to an organizational merger. *European journal of work and organizational psychology*, 13(3), 391-413.
- Lipsky, M. (2010). *Street-level bureaucracy: Dilemmas of the individual in public service*. Russell Sage Foundation.
- Martínez-Tur, V., Peiró, J. M., Ramos, J., & Moliner, C. (2006). Justice perceptions as predictors of customer satisfaction: The impact of distributive, procedural, and interactional justice 1. *Journal of applied social psychology*, 36(1), 100-119.
<https://doi.org/10.1111/j.0021-9029.2006.00005.x>
- McFarlin, D. B., & Sweeney, P. D. (1992). Distributive and procedural justice as predictors of satisfaction with personal and organizational outcomes. *Academy of management Journal*, 35(3), 626-637.
<https://doi.org/10.5465/256489>
- Mohlmann, M., & Zalmanson, L. (2017). Hands on the wheel: Navigating algorithmic management and Uber drivers. *Autonomy, in proceedings of the international conference on information systems (ICIS), Seoul South Korea*, 10-13.
- Nagtegaal, R. (2021). The impact of using algorithms for managerial decisions on public employees' procedural justice. *Government Information Quarterly*, 38(1), 101536.
<https://doi.org/10.1016/j.giq.2020.101536>
- Newlands, G. (2021). Algorithmic surveillance in the gig economy: The organization of work through Lefebvrian conceived space. *Organization Studies*, 42(5), 719-737.
<https://doi.org/10.1177/0170840620937900>
- Newman, D. T., Fast, N. J., & Harmon, D. J. (2020). When eliminating bias isn't fair: Algorithmic reductionism and procedural justice in human resource decisions. *Organizational Behavior and Human Decision Processes*, 160, 149-167.
<https://doi.org/10.1016/j.obhdp.2020.02.005>
- Oreg, S. (2006). Personality, context, and resistance to organizational change. *European journal of work and organizational psychology*, 15(1), 73-101. <https://doi.org/10.1080/13594320500451247>
- Parent-Rochelleau, X., & Parker, S. K. (2022). Algorithms as work designers: How algorithmic management influences the design of jobs. *Human resource management review*, 32(3), 100838.
<https://doi.org/10.1016/j.hrmr.2022.100838>
- Park, M. S., Jo, H., Lee, H., Jung, S. Y., & Hwang, H. J. (2022). Machine learning-based COVID-19 patients triage algorithm using patient-generated health data from nationwide multicenter database. *Infectious Diseases and Therapy*, 11(2), 787-805.
<https://doi.org/10.1007/s40121-022-00600-4>
- Parkin, J. (2011). Adaptable due process. *U. Pa. L. Rev.*, 160, 1309.
- Paterson, J. M., Green, A., & Cary, J. (2002). The measurement of organizational justice in organizational change programmes: A reliability, validity and context sensitivity assessment. *Journal of Occupational and Organizational Psychology*, 75(4), 393-408.
<https://doi.org/10.1348/096317902321119565>
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of applied psychology*, 87(4), 698.
<https://psycnet.apa.org/buy/2002-15406-008>
- Rosenblat, A. (2018). *Uberland: How algorithms are rewriting the rules of work*. Univ of California Press.
- Rosenblat, A., Levy, K. E., Barocas, S., & Hwang, T. (2017). Discriminating tastes: Uber's customer ratings as vehicles for workplace discrimination. *Policy & Internet*, 9(3), 256-279.
<https://doi.org/10.1002/poi3.153>
- Saunders, M. N., & Thornhill, A. (2003). Organisational justice, trust and the management of change: An exploration. *personnel Review*, 32(3), 360-375. <https://doi.org/10.1108/00483480310467660>
- Shah, N. (2011). A study of the relationship between organisational justice and employee readiness for

- change. *Journal of Enterprise Information Management*, 24(3), 224-236.
<https://doi.org/10.1108/17410391111122835>
- Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of applied Psychology*, 82(3), 434.
<https://psycnet.apa.org/buy/1997-06155-009>
- Su, Y., Ma, C., Chen, J., Wu, H., Luo, W., Peng, Y., & Li, H. (2020). Printable, highly sensitive flexible temperature sensors for human body temperature monitoring: a review. *Nanoscale Research Letters*, 15, 1-34.
<https://doi.org/10.1186/s11671-020-03428-4>
- Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial intelligence in human resources management: Challenges and a path forward. *California Management Review*, 61(4), 15-42.
<https://doi.org/10.1177/0008125619867910>
- Tao, K., Tzou, P. L., Nouhin, J., Gupta, R. K., de Oliveira, T., Kosakovsky Pond, S. L., & Shafer, R. W. (2021). The biological and clinical significance of emerging SARS-CoV-2 variants. *Nature Reviews Genetics*, 22(12), 757-773.
<https://doi.org/10.1038/s41576-021-00408-x>
- Thibaut, J. (1975). Procedural justice: A psychological analysis. *Lawrence Erlbaum Associates*.
<https://cir.nii.ac.jp/crid/1130000797754273408>
- Van den Bos, K., Lind, E. A., & Wilke, H. A. (2012). The psychology of procedural and distributive justice viewed from the perspective of fairness heuristic theory. *Justice in the workplace*, 49-66.
- Viscelli, S. (2016). *The big rig: Trucking and the decline of the American dream*. Univ of California Press.
- Walker, M., Fleming, P., & Berti, M. (2021). 'You can't pick up a phone and talk to someone': How algorithms function as biopower in the gig economy. *Organization*, 28(1), 26-43.
<https://doi.org/10.1177/1350508420978831>
- Wilson, H. J., Daugherty, P. R., & Morini-Bianzino, N. (2018). The jobs that artificial intelligence will create. <https://doi.org/10.7551/mitpress/11645.003.0020>
- Wood, A. J. (2021). *Algorithmic management consequences for work organisation and working conditions* (No. 2021/07). JRC Working Papers Series on Labour, Education and Technology.
<https://www.econstor.eu/handle/10419/233886>
- Yean, T. F. (2016). Organizational justice: A conceptual discussion. *Procedia-Social and Behavioral Sciences*, 219, 798-803.
<https://doi.org/10.1016/j.sbspro.2016.05.082>
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