28ᵗʰ International Scientific Conference

Strategic Management
and Decision Support Systems
in Strategic Management
SM2023
Subotica (Serbia), 18-19 May, 2023

Felix Diefenhardt
WU Vienna,
Vienna, Austria
felix.diefenhardt@wu.ac.at

Wolfgang Mayrhofer
WU Vienna,
Vienna, Austria
Wolfgang.Mayrhofer@wu.ac.at

Marco Leander Rapp
WU Vienna,
Vienna, Austria
marco.leander.rapp@wu.ac.at

Verena Bader
WU Vienna,
Vienna, Austria
Verena.Bader@wu.ac.at

DOING MORE BY DOING LESS? THE ROLE OF SETTING FORMALIZED GUARDRAILS IN THE APPLICATION OF HR ANALYTICS

Abstract: HR analytics comprises several ethical uncertainties associated with datafication and algorithmization of employee data, such as issues concerning data privacy. These uncertainties shape the actions of the actors – in particular HR professionals, data scientists, and works councilors – who are involved in the adoption and implementation of HR analytics. Using a relational perspective on technology that takes the uncertainties of technology adoption into account, we examine how the uncertainty navigation of these actors shapes the implementation of HR analytics. Based on a rich corpus of qualitative data in two contexts with marked differences in the regulatory environment covering digital technologies (Austria and Germany vs. Switzerland), we find that the actors involved in the implementation of HR analytics deal with ethical uncertainties by setting formalized guardrails of containment, i.e., by delineating acceptable and inacceptable usages as well as authorized and prohibited connections between technological entities such as data and software programs. The guardrails channel actors' behavior, i.e., they limit and enable their actions. Thus, they not only provide means to navigate ethical concerns, but also help to streamline and accelerate development and implementation processes by clarifying uncertainties, e.g., what HR analytics tools can be used for. HR managers can refer to these formalized guardrails to reduce tensions between actors and to find data-based solutions to business problems more quickly. Through our analyses, we contribute to a better understanding of the ethical uncertainties inherent to the implementation of HR analytics as well as the ways in which actors deal with these uncertainties.

Keywords: HR analytics, HR management, digitalization, formalized guardrails, relational perspective

1. INTRODUCTION

The ongoing "datafication" (Mejias & Couldry, 2019) of our lifeworld and the interrelated recent developments in data analytics and artificial intelligence has not left the field of human resource management (HRM) untouched. Quite the contrary: Under umbrella terms such as people analytics or HR analytics an ever-increasing number of actors, from software providers to HR consultants, are promoting a supposedly novel "data-driven" and "evidence-based" approach to HRM. As a current definition of HR analytics puts it this approach relies on "information technology that uses descriptive, visual, and statistical analyses of data related to HR processes, human capital, organizational performance, and external economic benchmarks to establish business impact and enable data-driven decision-making" (Marler & Boudreau, 2017: 15). However, there is a debate among HR practitioners and researchers as to how feasible a large-scale realization of data-driven approaches to human resource management across industries is at the moment (Angrave, Charlwood, Kirkpatrick, Lawrence, & Stuart, 2016; Arora, Prakash, Mittal, & Singh, 2022; Bechter, Brandl, & Lehr,

2022). Further, currently subjects of debate include whether or not HR analytics constitutes a disruptive shift in the field, or a less consequential management fad (Minbaeva, 2021; Ulrich & Dulebohn, 2015).

While the future of data analytics in HRM seems uncertain, it has become clear that an intensifying abstraction and – increasingly algorithmic – analysis of employee data for managerial ends inheres "simmering ethical challenges" (Edwards, Charlwood, Guenole, & Marler, 2022) leading one recent commentator to express concerns about an "unholy union of AI and HR" (Dicken, 2022). One salient challenge lies in the danger of algorithmic biases enacting discriminatory practices of hiring and firing. Widely publicized cases of algorithmic bias, for example at Amazon, give credence to arguments diagnosing essential biases inherent to data analytics and machine learning technologies and the dangers these biases constitute once humans are made subject to unregulated data-based and algorithmic decision making (Chun, 2021). Marxist scholars, in turn, have interpreted the datafication of human resource management as a novel tayloristic attack on the autonomy of workers, subjecting them to ever stricter surveillance and discipline (Dyer-Witheford, Kjøsen, & Steinhoff, 2019; Kels & Vormbusch, 2021; Moore, Akhtar, & Upchurch, 2018). These discourses show that, far from foreclosing spaces for ethical considerations (Weiskopf & Hansen, 2023) by "saving consensus" (Luhmann, 2012: 313), the information technologies of descriptive, predictive and prescriptive analysis of HR-related data contain ethical uncertainties that actors confronted with these technologies must engage with.

While the scholarly discourse surrounding HR analytics seems to be well aware of these ethical dimensions (Charlwood & Guenole, 2021; Leicht-Deobald et al., 2019; Tursunbayeva, Pagliari, Di Lauro, & Antonelli, 2021), such accounts largely remain at the level of the theoretical identification of ethical issues and possible responses. Research that empirically engages with the complexities of HR analytics implementation and usage has rarely made these ethical implications its central focus, centering instead on issues such as HR analytics practitioners' legitimacy (Belizón & Kieran, 2021), identity (Jörden, Sage, & Trusson, 2022), as well as their engagement of storytelling techniques (Fu, Keegan, & McCartney, 2022). Furthermore, these studies tend to focus on HR analytics practitioners, bracketing out the perspectives of those who are subject to these managerial technologies and practices and those tasked with representing their interests (for an exception, see Loscher & Bader, 2022).

This paper, therefore, seeks to provide insight into the ways in which actors engaged with HR analytics identify and navigate its ethical uncertainties. We draw on a rich corpus of qualitative data collected through interviews and observations in Germany, Austria, and Switzerland with a variety of actors such as HR analysts, HR analytics consultants, HR managers as well as ethics consultants, labor council members and representatives of unions and union-adjacent institutions. We show that our interviewees particularly underscore two sources of ethical uncertainties, the sensitivity of personnel data and the limits of quantification of human complexity. We also demonstrate that actors seek to mitigate these uncertainties by setting formalized guardrails to prohibit connections between certain technological entities and prevent ethically questionable HR analytics practices. Our findings show, the setting of these formalized guardrails can take the form of political deliberation between management and workers councils, or of ethical self-regulation of HR analytics practitioners either within organizations or amongst organization spanning networks and institutions. Thus, we contribute to the discourse surrounding the handling and analysis of personnel data in the field of HR analytics by showing (1.) how different actors make sense of the ethical uncertainties inherent to this phenomenon and (2.) how these uncertainties are rendered manageable through the setting of formalized guardrails that, once established, streamline engagements with HR analytics.

2. THEORETICAL FRAMEWORK

HR analytics promises to provide evidence bases through the analysis of discrete data and thus appears in a veneer of neutrality and scientific rationality. Therefore, it may serve to obfuscate the ethical and political dimensions of managerial practices, such as hiring and firing, by placing them on a supposedly neutral, rational footing (Weiskopf & Hansen, 2023). However, as critical engagements with technological entities in management from strategy matrixes (Jardat, 2017) to business plans (Townley, 2004) have argued, despite their rational and scientific appearances, they are far from neutral in the way they classify, sort, and process objects and subjects. To explore how actors identify and navigate these ethical nuances in the implementation and handling of HR analytics, we will draw on both a relational and a practice-oriented perspective on technology.

From a relational perspective recently formulated by Bailey et. al. (2022) technological entities, such as data infrastructures or analytics tools are entities enacted in relation to other entities. Thus, the underlining assumption of this perspective posits that the relations between entities are constitutive of their functionalities and agency (Cooper, 2005). The functions a technological entity, such as an algorithm, can perform, is thus dependent on its relation with other entities such as data infrastructures (Alaimo & Kallinikos, 2022). Bailey et. al. (2022) speak of dynamical constellations of relations to underscore how the effects of technology development and implementation arise from the relations various entities hold amongst each other and not from the intentions of the subjects engaged in this process. They, therefore, argue that "as relations increasingly channel data, a host of new functions can be performed that may rapidly and drastically alter constellations of relations." (Bailey et al., 2022: 11) Datafication, accordingly, does not only provide novel means of management by enabling the production of sophisticated evidence bases for decisions. By drastically altering constellations of relations, including those amongst actors, it can also produce novel uncertainties (Ratner & Plotnikof, 2022).

A practice oriented perspective ads to these theoretical considerations by pointing out that the way technological entities relate to actors is, primarily, through the practical engagement of the latter with the former (Schatzki, 2005). As Townley (2004) argues we can only meaningfully grasp technological entities in the ways they are engaged and made sense of by actors in consequential situations. Dependent on the practices through which we engage these entities, they might not only reveal their techno-scientific and rational but also ethical and practical dimensions (Townley, 2004). An HR analytics dashboard can thus appear as a rational depiction of an organizational reality, as an object of ethical considerations or as a useful visual aid for a certain argument. This depends not only on the entity and the relations it entertains but also on the concrete practices and the way in which they imply certain goals and conceptions of worth.

Taking these theoretical assumptions together, implies that , firstly, we need to pay attention to the ways in which constellations of technological entities and actors can produce uncertainties in organizations. Secondly, we also need to take into account how these uncertainties are conceived by actors who practically engage with them, thus revealing and addressing their rational, ethical, and practical dimensions.

3. METHODOLOGY

We conducted 35 expert interviews with HR professionals, consultants, and works council and trade union representatives across Austria, Germany, and Switzerland. These experts were either directly or indirectly involved in the implementation of HR analytics tools in organizations or advised HR professionals or workers councilors during this process. On average, the interviews lasted 48 minutes. Our interview partners represent a wide range of industries (e.g., manufacturing, banking, and retail) and seniority levels (e.g., from junior HRM business partner to head of HRM). Additionally, we collected a rich corpus of qualitative data, including 23 hours of observations of presentations from practitioners' conferences and meet-ups where organizations presented their best practices and HR analytics tools, as well as additional documents such as industry guidelines and recommendations published by trade unions. Through our thematic analysis (Braun & Clarke, 2021) and triangulation, we abstracted major themes on how strategic actors in the emerging field of HR analytics perceive and navigate the uncertainties of HR analytics.

4. FINDINGS

Our findings are structured in line with the themes we extracted from the qualitative material. We start by highlighting the ethical uncertainties that actors in the field of HR analytics face before illustrating one major strategy to address these uncertainties by limiting the scope of HR analytics through formalized guardrails of containment.

4.1 Ethical Uncertainties

In our first theme, we elaborate on the ethical uncertainties discussed by our interviewees. The data reveals that as personnel data is connected to novel data infrastructure, analytics software, and made subject to analytical practices two major uncertainties arise: One relates to the sensitivity of personnel data and the other to the limits of quantification with regards to human complexity.

As personnel data is increasingly channeled through various entities such as business information systems or data-lakes they can form the basis of novel managerial functions. At the same time, issues surrounding data privacy and potential misconduct become increasingly important. Many of our interviewees claimed that accounting for this sensitivity in their practical engagement of HR analytics tools is an important aspect of their work. As one HR manager describes her work: "We work with the most sensitive data you can have about a human being." (HR Manager, Germany) The sensitivity of the data extends to the potential consequences its use might have for human subjects. As one HR analytics practitioner explains: "We need to be aware that the tools we construct and the insights we generate have a potentially strong influence on the careers of employees." (HR Analyst, Switzerland). Thus, these actors reflect the special status of data concerning human behavior, relations etc. when engaging it to produce datafied evidence bases for managerial praxis, acknowledging not only the techno-scientific but also the ethical dimensions of HR analytics in their practical engagements. For those representing the employees affected by HR analytics tools, the increasing importance of sensitive digitized data through HR analytics is often discussed in light of possible misconduct. While we encountered no direct reference to a case of clear misconduct by management, the worry that individual managers might make ill use of sensitive data is omnipresent. Therefore, the implementation of HR analytics can introduce a potential of normative struggle into the relations between actors in an organization. One works council member described her position on the matter as such: "We are always defensive. Our position is, that right now we have a good relation to personnel, but that can always change." (Works councilor, Germany)

For HR managers and HR analytics practitioners this worry translates into a consciousness of their responsibility and an awareness that their reputation depends on the ethical use of HR analytics. One HR analyst describes the importance of trust and reputation in his work: "As soon as trust is lost either in the data or in the handling of the data, in the organization, I think you have a very bad chance of getting back on your feet with this issue. (…) For five years, as I said, we have

been struggling with trust in this activity and now we have a very good foot on the ground as far as this trust is concerned, and this trust can be squandered again with one or two failed processes. Not analytically, but regulatory failed processes." (HR Analyst, Germany) Thus, as the implementation of HR analytics alters the relations between actors by introducing novel ethical uncertainties and potentials for misconduct, actors engaging HR analytics are made aware of the importance of trust and reputation for their position. This underscores the importance of ethical dimension inherent to their practical engagement with HR analytics tools.

Beyond the sensitivity of the data processed in the course of HR analytics projects another source of ethical uncertainty is the abstraction of complex human attributes and behaviors in the form of metrics such as attrition rates. In a sense HRM is premised on the necessary simplification of human complexity into manageable resources (Czarniawska & Mouritsen, 2009). However, as HR analytics enables the production of metrics through the connection of certain personnel data, the issues represented by such metrics become increasingly complex. One controversial topic that arises in the data is the production of individual attrition scores. One HR manager gives a quite succinct description of this issue arguing, "You can't capture human complexity with 50 kilobits." (HR Manager, Austria) Thus, on the one hand, the abstraction of the diffuse phenomena of human relations and behavior into discrete digitized data allows for increasing managerial capacities as these phenomena can now be handled as numeric evidence bases. On the other hand, however, interviewees consider the risk inherent to this development, namely that "you don't look at the human anymore, but just make data-driven decisions." (HR Manager, Switzerland)

Amongst employee representatives this issue is also a cause for concern. For some it is part of a larger trend towards leadership by numbers that threatens to lose its human touch. Thus, datafication not only serves to reduce the complexity of human dynamics to manageable level. Through their practical engagement with HR analytics actors reflect the limits of the quantification of these complexities. This is observed not only as an ethical but also as a practical issue. Due to the inherent limits of the abstraction and quantification of human motivation and behavior some interviewees voiced harsh criticisms of data objects that they understood as not only ethically dubious but of questionable practical use.

One HR manager makes this case with regards to individual attrition scores "I'm not interested in what's always in the media: 'With certain indicators I already know who's going to quit.' I have no need for that kind of stupidity. That's something I absolutely reject ethically." (HR Manager, Austria) Thus, the limits of quantification appears as an important source of ethical uncertainty.

4.2 Setting Formalized Guardrails

As illustrated above, the implementation of HR analytics inheres certain ethical uncertainties, stemming from the sensitive nature of personnel data and the limits of quantification of human complexity. Under such uncertain circumstances both actors implementing HR analytics and those subjected to it seek to mitigate these uncertainties, leading them to engage in the setting of formalized guardrails for the technological entities and practices comprising HR analytics.

These guardrails serve to delineate acceptable and inacceptable usages as well as possible and impossible connections between technological entities and data streams. They channel actors' behavior, i.e., limit and enable the way actors can engage with HR analytics. Thus, they not only provide means to navigate ethical concerns but also help to streamline and accelerate development and implementation processes by clarifying uncertainties, e.g., giving actors clear guidance what personnel data and HR analytics tools can and cannot be used for. As one interviewee recalls: "I have one month's clear data in this database and I would theoretically be in a position, on the basis of this clear data, to also release data from three years ago for these employees on a person-specific level. And that has actually been requested already. Not with malicious intent, but simply out of interest. And at this point I have to say: Sorry, we're not allowed to do that." (HR Analyst, Germany) With reference to a code of conduct, this HR analyst was therefore able to avoid any discussions of the ethical and practical implications of individual-level analyses. This also helps sustain a kind of consistency within the constellation of relations between technological entities, actors, and their practices that compose an individual HR analytics system. As the HR analyst reference above explains the code of conduct and the prohibition of individual-level analyses is in part premised on the database being "strategic in nature." (HR Analyst, Germany) Beyond streamlining analyses by avoiding discussions surrounding certain analyses on ethical bases, such guardrails of containment allow practitioners to find data-based solutions to business problems more quickly, because the limited access to data and, thus, reduces data complexity.

Formal guardrails can assume different formats, in part dependent on the organizational and institutional context in which they are formed. In organizations in Austria and Germany where works councils are institutionalized by labor law the adoption of HR analytics is accompanied by political negotiations between HRM representatives and works councilors as major important actors. In this case formal guardrails take the form of legally binding company agreements. Faced with the ethical uncertainties mentioned above, works councils seek to demarcate clear red lines for HR analytics' usage: "We set the framework: no general performance and behavioral control, no profiling, no linking of different effects, evaluations. We also don't allow downloads in Excel, because then I could also do quite a lot" (Works councilor, Germany) As we have seen, the implementation of HR analytics has the potential of alter the relations between management and works council by introducing novel risks of misconduct and ethical uncertainties. The demarcation of red lines can aid the engagement with HR analytics in practice and stabilize the relationship between HR analytics practitioners and employees. This is because since any practice that falls within these lines does not have to be subjected to scrutiny, while actors engaging HR analytics can envisage the potential for controversy of an undertaking in advance.

Beyond these legally binding agreements some interviewees underscore the importance of organizational and trans-organizational codes of conduct, best practice papers and other documents that, as one interviewee puts it, are "maximally nonbinding and at the same time highly relevant." (HR consultant, Germany) As constellations of relations within organization are rapidly altered through the implementation of HR analytics, those that wish a sustainable development of HRM towards data-driven and evidence-based management practices are acutely aware of the importance of trust and reputation in mitigating the uncertainties inherent to these alterations. Particularly Swiss interviewees underscored the important of such self-devised guardrails, since company agreements between management and workers councils are not institutionalized there. As one interviewee explains: "If only one company steps out and does things that are not okay, like surveillance and I don't know what, then I think we as HR Analytics [practitioners] have a problem […] because then the trust will absolutely deteriorate. And the willingness to kind of give data will decrease. So […] for me personally, it's such a big, important thing. Um. Yeah, that we're all in the same boat, kind of." (HRA analyst, Switzerland) Thus, this interviewee points to a shared interest amongst different organizations to mitigate the ethical uncertainties associated with HR analytics. This points towards an institutionalization of data ethics, which is also indicated by NGO's conducting reports that rank organizations according to their data ethics (e.g., ethos & EthicsGrade, 2022).

5. DISCUSSION

Our findings resonate with recent theoretical accounts of the various ethical uncertainties implied by the datafication of HRM under the umbrella term of HR analytics (Charlwood & Guenole, 2021; Edwards et al., 2022). We identify two sources of such uncertainties in our expert interviews: (1.) the sensitive nature of personnel data and (2.) the limits of quantification with regards to human complexity. As personnel data is channeled into data infrastructures and processed by HR analytics tools and practices it reveals novel functions, namely serving as the material for evidence bases. Thus, this highly sensitive data is no longer simply stored but productively used and processed, leading to novel ethical uncertainties. Interviewees reflected on these ethical uncertainties, acknowledging that said data is not only a source for increasing organizational effectiveness but also objects of ethical considerations. Furthermore, the processing of said data allows for the construction of metrics representing complex human behaviors and attributes. This impacts the relations amongst actors by introducing the potential for an intensifying managing by numbers and a worry about a loss of human touch. It also leads actors that are practically engaging these metrics to reflect on their practical and ethical limits.

Thus our findings lend credence to the relationally focused arguments by Ratner and Plotnikof (2022) and Bailey et al. (2022) who propose that any emergent technology is an entity enacted in relation and thus holds to potential to alter existing constellations of relations between and amongst technological entities and human actors and thus not only introducing novel functionalities but also uncertainties. We have shown that in practice, HR analytics not only yields the potential for extending a kind of evidence based, calculative rationality further into HRM but also unveils practical and ethical dimensions that are mostly related to the sensitive and complex nature of the source from which data is abstracted. This is in line with Townley's (2004) argument that any practical engagement with managerial technologies inheres not only technical-scientific but also practical and ethical dimensions and that actors can make reference to these dimensions in their various practical engagements with these technologies.

Furthermore, we have proposed the setting of formalized guardrails that contain potentially cascading relations as well as certain practices. As exemplified by the company agreement prohibiting the integration of personnel data into Excel, these guardrails can constitute disconnections between certain technological entities thus channeling the dataflow. An example of such guardrails prohibiting certain practices is given by the code of conduct mentioned above, which prohibits analyses at an individual level. Our conceptualization of these guardrails contributes to the relational perspective by underscoring the importance of containment. Without a sensibility for the ways in which cuts between data flows are constitutive to the constellations of relations described by Bailey et. al. (2022) a relational perspective risks overemphasizing connectivity and resulting cascades of relations. Studying the ways in which actors reflect on the HR analytics' practical application can uncover those practical and ethical uncertainties that may lead to disconnection between and amongst certain practices and technological entities. As Cooper puts it: "Connections imply disconnections and both are necessary features of the inter space between the human agent and the objects that surround and support it." (Cooper, 2005: 1690)

With our interviewees highlighting both the sensitivity of the data processed in HR analytics applications but also raising concerns about the simplification of complex human interactions. While these are addressed by several means, in the respective paper we focus on setting formalized guardrails as important mechanism to build credibility vis-à-vis employees and works' councilors.

For practitioners, formalized guardrails for HR analytics are worth considering for several reasons. Firstly, they help to foster legitimacy for HR data and analytics. This is an essential aspect, particularly when it comes to data sharing and data quality, as well as the legitimacy of conclusions, practices, and measures that result from analyses in the scope of HRA. Formalized guardrails create a structure that enables organizations to interpret and understand HR data better. As a result, data-driven decisions are more reliable and accurate, and any practices or measures derived from such decisions are more credible. Secondly, the guardrails decrease managerial discretion. This, in turn, makes it easier to focus on specific topics. When there is too much discretion, it can lead to bias and a lack of consistency in decision-making. By establishing a clear framework, HR professionals can concentrate on specific issues and make data-driven decisions that are more objective. This can help to fully elevate the promises of HRA, namely more accurate and un-biased decision

making. Thirdly, as outlined by tool developers and HR analysts in MNEs, adhering to the strong regulation and co-determination present in Germany and Austria can be beneficial. By meeting these high standards, they are well equipped for international markets. This can lead to more significant opportunities for growth and expansion, as well as increased credibility and trust in their tools.

While our study outlines the value of guardrails in tackling ethical uncertainties around HR analytics, more research into this process is needed. Future research could, for instance, investigate the interplay of (mis)trust in HR analytics and the effects on the negotiations around the guardrails.

6. CONCLUSION

Human resources analytics has emerged as a promising tool to help organizations make evidence-based decisions about their workforce. By analyzing vast amounts of data, HR analytics enables practitioners to identify patterns, trends, and insights that can inform a wide range of HR processes, from recruitment and talent development to performance management and employee engagement. However, despite its potential benefits, the implementation of HR analytics is not without challenges and ethical uncertainties. Within the scope of this paper, we tried to illuminate how different actors in the emerging field of HR analytics deal with the ethical uncertainties that are inherent to the datafication and algorithmization of HR processes. Analyzing a rich corpus of qualitative material, we identified data sensitivity and fears of being leading by numbers, as well as depicting complex HR phenomena in KPIs as major uncertainties. Actors try to address these uncertainties by formalizing guardrails that restrict data points and potential analyses to an internally coordinated set. Thereby, containing the actual use might, in the long run, offer some positive effects for the actors involved in the implementation and use of HR analytics.

7. REFERENCES

Alaimo, C., & Kallinikos, J. 2022. Organizations Decentered: Data Objects, Technology and Knowledge. Organization Science, 33(1): 19–37.

Angrave, D., Charlwood, A., Kirkpatrick, I., Lawrence, M., & Stuart, M. 2016. HR and analytics: Why HR is set to fail the big data challenge. Human Resource Management Journal, 26(1): 1–11.

Arora, M., Prakash, A., Mittal, A., & Singh, S. 2022. HR analytics: What's holding users back? Global Knowledge, Memory and Communication, ahead-of-print(ahead-of-print). https://doi.org/10.1108/GKMC-03-2022-0067.

Bailey, D. E., Faraj, S., Hinds, P. J., Leonardi, P. M., & von Krogh, G. 2022. We Are All Theorists of Technology Now: A Relational Perspective on Emerging Technology and Organizing. Organization Science, 33(1): 1–18.

Bechter, B., Brandl, B., & Lehr, A. 2022. The role of the capability, opportunity, and motivation of firms for using human resource analytics to monitor employee performance: A multi-level analysis of the organisational, market, and country context. New Technology, Work and Employment, in press. https://doi.org/10.1111/ntwe.12239.

Belizón, M. J., & Kieran, S. 2021. Human resources analytics: A legitimacy process. Human Resource Management Journal. https://doi.org/10.1111/1748-8583.12417.

Braun, V., & Clarke, V. 2021. One size fits all? What counts as quality practice in (reflexive) thematic analysis? Qualitative Research in Psychology, 18(3): 328–352.

Charlwood, A., & Guenole, N. 2021. Can HR adapt to the paradoxes of artificial intelligence? Human Resource Management Journal, n/a(n/a). https://doi.org/10.1111/1748-8583.12433.

Chun, W. H. K. 2021. Discriminating Data Correlation, Neighborhoods, and the New Politics of Recognition. Cambridge: MIT Press.

Cooper, R. 2005. Peripheral Vision: Relationality. Organization Studies, 26(11): 1689–1710.

Czarniawska, B., & Mouritsen, J. 2009. What is the Object of Management?: How Management Technologies Help to Create Manageable Objects. Accounting, Organizations, and Institutions: Essays in Honour of Anthony Hopwood, 157–174.

Dicken, P. 2022. Surveillance Humanism: The unholy union of AI and HR is coming. The New Atlantis, 65. https://www.thenewatlantis.com/publications/surveillance-humanism.

Dyer-Witheford, N., Kjøsen, A. M., & Steinhoff, J. 2019. Inhuman Power: Artificial Intelligence and the Future of Capitalism. London: Pluto Press.

Edwards, M. R., Charlwood, A., Guenole, N., & Marler, J. 2022. HR analytics: An emerging field finding its place in the world alongside simmering ethical challenges. Human Resource Management Journal. https://doi.org/10.1111/1748-8583.12435.

Edwards, T., Sánchez-Mangas, R., Jalette, P., Lavelle, J., & Minbaeva, D. 2016. Global standardization or national differentiation of HRM practices in multinational companies? A comparison of multinationals in five countries. Journal of International Business Studies, 47(8): 997–1021.

ethos, & EthicsGrade. 2022. Corporate digital responsibility of SMI Expanded Index companies. Geneva, Switzerland: Ethods Foundation. https://www.ethosfund.ch/sites/default/files/2022-01/Etude_CDR_2021_EN.pdf.

Fu, N., Keegan, A., & McCartney, S. 2022. The duality of HR analysts' storytelling: Showcasing and curbing. Human Resource Management Journal, n/a(n/a). https://doi.org/10.1111/1748-8583.12466.

Jardat, R. 2017. Strategy matrixes as technical objects: Using the Simondonian concepts of concretization, milieu, and transindividuality in a business strategy context. Culture and Organization, 23(1): 44.

Jörden, N. M., Sage, D., & Trusson, C. 2022. 'It's so fake': Identity performances and cynicism within a people analytics team. Human Resource Management Journal, n/a(n/a). https://doi.org/10.1111/1748-8583.12412.

Kels, P., & Vormbusch, U. 2021. The Power of Prediction: People Analytics at Work. In P. V. Moore & J. Woodcock (Eds.), Augmented Exploitation: Artificial Intelligence, Automation and Work. London: Pluto Press.

Leicht-Deobald, U., Busch, T., Schank, C., Weibel, A., Schafheitle, S., et al. 2019. The Challenges of Algorithm-Based HR Decision-Making for Personal Integrity. Journal of Business Ethics, 160(2): 377–392.

Loscher, G., & Bader, V. 2022. Augmenting a Profession: How Data Analytics is Transforming Human Resource Management. In T. Gegenhuber, D. Logue, C. R. (Bob) Hinings, & M. Barrett (Eds.), Digital Transformation and Institutional Theory, vol. 83: 87–110. Emerald Publishing Limited.

Luhmann, N. 2012. Theory of Society, Volume 1. (R. Barrett, Tran.) (1st edition). Stanford, California: Stanford University Press.

Marler, J. H., & Boudreau, J. W. 2017. An evidence-based review of HR Analytics. The International Journal of Human Resource Management, 28(1): 3–26.

Mejias, U. A., & Couldry, N. 2019. Datafication. Internet Policy Review, 8(4).

Minbaeva, D. B. 2021. Disrupted HR? Human Resource Management Review, 31(4): 100820.

Moore, P. V., Akhtar, P., & Upchurch, M. 2018. Digitalization of Work and Resistance. In P. V. Moore, M. Upchurch, & X. Whittaker (Eds.), Humans and Machines at Work: Monitoring, Surveillance and Automation in Contemporary Capitalism. London: Palgrave Macmillan.

Ratner, H., & Plotnikof, M. 2022. Technology and Dis/Organization: Digital data infrastructures as partial connections. Organization Studies, 43(7): 1049–1067.

Schafheitle, S., Weibel, A., Ebert, I., Kasper, G., Schank, C., et al. 2020. No stone left unturned? Towards a framework for the impact of datafication technologies on organizational control. Academy of Management Discoveries, 6(3): 3–67.

Schatzki, T. R. 2005. Peripheral Vision: The Sites of Organizations. Organization Studies, 26(3): 465–484.

Townley, B. 2004. Managerial Technologies, Ethics and Managing. Journal of Management Studies, 41(3): 425–445.

Tursunbayeva, A., Pagliari, C., Di Lauro, S., & Antonelli, G. 2021. The ethics of people analytics: Risks, opportunities and recommendations. Personnel Review, ahead-of-print. https://doi.org/10.1108/PR-12-2019-0680.

Ulrich, D., & Dulebohn, J. H. 2015. Are we there yet? What's next for HR? Human Resource Management Review, 25(2): 188–204.

Weiskopf, R., & Hansen, H. K. 2023. Algorithmic governmentality and the space of ethics: Examples from 'People Analytics.' Human Relations, 76(3): 483–506.