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Short paper

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Abstract

As forces like globalisation and workforce diversity transform the workforce and workplace, organisations need to be agile in responding to employee performance needs and challenges. However, traditional performance management practices are slow and reactive. It has been claimed that technology advancements in people analytics can facilitate performance management by providing organisations with the tools needed to be responsive. This position paper explores emerging trends in people analytics, particularly the integration of people analytics with systems of productivity, hyper-personalised employee experience, and the use of nudges to influence behaviours. It argues that these trends are shifting organisations towards what we call perpetual performance management. Implications are discussed and an IS research agenda is proposed.

Keywords perpetual performance management, people analytics, hyper-personalisation, talent management, performance management

1   Introduction

The rise in globalisation, transition from manufacturing to service/knowledge-based economy, and the emerging use of technology make human resources (HR) management, especially, the management of performance complex and challenging (Isson and Harriot 2016; Stone and Deadrick 2015). Over 78% of organisations consider performance management (PM) critical and essential for organisational performance and success (Bersin et al. 2017). However, many organisations still use the conventional PM practices that are slow, reactive, and lack the necessary tools and insights required to manage performance effectively (Petrucci and Rivera 2018) in dynamic environments. Organisations further need to find innovative ways to address the varying PM needs of a diverse workforce. Millennials, for example, expect to give and receive feedback openly and regularly, but annual performance reviews do not provide the experience that millennials expect (Isson and Harriot 2016). Indeed, a recent study has found that 95% of employees are not satisfied with their organisations' PM systems (Koulopoulos 2018). Hence, PM remains a big challenge for many organisations.

Recent research suggests that people analytics can help organisations streamline PM processes, and shift from standard appraisals to "continuous monitoring, feedback, coaching, accountability, and transparency" (Tursunbayeva et al. 2019, p. 3). These technologies employ a data-driven approach to provide employees and organisations with evidence-based insights and (in some cases) actionable suggestions required to make decisions and take actions to improve employee experience, engagement, productivity, and performance. It has been proposed that people analytics provide forward-looking insights that can inform and help address unclear, complex business decisions related to human resources (Institute for Corporate Productivity 2018). Practitioners argue that people analytics can offer organisations flexibility and choices to develop agile PM practices and move from standardised to personalised PM approaches (Bersin et al. 2017). To date, there is little published empirical research that bears out the claims summarised above about people analytics. This is a critical area in which empirical field-based studies are needed, in light of the long history of failed "silver bullet" IT solutions and increasing organisational reliance on analytics.

This short position paper explores the technological trends in people analytics that are transforming PM. It specifically focuses on the integration of people analytics with enterprise applications, hyper-personalising employee experiences, and nudging to influence behaviours. We argue that these technological trends shift organisations towards a new PM approach, which we term "perpetual performance management (PPM)". Implications of this approach are discussed, and a research agenda is proposed.

2   Emerging Trends

2.1   Integration of People Analytics with Systems of Productivity

To meet organisations' needs for PM, enterprise application providers are now integrating artificial intelligence (AI) and people analytics technologies (Harris and Gurchensky 2020) with systems of productivity (Bersin 2018a) such as productivity suite, enterprise resource planning and collaboration tools. Integration can provide organisations with the necessary means to effectively manage employee performance through evidence-based decisions (Harris and Gurchensky 2020). For instance, Microsoft has integrated workplace analytics in its Office 365 platform, continuously providing insights and suggestions to employees and team leaders (Microsoft 2019). According to vendor literature, integrating analytics in enterprise applications enables features and capabilities such as automated data collection and verification, comprehensive libraries of workforce metrics and benchmarks, add-ins, and interactive analysis, as well as personalised dashboards (Oracle 2011). Moreover, integration enables organisations to optimise the PM process, access high-quality data, and swiftly identify, discover, prioritise and respond to issues and deficiencies that impact employee performance. Gartner predicts that analytics technologies will be ubiquitous by the year 2022, and "everyday AI" services will mainly be unnoticeable in daily work activities (Peters and Duncan 2020).

2.2   Hyper-personalised Employee Experiences

Personalisation of employee services is gaining momentum in the HR field. To retain, manage, and improve employee experiences, organisations adopt customer-based analytics techniques to provide personalised services and content (Fecheyr-Lippens et al. 2015; Isson and Harriot 2016). Some organisations have moved towards hyper-personalisation as employee experiences become critical for organisations' performance and value creation (World Economic Forum 2019). Hyper-personalisation involves using people's data to provide more personalised and targeted products, services, and content

(Jain et al. 2018; Subramanyan 2014). Some vendors have already started offering hyper-personalised services to help improve employee performance and experience. For instance, Workday recently launched hyper-personalised employee solutions Workday Help and Workday Journeys to help employees navigate the workplace and become more productive (Workday 2020). According to the literature, personalisation can help organisations detect behaviour and collaboration patterns (George 2017) to uncover and make visible employees capable of supporting the organisation to achieve its goals (Leonardi and Contractor 2018). Personalised insights and suggestions are delivered to employees and managers via personalised headlines, dashboards, reports, inline tips, and weekly digests.

2.3 Nudging to Influence Employee Behaviours

There seems to be an increase in the enterprise tools designed to influence behaviours by using digital nudges. These tools, some of which are integrated with productivity systems, aim to encourage employees and managers to improve their well-being, productivity, and performance (Visier 2019). Innovators like Humu have developed nudging tools using behavioural science and machine learning (Humu 2020) to drive behavioural change across various areas related to employees' and managers' work activities. These tools collect and use employee behavioural data from multiple sources to provide a series of time-based hints and tips to facilitate employees' behavioural change and performance improvement (Bersin 2018b). The core idea behind these tools is to help employees "work smarter, develop productive behaviours, and better collaborate within and across teams" (Humu 2020). According to Humu, nudging tools deliver "precise and personalised coaching moments" when employees need them most – "in the flow of their day-to-day, and the moments that matter."

3 Performance Management

Some organisations are already using people analytics in their PM processes. Kiron and Spindel (2019) provide a good case of the IBM PM system. This section discusses how this emerging practice disrupts PM routines. It also introduces the concept of perpetual PM.

3.1 Traditional Performance Management Practices

Conventionally, PM relied heavily on managers' mentoring, coaching, supervision, and employee performance evaluation. This PM approach is reactive and encompasses longer performance cycles, reviews, irregular feedback, monitoring, and ad-hoc reporting (Isson and Harriot 2016). Moreover, the information flow is mostly unidirectional - moving up the corporate hierarchy (e.g., employee → manager → executive). The PM tools provide managers with standard data, key performance indicators (KPIs), and metrics reports via standard dashboards. The managers then share performance information with employees during monthly or quarterly performance reviews. The performance data is mostly descriptive and fragmented, as most organisations do not have the ability or tools to perform predictive and prescriptive analysis (Isson and Harriot 2016). Traditional PM systems are often rife with favouritism and performance evaluations' subjectivity due to a lack of transparency in performance metrics and assessments.

3.2 Towards Perpetual Performance Management

Integrating people analytics (hereafter, the "tool") in PM systems makes both managers and employees active participants in the PM process. It also makes the tool a prominent and active actor in PM relationships (Figure 1). The tool plays an active mediating role, leading to a triadic PM relationship. The emergent PM approach is more transparent as it enables employees to have direct access to personalised descriptive, predictive, and prescriptive workplace and performance information and insights. The tool continuously collects and analyses employees' data from multiple sources to provide customised and contextualised feedback and reports. The feedback enables employees to self-reflect and gain self-knowledge about their daily work practices that affect productivity and performance. The tool further provides managers with aggregated insights into teams' collaboration patterns, enabling managers to monitor and analyse employees' data, and take actions to enhance employee efficiency and performance.

Some tools have nudging engines that consistently provide tips and hints to help managers and employees to optimise performance. Using the tool's feedback and suggestions, employees and managers may dutifully adjust their work practices and set new goals to address problematic areas highlighted by the tool. Winikoff et al. (forthcoming) explored the use of Microsoft's MyAnalytics to understand how it influences collaboration and productivity management behaviours. Their findings reveal that the tool acts as a "performance coach", coaching and guiding employees into taking specific actions to improve or sustain healthier work behaviours and habits. The MyAnalytics tool also helps the

manager review their performance and that of their teams. Still, the manager must trust the reciprocal employee-tool relationship and work with the employee to better understand it.
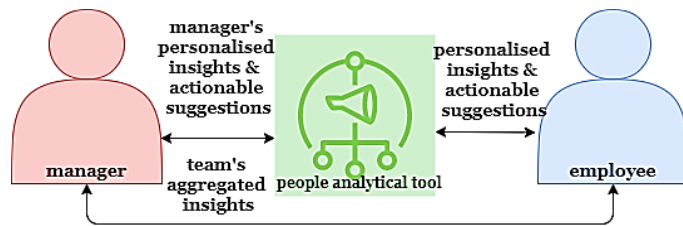

Figure 1: PPM relationship

Figure 2: Characteristics of PPM

This is a significant shift from the traditional PM approach, where managers share and discuss employee performance on an ad-hoc basis. Based on the description above and the characteristics in Figure 2, we propose a new term "**perpetual performance management**" and define it as *an emergent PM approach that is proactive, responsive and involves continuous monitoring, continuous data collection, contextualised and constant feedback, customised goal settings, and granular, personalised and customised reporting, and shorter performance cycles*. The implications of PPM are discussed next.

3.3 Implications of Perpetual Performance Management

Introducing intelligent tools as prominent actors in the PM process raises interpersonal and managerial concerns. The direct exchange of information between employees and the tool shifts the information and control into employees' hands, giving employees the ability to self-manage. The tools also provide different views of work behaviours and practices for employees and their managers, with varying granularity levels. While this partially addresses privacy concerns and analytics risks, it creates information and power asymmetry. In the case of MyAnalytics, the manager cannot see anything like the level of details that the employee does. There is a privacy "filter" that allows managers to see only aggregated and anonymised team-level data via a "team insights portal." Hence, these tools introduce a situation where the employee has more granular and personalised insights than the manager. As a result, managers need to accommodate sharing the role of PM with an invisible digital performance manager. Managers have, to some extent, be disintermediated in that vital information could be missing. As these tools advance, they could render supervisors and managers' roles, performance evaluation decisions, or ratings irrelevant (Ledford et al. 2016).

Similarly, using the tool could lead to a lack of control in managing information or algorithmic biases. The tools use various performance evaluation metrics and concepts, most of which may not be well understood by employees. Moreover, employees may perceive evaluation metrics as inaccurate or misaligned with their work practices. The tools (unlike the employee and manager) cannot factor in the work context's implications for the qualitative interpretation of data analytics and may give inaccurate or contradictory suggestions. This may elevate tensions, contention, resentment and dissatisfaction in PM relationships. Tensions could also arise when the same information is interpreted differently by the tool, managers and employees (e.g., the percentage of time spent in meetings could be seen as valuable or unproductive depending on the work context, which cannot be known by the tool).

Let's illustrate with few scenarios. Scenario X is about the implication of information asymmetry and misinterpretation of insights (marked X in Figure 3). Maria is an employee under the supervision of her manager, Anita. Maria and Anita are working on a project that takes up most of Maria's work time. As usual, Maria receives feedback on her work behavioural patterns and practices from the tool. Maria also receives suggestions to reduce collaboration time, and the tool nudges her into scheduling some focus time. Maria interprets "focus time" as taking time away from work and acts based on that understanding. Maria did not inform Anita that she would be taking a few days off because she assumed that the tool also provided Anita with similar information. When Maria misses the project deliverables deadline, her manager Anita summons her and expresses her disappointment. A disagreement ensues between Maria and Anita, and now they have a strained relationship.

Scenario Y is about misaligned ways of doing things between the tool and managers (marked Y in Figure 3). Anita (manager) has a high-contact approach to managing her project team. However, the tool suggests and nudges Anita into reducing the number of meetings with her direct reports. Trusting the tool, Anita acts as instructed and reduces the number of project meetings. As a result, projects are now

behind schedule; therefore, Anita and her team need to work overtime to complete the project on time. The consequences are that they are overworked and stressed. Slowly, they start losing confidence and trust in the tool and the information and guidance it provides.

In these scenarios, the tool has acted on generic rules that do not account for managerial priorities, work context and interpersonal relations. By providing Maria and Anita with personalised instructions, the tool, in a sense, also reduced the value of face-to-face interactions (marked Z in Figure 3), creating communication and interpersonal issues between Anita and Maria.
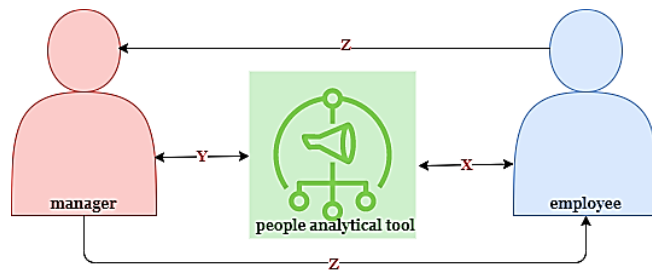

Figure 3: Examples of potential implications of PPM

Apart from the complicated triadic relationship, PPM may also negatively impact employee productivity. For instance, constant real-time nudges and alerts may distract employees' focus on work activities, consequently affecting performance. Besides, PPM relies heavily on continual monitoring and analysis of employees' data and work patterns, which could be perceived as privacy-invasive. A work environment in which (excessive) monitoring is perceived unfair and invasive may not be conducive for employees to perform at their best. Hence, finding a balance between using people analytics in PM and employee boundary preferences is critical.

4 Research Agenda

There is a growing body of literature on applying people analytics in HR; however, most of this research has focused on using people analytics for recruitment, selection, and employee attrition. There is a need to understand the implications of the technological trends discussed above on employee performance and PM processes. Further, research is needed to understand employee attitudes and behaviours towards using people analytics to improve performance. Gal et al. (2020) argue that datafication, use of nudges, and algorithmic opacity can impact employees' ability to pursue internal good, ability to acquire practical wisdom, and ability to act voluntarily. Moreover, Ryan and Wessel (2015) identified several implications of technology-mediated relationships on individuals' perceptions of fairness in the workplace, specifically regarding acceptable use of technology, monitoring, use of non-job-related information, and privacy expectations. Issues like these may influence employees' attitudes and behaviours toward acceptance and use of intelligent analytical technologies, organisational commitment, and job satisfaction (Tomczak et al. 2018). These ethical challenges need to be explored further to understand the impact on employees' performance.

Due to the lack of people analytics research in the IS field, the following research agenda is proposed.

- Investigate how work practices change and how they differ from traditional practices when intelligent tools that influence behaviours are introduced in PM.

- Critically examine the benefits, challenges, and implications of PPM on employee productivity, performance, and organisational performance.

- Assess employees' and managers' behavioural and psychological reactions towards a PPM system.

- Examine the implications of using people analytics on individuals' perceptions of privacy, trust, and interpersonal relationships among employees and managers.

- Examine how intelligent PM tools can be designed to minimise unintended consequences such as workflow disruptions and strained interpersonal relationships.

- Examine employees' willingness to accept and use people analytics to improve performance.

- Examine the effects of nudges and personalisation on employee behaviours, productivity, and performance.

- Examine the human impacts of bringing intelligent tools into the PM relationship.

5 Conclusion

As the world changes, so does the workplace, the nature of work, and the workforce. These changes require systems that enable organisations to be proactive and make fast decisions. As organisations shift towards hybrid-remote work models, the uptake of people analytics will probably increase. People analytics have the potential to support and facilitate effective management of employee performance. However, introducing people analytics in PM raises serious concerns that should be taken into consideration. This paper has explored the shift towards PPM enabled by technological changes in the people analytics field. It discussed the trends and implications of integrating people analytics in enterprise applications, personalising employee experiences, and nudging in the context of PM. Based on the implications, the paper proposed an IS research agenda.

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