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RESEARCH ARTICLE

From human resource management to intelligent human resource management: a conceptual perspective

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Abstract
No organization can fully serve people or produce without people. People are a critical resource and capital for organizations. Hence, managing people is at the core of organizational activity and is essential for competitive success. In that regard, this paper discusses the evolution of HRM, particularly the current developments in HRM in terms of computer technology. We explain how HRM is experiencing a critical change due to the active integration of artificial intelligence into the HR field—what we call intelligent HRM. Focusing on the case of IBM's AI technology, we discuss how artificial intelligence escalates as a human resources phenomenon, how Watson operates, the capabilities and benefits of Watson in regard to HR practice, and the main characteristics of intelligent HRM. Furthermore, we point to some challenging issues with computer technology in terms of HRM. This paper will help stakeholders develop insights into how we are experiencing the intelligent phase of HRM.

Keywords Human resource management · Intelligent human resource management · Artificial intelligence · Cognitive computing · IBM AI technology · Watson · The main characteristics of i-HRM

1 Introduction

Today, both the manufacturing and service industries thrive on people. No organization whether profit or non-profit can fully serve people or produce without people. Hence, people are appreciated as a critical resource and capital for running the majority of commercial or non-commercial activities. People within organizations, with their knowledge, skills, abilities, and other characteristics, stand at the forefront of employers' consideration more than ever. Every year, many organizations spend hundreds of thousands of dollars on recruiting competent people to achieve organizational success and thus sustain their businesses (Lee-Ross and Pryce 2010). Every organization competes for its most essential resource, namely qualified knowledgeable people to gain advantages over their competitors (Drucker 1992; Cole 2002).

Such a competitive environment unequivocally puts the employment and management of people in the center of organizational activity. The overall organizational decisions and activities relating to human resources (HR) generally refer to the realm of human resource management (HRM). To Beer et al. (1984), HRM involves all management decisions and actions that affect the nature of the relationship between the organization and its human resources. Being at the heart of organizational activity makes HRM essential for organizational success.

From the 1980s onward, HRM has undergone major changes with the employment of computer systems for HR activities. HR professionals, on behalf of their organizations, initially utilized these systems majorly as record-keeping systems for basic procedures, such as receiving and storing job applications (Hendrickson 2003; Stone et al. 2013). However, with the advance of information technology (IT), HR incumbents began to fulfill most of their daily duties and make their decisions on strategic issues with the use of sophisticated computer systems. Hence, the HR processes were substantially streamlined (Heikkilä 2010). IT is now prevalent in HRM, and both internal and external activities, particularly those relating to recruitment, onboarding, development, performance assessment, strategic analytics, remuneration, compensation, business-to-employees (B2E), and outsourcing, require advanced computer systems.

Developments in computer science have led to the flourishing of advanced technologies, such as artificial intelligence (AI). This realm is constituting the apex of current

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computer technology and is creating new opportunities for businesses and giving rise to various innovations. AI technology is also leading to critical changes. Such a change could lately be observed in a tech-dependent phenomenon, HRM. These substantial changes in HRM we are undergoing are highly worth of scrutiny.

In what follows, this article discusses the evolution of HRM and chiefly its latest critical engagement with technology. In the following section, we encapsulate the historical development of HRM and its transition into virtual space, which is generally referred to as e-HRM. In the discussion, we explain how HRM is experiencing a critical change due to the active integration of AI into HR practice—what we call intelligent HRM (i-HRM). Further, we direct attention to some challenging issues of computer technology in terms of HRM.

2 From manpower to human resource

The big shift in manufacturing and wealth dates back to the Industrial Revolution in the eighteenth century (Berg and Hudson 1992; Ashton 1997; Berg 2005). With the advent of steam power, agrarian and handicraft economies changed to industrial and machine manufacturing dominated ones (Trebilcock 2013; Rafferty 2019). What we call, the modern manufacturing that developed in the 1800s merged manpower with machines, which resulted in mass production (Williams et al. 1987; Cascio 1995). As small companies started mass production with the help of the technology, they became large-scale corporations that made large profits, and thus it aroused the need for more able people who could do the work properly and be as productive as possible (Williams et al. 1987; Cascio 1995).

In the early twentieth century, the manufacturers experienced the paradigm of scientific management that proposed the standard-performance production that could yield the highest prosperity with one best way (Carrell et al. 1995; Taylor 2013). At the time, employers showed great concern for employee output rather than employee satisfaction under the implementation of scientific management techniques with very little public regulation and poor law in regard to personnel policies and practices (Klatt et al. 1985; Carrell et al. 1995). Such implementations appreciated as the intermediary of the maximum prosperity (Taylor 2013) was interrupted dramatically by the Great Depression an economic catastrophe that appeared in the USA and spread throughout the world in the 1930s following the high levels of investment, significant productivity advances, stable prices, full employment, tranquil labor relations, high wages, and high company profits (Crafts and Fearon 2010).

From the 1920s to the 1950s, the movement of human relations grew out of a reaction against the deficiencies of scientific management, particularly those on human and social factors in the work environment (Sikula and McKenna 1990). The movement was based on the famous Hawthorne studies that discovered employee productivity was related to the degree of teamwork and cooperation rather than physical conditions and that the notion came to view the organization of workers majorly as a social system (Cascio 1995). During the period of human relations, particularly in the aftermath of the great economic crisis, governments such as in the USA acted as mediators of coordination between the employers and the employees with regard to the legal regulations on some issues like wages, work hours, unemployment, and retirement (Klatt et al. 1985). Along with such legal improvements, professional organizations also experienced the behavioral science studies in which the researchers engaged themselves with the study of human behavior that construed the working people as resources rather than barely as factors of production (Carrell et al. 1995).

3 HRM and its shift to e-HRM

The prevalent study of human behavior and major developments in the structure and intensity of international competition between large companies influenced the personnel management practices vastly toward the end of the twentieth century, and consequently, these influences made way for the emergence of HRM (Cascio 1995; Price 2011). From the early 1980s onwards, HRM has become the prevalent practice in managing the people within an organization (Dransfield 2000; Gilmore and Williams 2013). Since then, it has been regarded as the core mechanism for forming management systems to direct human competencies effectively toward organizational goals (Milkovich and Boudreau 1997; Mathis and Jackson 2008).

Recently, many organizations have profoundly experienced the use of computer systems in HRM. The blossoming use of computers in HRM appeared in the 1980s (Sikula and McKenna 1990). During the time, the dissemination of personal computers gave rise to the computer-based human resource information systems (HRISs) (Carrell et al. 1995). With time, with the emergence of the Internet as a business resource, and with the progress in IT, HRISs became a hub for managing HR activities (Milkovich and Boudreau 1997).

The more general term to the use of computer technology within the HR function is now electronic HR (Armstrong 2009). In the last two decades, e-HRM seemingly became the common term for referring to virtual HR (Lepak and Snell 1998) or e-enabled HRM (Francis and Keegan 2006) in which IT is used to implement the overall HR activities within an organization (Strohmeier 2007). In general, it is thought to be quite beneficial as it is supposed to enhance HR efficiency, reduce costs, decrease administration burdens, facilitate HR planning, and allow HR professionals to become strategic or business partners in organizations (Stone and Dulebohn 2013). However, Stone et al. (2013) argued that computer-based HR systems can also have

some negative effects, particularly on the employee selection process in terms of some issues such as workforce diversity, data privacy, and accuracy. Along with that, Parry (2011) found that e-HRM might not be as cost-effective as it is supposed to be.

For decades, organizations have been moving from conventional face-to-face HR practices to modern electronic ones parallel to the increasing popularity of IT—turning e-HRM into a significant theoretical and practical phenomenon (Ma and Ye 2015; Marler and Parry 2016; Panos and Bellou 2016). Many people have been anticipating that e-HRM would change the way that HRM is practiced in organizations, shifting it from being primarily administrative to being more strategically relevant (Marler and Parry 2016). Thite (2019) states that the electronic/digital transformation, in the eyes of HR and business leaders, has two fundamental challenges. One of those is the potential of HR to help business professionals shift to a digital mindset, a digital way of managing, organizing, and leading change, and the other one is the potential of HR to revolutionize the entire employee experience by transforming HR processes, systems, and the HR organization through new digital platforms, applications, and ways of delivering HR services.

4 The cutting-edge technology: artificial intelligence

As a key business tool for many companies, IT is on the agenda of many people, particularly professionals and academics. Today, it prevails almost any major commercial activity in various businesses, such as banking, e-commerce, tourism, and travel. Seemingly, it is also the future of such businesses, since they have tech-friendly and tech-dependent natures. Specifically, considering e-HRM, it will predictably sustain its benefits in regard to the management of employees in the long run.

What is more compelling that there is an endeavor underway at the international level aiming at enhancing the attributes of IT with the help of AI or interchangeably cognitive computing. Pan (2016) states that various IT giants have acquired about 140 entrepreneurial firms in the field of AI since 2011. These entrepreneurs are trying to incorporate AI into various computer systems in order to create seamless experiences on these systems' implementation.

There is a general conception that the term intelligence is mostly attributed to human beings. Humans write computer programs, do mathematics, engage in commonsense reasoning, understand language, and drive cars that all require intelligence (Nilsson 1980). AI aims to enable machines to perform such activities the way human beings do in that regard. However, to elucidate, the machines performing like human beings could be better deemed in terms of the notion of imitating as Turing (2009) argues, given the fact that people have not still entirely decoded and understood the human intelligence that AI simulates.

Although the term AI and its first practices date back to the 1950s (Russell and Norvig 2010), its prominence is a sort of new acquisition as such. Particularly, strong AI (contrary, weak AI) aiming to mimic the full range of human cognitive capabilities has gradually escalated since the 1980s and became an interdisciplinary study that tries to illuminate the human intelligence enigma, thereby enriching the development process with different standpoints (Jones 2009). Lately, notable developments have made AI a prospect for becoming part of everyday life and thus prompted researchers to examine this phenomenon within its manifold aspects with regard to distinct research fields.

A very recent initiative called Society 5.0 was introduced by the Japanese Cabinet with the aim of creating a social reform (Shiroishi et al. 2018). This innovative attempt seemingly seeks to achieve a high level of interaction between humans and machines. It intends to connect people, things, and systems in cyberspace where commands are detected by sensors and executed through AI (Cabinet Office 2019). Unlike the concept of industry 4.0 that we are on the eve of, Society 5.0 is not circumscribed by the manufacturing industry, but it pervades social life with the convergence of AI, the Internet of Things, augmented reality, and robots (Skobelev and Borovik 2017).

5 Discussion

5.1 From e-HRM to i-HRM: explaining the intelligent human resource management

HR departments have been utilizing conventional computer technology in the business for decades. They manage the people of their organization and these peoples' careers and run the pertaining operations with the help of this technology. However, IT is recently in a turning point for its intelligent progress, and this is leading to conspicuous changes in HR as well. This means that activities relating to HR, such as computational data query, access, and analytics, and B2E will no longer stand within the realm of old-school. Large tech companies such as IBM have already started to develop applications to engage cognitive computing in daily HR activities. The company has developed an array of HR solutions applicable to various industries, and these solutions are becoming common.

Ulrich (1997) suggested that technology will make information accessible and join people together electronically in ways that can impact organizations and work relationships. Further, he concluded that the workplace and workforce of tomorrow will be different from that of today that change outside HR will require change within HR. In a similar vein, Lawler and Elliot (1996), over two decades ago, anticipated that the HRM field would increasingly depend on sophisticated IT applications. They also added that expert systems and AI

programs would likely become more commonplace in HRM, stressing that such technologies were rare in the 1990s.

Much time has elapsed since such premises first appeared, and in that period, computer technology has evolved. This evolution has given rise to the active employment of the Internet and IT in HR activities that were specifically defined as e-HRM (Zhang and Wang 2006; Ma and Ye 2015; Marler and Parry 2016). Parallel to such advancement, we have also seen the growing popularity of cognitive computing or AI systems in business and an initial entree of such systems into the HR field (Marr and Ward 2019; Strohmeier and Piazza 2015; Feinzig 2018).

Recently, with the increasing involvement of cognitive computing in the HR field, we are facing an observable gradual shift from the electronic to the intelligent phase of HRM. This phase is something beyond the scope of regular e-HRM. The intelligent phase comprises the management of people in an organization through the effective use of advanced computer systems empowered by cognitive computing. It involves the active use of cognitive computing that the previous phase did not possess, and therefore, it cannot be deemed as e-HRM and/or confined to the context of it. Such a proceeding in HRM should be better referred to as i-HRM. The discussion below helps us gain insight into how we are experiencing i-HRM.

5.2 Experiencing i-HRM: the case of IBM AI technology

As mentioned above, efforts to utilize AI in everyday life have also comprised HR activities. With the introduction of cognitive computing into the HR field, discussions have been conceived about how this technology could be applied to specific HR tasks and how it could be used to improve HR experience workwise. In such an environment, Strohmeier and Piazza (2015) determined six selected scenarios for the potential of AI techniques in HRM. These were turnover prediction, candidate search, staff rostering, HR sentiment analysis, resume data acquisition, and employee self-service. Feinzig (2018) and Bokelberg et al. (2017b), on the other hand, specified the potential of AI capabilities in terms of three specific HR areas that were discussed in Section 5.2.2.

One of the most outstanding efforts made recently to facilitate organizational tasks with the help of cognitive computing was that of IBM. The multinational IT company started developing a virtual product called Watson in early 2007 (Ferrucci and Brown 2011). Originally built to rival the computer chess-playing champion Deep Blue and challenge the Jeopardy! quiz show, Watson has become an enterprise-ready AI suite that is intended to facilitate medicine, enterprise search, and gaming activities (Ferrucci et al. 2010).

5.2.1 How Watson operates

Watson is a cognitive system that is grounded on a software architecture named DeepQA that is for building open-domain question-answering systems (Ferrucci 2012). DeepQA architecture catches various interpretations of a given question, generates hypotheses by collecting evidence from sources, scores the evidence by depending on sources, synthesizes the data, and renders answers (Ferrucci et al. 2010; Lally and Fodor 2011). To elaborate, to High (2012), Watson responses to questions through the following process:

1. It parses the question and extracts the major features of it.
2. It generates a set of hypotheses by searching for passages that could potentially contain a valid response throughout the knowledge base.
3. It compares the language of the question and the language of each potential response by using reasoning algorithms.
4. Each reasoning algorithm produces scores.
5. Each score is then weighted against a statistical model that captures how well the algorithm did at establishing the inferences between two similar passages.
6. It repeats the process for each of the candidate answers until it finds the strongest one as a response.

5.2.2 Capabilities and benefits of Watson with regard to HR practice

According to a recent study by IBM institutes, half of the HR executives surveyed acknowledged that cognitive systems have the potential to transform key aspects of HR, and two-thirds of CEOs think that it can drive significant value in HR (Feinzig 2018). The study carried out by the IBM team (Bokelberg et al. 2017a) asserted that Watson has various capabilities and benefits relating to HR activities. Known as Watson Talent, it is a specific solution designed to address the HR activities of organizations. To Bokelberg et al. (2019), this cognitive suite has three capabilities: understand, reason, and learn. It can receive verbal, visual, and auditory cues and examine unstructured information such as HR service center recordings to identify keywords and patterns. The process is based on Watson's reasoning ability that is capable of forming hypotheses and testing them by searching across the knowledge base and synthesizing information to output relevant and meaningful responses in a case such as the selection of a suitable candidate for a vacancy. Along with understanding and reasoning, Watson also reads, tags, and organizes content derived from every data point, interaction, and outcome originating from the process and builds a broad knowledge base with up-to-date HR content. Apart from these capabilities, Watson allegedly has various benefits as well (Fig. 1). These benefits are categorized into three major areas: talent

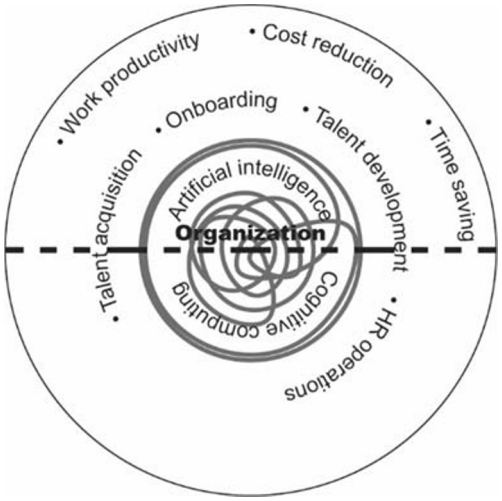


Fig. 1 Benefit areas of AI and AI's overall benefits to HRM

acquisition and onboarding, talent development, and HR operations (Bokelberg et al. 2019; Feinzig 2018).

Talent acquisition is one of the most challenging issues of our time. Large companies such as hotel chains and tour operators take advantage of every occasion to recruit the most suitable people into their organizations. In that regard, Watson offers such companies conspicuous success in recruitment through its spectrum of solutions such as talent acquisition suite, candidate assistant, recruitment, talent match, talent frameworks, career coach, and talent assessment. These products seemingly aim to help both professionals and candidates with a two-dimensional approach to improve the effectiveness of recruitment. For example, the candidate assistant helps job seekers find jobs relevant to their personality, skills, and interests and inform them about the organizations and how they fit in the recommended jobs (IBM 2019a). Correspondingly, Watson recruitment helps recruiters find the most competent candidates by using both internal and external data, such as job skills, competencies, and social sentiment (IBM 2019a). With cognitive solutions, the recruitment becomes more proactive, targeted, predictive, personalized, and less time-consuming (Bokelberg et al. 2017).

Along with recruitment, another critical stage for recruiters is onboarding. In this stage, Watson offers candidates real-time and targeted guidance workwise (Bokelberg et al. 2017). A cognitive assistant called CHIP provides fast responses to basic inquiries workwise and also sends notifications about some tasks, such as completing the new-hire checklist, business conduct guidelines, or benefit enrollment (Bokelberg et al. 2017). Similarly, Kenexa onboard promises professionals to eliminate paper, cycle time, and data-entry errors relating to onboarding new employees (IBM 2019b).

HR development is an activity of utmost concern that many organizations engage with. This area of activity aims to develop personnel's knowledge, expertise, productivity, and satisfaction relevant to their professions (Werner and DeSimone 2012). Watson provides both professionals and novices with some solutions to such an issue through its products, such as talent frameworks, career coaching, and talent assessment. The talent framework is an extensive ready-to-use library designed to assist both managers and employees from various industries through general corporate function extension on operational and developmental issues, such as job descriptions, key responsibilities, and required competencies (IBM 2019c). It also helps personnel by proving interview questions, coaching tips, development goals, and prescriptive learning suggestions for each competency and skill level (IBM 2019c). The career coach, on the other hand, intends to impact the internal mobility of personnel by advising on their career planning (IBM 2019c). Basically, it tracks the employees' preferences and interests and recommends them for existing job opportunities, and how to steer their future career moves by depending on the records (IBM 2019c). Other than the two assistants above, talent assessment is intended for guiding HR seniors through the processes of choosing the right people for the right jobs and assessing their qualifications to align them with suitable positions by using a collection of validated assessments (IBM 2019c). To Bokelberg et al. (2017), cognitive systems can help managers guide their teams toward the right learning opportunities. Beyond that, they can help HR professionals better understand employees' sentiments and concerns and identify emerging issues, hot topics, and trends that could affect employee morale, performance, and productivity (Bokelberg et al. 2017).

HR departments or officers engage in various intra-departmental and inter-departmental operations within their organizations. They usually employ computer technology to run these complex operations that also would involve some external contacts with other organizations, such as public bodies, banks, and outsourcing agencies. Such operations that conventional computer technology could execute include absence management, training, and development, rewarding, managing diversity, recruitment and selection, payroll, performance management, HR planning, knowledge management, and expenses (Armstrong 2009). Watson, one step ahead, enables HR professionals to manage many of such HR operations with cognitive agents at fingertips able to analyze tremendous data and provides users with faster and more accurate information (Bokelberg et al. 2017).

Considering the potential benefits of cognitive systems, such as Watson, as described above, it is also possible to infer some macro-level organizational benefits. The benefits of cognitive systems in the process of recruitment, onboarding, talent development, and HR operations could augment the productivity of employees, save their time, and reduce the overall company costs (Bokelberg et al. 2017; IBM 2019d). For example, if it is taken for granted that cognitive systems such as Watson are capable of finding a suitable candidate for a vacancy, then it would be possible to expect it to render

outcomes related to work productivity. On the other hand, a cognitive system is an easy-access facility once installed, giving users instant access and making personalized recommendations to user queries that would also be expected to increase personal and shared productivity. Opportunities such as easy access and personalized recommendation that cognitive systems provide could also be assumed to lead to advantages in terms of saving time. Apart from allowing employees to save their time and increase their productivity, cognitive systems could also reduce the expenditures of a company due to its HR activities. For instance, with the help of abilities of cognitive systems to analyze internal and external data relevant to the user query and provide targeted practical assistance, the expenditures of HRs made during the process of recruiting, onboarding, and developing talented people, and those relating to internal and external operations, would probably be lessened.

5.3 Identifying the main characteristics of i-HRM

Given the discussion above, we are driven to identify the fundamental characteristics of i-HRM. In light of the discussion, we focus on two major attributes of i-HRM. First, we can state that one of the primary distinctive features of it is being AI-driven. HR practices that are considered in terms of i-HRM depend on AI-enabled systems. Internal and/or external organizational activities are managed by the employment of AI systems at divergent levels (e.g., utilizing these systems just for recruitment and selection process or conducting most of the HR tasks en masse via these systems). When we speak of AI systems, one thing to note is that these systems are autonomous or in other words self-governed. Once any sort of data is available online and open to access, they progress on that data, develop themselves, and keep up-to-date for future queries and scenarios, and that, in consequence, would potentially facilitate the execution of some challenging and complex HR tasks. However, related potential risks are a matter of some concern (see Section 6). We should also note that AI systems are highly logic-centric, and therefore, decisions made upon relying on these systems are likely to be rational, thus potentially creating a more competitive environment in human resources. Second, i-HRM is unequivocally virtual space-dependent. HR operations within the realm of i-HRM are performed on advanced computer and mobile systems and networks. Therefore, organizations require such systems workwise to be able to carry out their routine HR tasks. Parallel, human resources of this domain would thrive on the development of overall computer and mobile technology. As advanced computer and mobile systems mostly operate through advanced networks online, they are easily accessible from personal computers and mobile devices such as laptops, tablets, and smartphones, allowing HR professionals to do their routine tasks anywhere at anytime.

6 Some further issues for future development

Even though there are several advantages of cognitive computing, as discussed above, there are also some further issues to consider. A recent catching argument on the negative aspects of data science was made by Capelli (2019). In his criticism of data science in terms of recruitment, he defends that data science is in its infancy and thus not yet the panacea that employers look for. Furthermore, his major concern is seemingly about data scientists' backgrounds—with a dearth of HR experience, and their approaches to mining, gathering, and analyzing data—overall the methods and sources their products rely on. Hence, he derives some privacy, legal, and discrimination issues. As to him, employment mechanisms that rely on sources such as social media, blogs, or other websites may infringe the privacy of individuals who apply for jobs, since they did not intend their virtual postings for such purposes. To him, it might not be fair to decide whether to hire somebody or not on personal social postings made a generation ago. He also adds that machine learning algorithms in a structure are partially dependent on experiences that their future predictions could be in parallel to the past, and thus might be unsatisfactory. His further concerns are about the discriminative adverse impacts of such mechanisms for minorities and the infringement of regulations relating to discrimination.

When people speak of computers, they cannot exclude the phenomenon of security. One of the main problems that computer technology ever has is security. Computer security comprises all security issues relating to human-computer interaction and is a challenging study. To Pfleeger et al. (2015), computer security is the protection of the assets of a computer or computer system involving hardware, software, data, people, processes, or the combinations of these, and seeks to prevent unauthorized viewing (confidentiality), modification, or fabrication (integrity) of data while preserving access (accessibility).

Computer systems and any device that operates on software and has access to a network are on target, vulnerable, and thereby open to exploit, misuse, and manipulation. Abnormal behaviors (Illankoon et al. 2019), data access interruptions, delays, data modifications, fabrications, losses, leakages, or other problems in these systems and devices emanate from both human and nonhuman motives and causes. Such motives and causes, in general terms, consist of user error, defects in code, malicious acts, hardware failure, and acts of nature (Strebe 2002).

When a computer system or a device undergoes a threat, it means that at least one of the conceptual threesome—confidentiality, integrity, and accessibility—suffers to some extent (Pfleeger et al. 2015). Such suffering may cause HR professionals and the other people within an organization to have serious personal and organizational security, privacy, and thereby technical, legal, or ethical troubles. These troubles would impede or even collapse the routine flow of essential operations that may pose instant chaos or crisis, and thus extra burden for the organization.

Despite the state-of-the-art advances, AI-empowered computer systems and electronic devices are—more or less—prone to any kind of threat as regular ones. No matter how stringent precautions are taken, people somehow—wittingly or unwittingly—find their way to break and use these systems for extracurricular purposes. In such a case, the outputs these systems render would be questionable. They might be manipulative and therefore misleading toward risky outcomes.

Apart from security, a further issue to consider is the nature of data sources that AI-enabled systems rely on. AI-enabled systems can obtain data from both verified and non-verified sources. Verified sources are comprised of formal inputs on databases of both public and private institutions, affiliated organizations, and personal webpages, while non-verified sources are informal ones such as postings on professional networks, social media, and webpages of news agencies and organizations. Since these sources are public, usually casual, and somehow open to third parties' commentary, manipulation, and even modification, the quality of data from such sources will always be open to debate. Data derived from such sources might be a weak point in AI-enabled systems, and such a weakness could result in manipulative and biased analytics in making critical HR decisions.

One more focal point to bring to attention is that AI is a highly logical mechanism that omits sentiment majorly. AI-enabled systems depend on human-created algorithms that strictly follow logical principles. However, managing people demands something more than logic. Various HR activities, mostly, require the involvement of sentiment and intuition. For example, many activities such as hiring, assigning to a suitable vacancy, promoting, building teams, and solving problems such as conflicts among colleagues and work-family conflicts would claim emotional feelings and intuition that are specific to humans. For now, it might be too pretentious to expect AI systems to pose sentiment or behave like humans. However, leaving such a controversy out herein, one should emphasize that effective HRM requires human-specific qualities that cognitive computing does not contain.

It is not only the logic that leads people to success but also sentiment as well. Long-term organizational success depends on the effective management of people through both logical and humane perspectives. Hence, i-HRM is the brand-new phenomenon that brings logic and sentiment together in terms of personnel management. It mingles the advanced versatility of machines as an auxiliary to human deficiencies with human-specific characteristics that the machines lack.

7 Conclusion

In conclusion, i-HRM is no panacea for all the challenges of HR; yet, it seems to be the new way of personnel management. Even though AI technology is in its crawling session, it has something to say about the future of HRM. It will possibly reduce the burden of HR crews and facilitate HRM. However, some challenging issues need to be resolved. For now, it is a big question whether AI will be a true success or a failure story in HRM. Remember that there are some ongoing arguments on the negative experiences of AI technology entrepreneurs and practitioners with healthcare solutions (see Whelan 2018; Mearian 2018; Strickland 2019; Robitzski 2019).

Compliance with ethical standards

Conflict of interest The author declares that there are no conflicts of interest.

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