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## Does Artificial Intelligence devalue "Human" in Human Resources Management?

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### Abstract

*The rapid evolution of information technology besides helping humans in their work also has the potential to get rid of humans. From these two conditions, this study was made with the aim of answering how HRD will view employee performance which is dominantly resolved by AI, the trade off dilemma of AI and human workers and how to achieve an equilibrium between human and AI performance. This study used a literature review technique, but the results found that AI is still used in the majority of the recruitment and selection process, not in the function of human development. One question that cannot be answered in this study because the answer must be a joint agreement between academics, practitioners and company management.*

**Keywords:** *Human Resource Management, Artificial Intelligence, Performance.*

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### INTRODUCTION

Customers and business owners benefited greatly from the Industrial Revolution 4.0 period disruption of information technology, but workers were the ones who suffered the most, not efficiency and effectiveness. The World Economic Forum (WEF), in a report titled The Future of Jobs that was released in 2020, predicted that 85 million people would lose their jobs due to automation by 2025 at the very least. These incredible figures haven't even been calculated in light of artificial intelligence's (A.I.) impact on the workplace.

The presence of ChatGPT, a web-based A.I. that was expected to be able to respond to any question posed by the user, stunned the media at the beginning of 2023. In February 2023, ChatGPT had more than 100 million members and had received an average of 1 trillion page views each month up until the time of this research, just five days after its November 2022 launch.

Due to ChatGPT's success, many people now view artificial intelligence (AI) as a means of making money, and these individuals have driven competitor AI systems apart. Numerous A.I. with various specialties are dispersed around the internet as of this writing (June 2023) in their thousands.

Our observations since the middle of January 2023 show that lots of social influencers are passing on knowledge about using various A.I. to aid in planning, designing promotional content, and marketing products on social media. And some others disperse knowledge on how to use A.I. specifically to generate images that are challenging for even highly skilled digital artists to create, or at least take a long time. In less than a minute, Dan A.I. can produce 4 photos. This disproves the notion that artists cannot be replaced by technology.

Back to the issue of an AI system being able to create a brand's marketing strategy. We were inspired to undertake this research after seeing a few videos on various social media platforms. In these films, content producers interview a number of people with varied professional backgrounds to find out what tools they use to support their work. Our interpretation leads to the following research inquiries:

*R1 : If A.I can do whatever is assigned, does the company still need skilled workforce?*

*R2 : Can the output of tasks aided by artificial intelligence be fully regarded as employee performance?*

*R3 : What is the solution to achieving an equilibrium between employee and AI performance?*

The topics and solutions presented here are novel because they may not have been considered or openly explored before by Human Resources Management scholars and professionals.

## **METHOD**

This study investigate 15research papers using semi-systematic literature review.

## **RESULTS**

To answer the aforementioned concerns, we must first examine the historical relationship between humans and technology.

### **The Humans and the Machine**

The phrase "boys and their toys" is meant to create the concept that occasionally men genuinely attracted to machines and technology. Even at a young age, children are commonly exposed to a variety of cutting-edge media, such as movies about robots and weapons.

It is general knowledge that the first sentient machine, which was referred to at the time as a "Maschinenmensch" (literally 'machine-human' in German), was displayed for the very first time in a film titled "Metropolis" in the year 1927. In point of fact, the term "ROBOT" was used for the first time 7 years earlier in the famous play "R.U.R." from 1920, which stood for Rossum's Universal Robots. The word "robot" originates from an older Church Slavonic term called robota, which meant "servitude" or "forced labor." But it's not commonly awared that Thomas Hobbes writing in the seventeenth century, is credited by academics as being the first to propose the concept of artificial intelligence. Hobbes argued that humans can be understood mechanically and that symbols such as numbers, graphs,

computations, and statistics can be used for problem solving rather than long words or synonyms. Claude E. Shannon, Marvin L. Minsky, Nathaniel Rochester, and John McCarthy launched the Dartmouth Summer Research Project in 1956, making it one of the early AI research projects (McCarthy et al., 2006). Their goal was to give computers the ability to understand and use language so that they might solve issues and advance the state of the art through the application of abstract ideas. Initial artificial intelligence (AI) research suffered by difficulties and produced few noteworthy results because of technological constraints.

When Terminator was released in 1984, it was the first time that the modern people, who were primarily Baby Boomers and Gen-X at the time, were aware to the concept of AI. In point of fact, the movie left a profound impression that an artificial intelligence created with the intention of preserving world peace instead turned against humanity. This occurred because the AI reasoned that humans were the cause of destruction on earth, and as a result, humans needed to be annihilated. Until early 2023, when A.I.--particularly ChatGPT--became popular, diverse attitudes toward A.I. technology ranged from appreciation to acceptance to fear. In an academic context, the ever-changing and frequently conflicting path that artificial intelligence (AI) has taken during the course of its development has been the topic of substantial research and a great deal of discussion (Ahrweiler 1995; Nilsson 2010; Russel and Norvig 2010).

Assisted, Augmented, and Autonomous are the three types of AI systems defined by Albawwat and Al Frijat (2021). Assisted AI systems are programmed to help humans make decisions and react to circumstances by carrying out activities that humans have traditionally handled. Collaborative human-machine decision making, in which robots interact with the environment and learn from the auditor, is essential for improved AI systems. Autonomous systems are artificial intelligence (AI) systems that can function independently and adjust to new circumstances, with the ability to make their own decisions. These self-aware AI machines are not only smart, but also empathetic. The research concluded that assisted AI systems are the most user-friendly and useful, whereas autonomous AI systems contribute the least to audit quality.

### **As Man get smarter, so does the Machine**

As time passes, technology also evolves. Initially, computers were designed to perform only sophisticated mathematical calculations. The initial computer ability went on to develop from calculation to computation. Detail-wise, calculating is limited to numbers and how they are altered (addition, subtraction, multiplication, and division), whereas computing extends to non-mathematical calculations performed by computers using mathematical algorithms. In computation, computers are given the ability to generate and select alternatives. Deep Blue's ability to vanquish grandmaster Garry Kasparov is an example.

Until then, a computer could be compared to a brain without limbs. The next evolution was extending a computer unit with additional hardware to perform various physical tasks. Humans play a role in issuing directives or establishing

objectives, and computers with limited data will attempt to complete these tasks as efficiently as feasible. This is known as automation.

In recent years, the world has witnessed a revival of artificial intelligence (AI) as a result of advancements in the Internet of Things' infrastructure speed, availability, and scalability. Cloud computing, deep learning, and neural networks have facilitated the automatic extraction of features from unstructured or semi-structured inputs such as images, audio, text, and video.

### **The Human versus The Machine**

In the era before the Fourth Industrial Revolution, humans worked alongside machines, taking advantage of the capabilities of machines to accomplish tasks. However, when industrial revolution 4.0 arose the excessive use of technology had many negative consequences. The manufacturing sector is beginning to replace its limited human personnel with machines that can operate 24 hours a day without the need for rest periods, overtime pay, or other benefits. Thousands, if not millions, of workers must lose their employment as a result of automation. Marx (1867) explained in Labor Theory of Value how capital-labor substitution would be manifested in the labor market. By increasing capital accumulation and surplus value, Koç & İzgi-Şahpaz (2023) interpret the theory that technological advancements cause higher unemployment rates. Oanh, Dao, Nga, and Nguyen (2023) confirm that high-tech exports represent Industry 4.0, thereby contributing to an increase in unemployment. In Clifford (2019), Elon Musk warned that artificial intelligence might be even more dangerous than nuclear weapons.

Risks and uncertainties regarding the direction, feasibility, and expected, mostly economic impacts of an innovation are common, as noted by Hirsch-Kreinsen (2023). By setting up clear perspectives for action for the developers, pique the interest of other concerned actors, and coordinate their efforts, expectations and the accompanying promises, visions, and scenarios regarding viable and desirable development paths help mitigate the uncertainties and complexity surrounding innovations

### **The utilization of AI in Human Resources Management**

From our empirical search, we found that almost all research discussing AI and Human Resources Management focuses on the topic of using AI in the recruitment and selection process (Jia, et al, 2018; George & Thomas, 2019; Hmoud & Lazlo, 2019; Bhardwaj, Singh & Kumar, 2020; Niehueser & Boak, 2020) and training & development (Kambur & Akar, 2022)

### **Criticism**

Nearly all of the research we found is about the utilization of AI in recruitment and selection. As stated by Strohmeier and Piazza (2015), managing human resources involves a variety of activities, including hiring, overseeing performance, advancing employees skills and careers, and rewarding. Our findings imply that AI is still underutilized and has the potential to be used in a broad variety

of HRM functions, such as determining the impact of training costs on company performance (human resources investment). Our primary criticism is that the current use of A.I. in HRM overlooks the most essential aspect of HRM: human development.

The first research issue has already been addressed, as stated by Buzko et al. (2016): "Artificial intelligence technologies enable prompt analysis of data by people who do not have special skills in data analysis, such as cleaning, investigating, and drawing conclusions." The increasing capabilities of AI technologies to automate data analysis tasks can potentially reduce the reliance on skilled employees with specialized data analysis abilities in certain areas. As AI algorithms become more sophisticated and accessible, companies can leverage these technologies to perform tasks that previously required human expertise. What is supposed to happen is that AI should only assist or enhance employees skills, not the other way around. This means that companies should rely on employees skills, and AI could assist them to perform more efficiently and potentially reducing job errors. The collaboration between humans and AI should involves a division of labor, with each contributing their respective strengths. While AI can automate repetitive and time-consuming tasks, provide data analysis, and generate insights, human employees bring contextual understanding, critical thinking, creativity, and domain expertise to the table. The combined efforts of humans and AI may lead to more comprehensive and effective outcomes.

It's an open debate as to how businesses will treat the question of whether AI-assisted work should be counted as employee performance. We were unable to discover a solid basis for answering the question. Even if we provide a response, it will only represent one side's perspective. However, we asked ChatGPT this question for amusement, and ChatGPT answered A.I responded without hesitation "The output of tasks aided by artificial intelligence (AI) cannot be fully respected as employee performance in the traditional sense." In the end, we will be leaving the reader the freedom to figure out how to comprehend the meaning of the answer.

To answer the third research question, the Task-Technology Fit /TTF approach that Goodhue & Thompson (1995) may offers the solution. The method, which seeks to explain the effectiveness of IT, posits that task-technology fit (the degree to which task needs and the capabilities of the technology align) is the most important factor. With Task-Technology Fit (TTF) application, ensure that employees effectively utilize their skills in their job tasks while appropriately leveraging AI aids. TTF will be focused on aligning the characteristics of the task with the capabilities of the technology to optimize performance. Here's how TTF can be applied to AI:

1. Task analysis: By analyzing the nature of the tasks employees need to perform, identifying the specific skills and knowledge required, considering the complexity, variety, and interdependencies of tasks helps in understanding the areas where employees' skills are essential and where AI aids can enhance their performance.
2. Fit assessment: By comparing the requirements of the tasks with the capabilities of the AI technology can identify areas of alignment and potential



gaps which assure that AI can enhance employees' skills without replacing or overshadowing their expertise. The aim is to find the right balance between human skills and AI aids to optimize task performance.

3. Design interventions: Based on the fit assessment, design interventions will encourage employees to use their skills while appropriately integrating AI aids. Through training and guidance programs on how to effectively use AI technology as a tool rather than a main crutch, and emphasize the value of human judgment, critical thinking, and creativity in decision-making processes.
4. Supportive culture: Foster a supportive organizational culture that values and recognizes the unique skills and contributions of employees. By encouraging collaboration and knowledge-sharing between employees and AI systems will emphasize the complementary roles they play in achieving organizational goals.

## **CONCLUSION**

It is undeniable that the speed, accuracy, and ability of AI to continuously learn can outperform human abilities. But it must be remembered that technology was created to help humans, not to get rid of them. Even though every business aims to make a profit—which can be achieved through efficiency, It must be reminded that implicitly, their social goal is to maintain human "existence". There are still many economic issues that can be discussed due to the neglect of social goals. For example, when workers are removed, unemployment will increase, and they won't be able to buy the goods offered by companies. The point is that ignoring these social goals will ultimately backfire on the company as well. On second thought, it's not actually AI that devalues the role of humans in business; it's actually humans—who create AI with extraordinary powers, and overuse the technology—that devalue fellow humans.

## **RECOMMENDATION**

1. Artificial intelligence and machine learning will indeed change the future of every industry, and every stakeholder in any company must be prepared to interact with the technology wisely.
2. Having a skilled employee cannot be a consideration, but a necessity—to maintain human existence in business.
3. Apart from the second research question that we asked, there are still many other questions—which we may not have thought of and cannot answer unilaterally—that Academics, HRD practitioners, and company management must consider and discuss the answers to together.
4. To achieve equilibrium, humans must impose limits on AI to maintain human existence in business.

## **REFERENCES**

- Albawwat, I., & Frijat, Y. (2021). An analysis of auditors' perceptions towards artificial intelligence and its contribution to audit quality. *Accounting*, 7(4), 755-762.
- Ahrweiler P (1995) Künstliche Intelligenz-Forschung in Deutschland. Die Etablierung eines Hochtechnologie-Fachs. Münster: Waxmann.
- Bhardwaj, G., Singh, S. V., & Kumar, V. (2020, January). An empirical study of artificial intelligence and its impact on human resource functions. In 2020 International Conference on Computation, Automation and Knowledge Management (ICCAKM): 47-51. IEEE.
- Buzko, I., Dyachenko, Y., Petrova, M., Nenkov, N., Tulenina, D., & Koeva, K. (2016). Artificial Intelligence technologies in human resource development. *Computer modelling and new technologies*, 20(2), 26-29.
- Clifford, C. (2018). Elon Musk: 'Mark my words — A.I. is far more dangerous than nukes,'. London: CNBC Available at <https://www.cnbc.com/2018/03/13/elon-musk-at-sxsw-a-i-is-more-dangerous-than-nuclear-weapons.html>.
- George, G., & Thomas, M. R. (2019). Integration of artificial intelligence in human resource. *Int. J. Innov. Technol. Explor. Eng*, 9(2), 5069-5073.
- Goodhue, D., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS Quarterly*, 19, 213-236. DOI: 10.2307/249689
- Hirsch-Kreinsen, H. (2023). Artificial intelligence: a "promising technology". *AI & SOCIETY*, 1-12.
- Hmoud, B., & Laszlo, V. (2019). Will artificial intelligence take over human resources recruitment and selection. *Network Intelligence Studies*, 7(13), 21-30.
- Jia, Q., Guo, Y., Li, R., Li, Y., & Chen, Y. (2018). A conceptual artificial intelligence application framework in human resource management. In *Proceedings of The 18th International Conference on Electronic Business* (pp. 106-114). ICEB, Guilin, China, December 2-6.
- Johansson, J., & Herranen, S. (2019). The application of Artificial Intelligence (AI) in Human Resource Management: Current state of AI and its impact on the traditional recruitment process. Dissertation. Jönköping University, Sweden. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-44323>
- Kambur, E. and Akar, C. (2022), "Human resource developments with the touch of artificial intelligence: a scale development study", *International Journal of Manpower*, 43(1): 168-205. DOI: 10.1108/IJM-04-2021-0216
- Marx, K. (1867), *Das Capital*, Hamburg: Verlag von Otto Meissner.
- Niehueser, W., & Boak, G. (2020). Introducing artificial intelligence into a human resources function. *Industrial and commercial training*, 52(2), 121-130.
- Nilsson NJ (2010) *The quest for artificial intelligence: a history of ideas and achievements*. Cambridge: UP.
- Oanh, T.T.K, Dao, L.T., Nga, P.T.H. and Nguyen, H.T. (2023). Impacts of human capital, the fourth industrial revolution, and institutional quality on unemployment: An empirical study at Asian countries. *Journal of Eastern*

- European and Central Asian Research (JEECAR), 10(2), 238-250. DOI: 10.15549/jeecar.v10i2.1010
- Quarterly, 19(2), 213–236. Hirsch-Kreinsen, H. (2023). Artificial intelligence: a “promising technology”. *AI & SOCIETY*, 1-12.
- Russel, S.J. and Norvig, P. (2010) Artificial intelligence. A modern approach, 3rd edn. Boston: Prentice Hall.
- Strohmeier, S., & Piazza, F. (2015). Artificial Intelligence Techniques in Human Resource Management—A Conceptual Exploration. *Intelligent Systems Reference Library*, 149–172. doi:10.1007/978-3-319-17906-3\_7