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The Next Generation of Employment and Artificial Intelligence -- Human-AI Interaction in Organizational Making Choices

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Abstract: *As artificial intelligence (AI) permeates numerous organizational procedures, there is a rising concern that many human decision-making will soon be replaced by intelligent robots. This essay explores how humans and AI complement each other and how each may contribute their own strengths to organizational decision-making processes that are often marked by ambiguity, complexity, and uncertainty in order to offer a more proactive and practical viewpoint. While persons are capable of offering a more comprehensive, intuitive method to dealing with uncertainty and equivocality in organizational decision-making, artificial intelligence (AI) can enhance human cognition when addressing complexity due to their larger computer capacity for data processing and analytical approach. The theory of "intelligence augment" is seen in this premise: AI systems ought to be developed with the goal of increasing human contributions and not taking away from them.*

Keywords: human enhancement, human-machine symbiosis, artificial intelligence, and decision-making

I. INTRODUCTION

Developments like Google DeepMind's AlphaGo and IBM's Watson, which defeated their top human competitors at Jeopardy and Go, clearly illustrate the prominence and quick speed of artificial intelligence (AI) in recent years. Although artificial intelligence (AI) has many different forms, it can be broadly described as intelligent systems that possess the capacity for thought and learning (Russell & Intelligence, 1995). AI encompasses a diverse range of instruments, methods, and algorithms. Numerous methods and applications
fall into the wide broad umbrella of machine intelligence (AI), including neural networks, deep learning, genetic algorithms, or speech/pattern recognition. Natural language processing (the process by which machines are capable of understanding and analyzing language as used by humans), machine learning (algorithms that allow systems to learn), and machine vision (algorithmic evaluation and evaluation of images) have examples of basic elements that extend AI cognitive utilities and may enhance human labor.

Let's use IBM's Watson as an example. Watson can comprehend complex human-written the words and give terms and concepts various meanings because of natural language processing. Watson can learn from experience and data interaction thanks to machine learning capabilities, as well as enable Watson to generate innovative ideas based on previous experience.

Watson was taught to identify patterns in cancer through artificial intelligence techniques, access to electronic health records, medical research articles, and even medical notes at Harvard Sloan Kettering. The AI is growing by offering viable alternatives for treatment. Finally, Watson can now quickly analyze countless skull brain scans and identify tiny blood loss in an image for doctors because to AI-powered machine vision (Captain, 2017).

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Because of their amazing ability for improving yourself and education, new AI systems like Watson's are increasingly being utilized for based on knowledge jobs that had previously been believed to be only within the reach of humans. White-collar humans used to perform these types of tasks, and it was believed that they were unable to be automated (Wladawsky-Berger, 2017). Rapid improvements in artificial intelligence (AI) techniques have allowed them to make decisions in a wider range of challenging situations with an appropriate amount of
freedom (Davenport & Kirby, 2016). According to Brynjolfsson and McAfee (2014), postindustrial economies are now moving into a "second machine age" as a result of strong smart technologies that are expected to
replace human workers in many different kinds of businesses.

Organizations are confronted with hard concerns about AI's affect on their work as its possible uses continue growing. Based to the debate, "some computer science students may already be trying to develop an algorithm to do it for any given skill one has memory of" (MacCrory, Westerman, Alhammadi, & Brynjolfsson, 2014, p. 14).

Elon Musk along with others highlight the disruptive nature of AI is and forecast that it is going to replace human beings in a lot of jobs (Kalev, 2016). Therefore, AI and other smart technologies are frequently cited as being at the vanguard of a previously unheard-of automation a tsunami. the works of Kelly (2012) and MacCrory et al. (2014), they are specifically seen to be the forces behind the shift in decision-making regarding a cognitive as well as information-centric process. According to a recent Accenture survey, 85% of executives have plans to make major investment in AI-related technologies over a period of three years, and executives from America's most significant corporations ranked AI and machine learning as the most significant trends in the industrial the outdoors in the years to come (New Vantage Partners, 2017).

So it's essential to put the infatuation with artificial intelligence and its inherent trend toward automation and human displacement in the context of history. In his 1930 study "Economic Possibilities for our Grandchildren," renowned economist John Maynard Keynes spoke of "technological unemployment" as a "new disease." (2017) Wladawsky-Berger. In her seminal piece "In the Age of the Smart Machine," published in 1988, Shoshana Zuboff especially addressed the implications of information technology for the workplace. She identified information technologies as "smart" technologies and set them apart from former robotic and automation technologies by launching the "informating" process, which converted events, activities, and events into information.

She highlighted similar disappointments when information technologies were solely utilized for automation and control, ignoring the possible benefits, which include better openness and a more fulfilling work setting. Because of this, "automation" has been a topic of discussion among academics and managers for many years.

While a lot of people think that machines will soon surpass humans in intelligence and completely replace them in the workplace due to the recent overstatement surrounding the field of artificial intelligence (AI) and other cognitive technologies, others view this as just another excessive claim (Sandy Pentland interviewed in Guszcza, Lewis, & Evans-Greenwood, 2017).

Such overstated assertions actually are not fully new; they remind us of early predictions made following the initial AI study and advancements on the application of AI in later projects. For instance, renowned cognitive scientist Herbert Simon (1965) estimated that by 1985, artificial intelligence would be able to perform any task that a human can. "In between three and eight years, we can expect a machine with the general intelligence of the average human being … able to read Shakespeare, oils a car, play workplace games, tell a story, and have a fight," predicted Marvin Minsky, the founder of MIT's AI Lab, in 1970. This forecast was even more highlighted. The machine is going to begin developing on itself at a rapid pace. It will reach genius status in a few months, and then its abilities will be unimaginable. Grudin with King (2016). However, the discussion of how the distinct qualities of humans and AI may work in concert is missing form both this historical discussions and the recently revived focus given to AI.

This article examines the complementarity of AI and humans in the context of organizational decision making, building on claims issued by certain AI pioneers that "computers plus humans do better than either one alone" (Campbell, 2016). A single instance is games. The restricted cognitive capacities of even chess professionals limit their ability to anticipate and process game eventualities; it is estimated that they only take into account 100 scenarios, or about 10% of the potential decisions and responses (Simon, 1982). Since IBM Deep Blue defeated then-grandmaster Gary Kasparov in 1997, artificial intelligence has long since transcended this basic cognitive capacity. This was the start of a

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new era, and many people thought that chess would eventually die out. However, the best chess player was neither artificial intelligence nor human when He created his own the opinion for a new chess league, which was modeled after the concept of "free style" martial arts. He described them as centaurs, and they're essentially human-AI interactions. A view of the complimentary duties of AI and humans is presented by the example of chess; both provide distinct but similar abilities necessary for sound decision-making.

The human-AI collaboration is not just limited to chess; it may be apparent in other contexts as well (Brynjolfsson & McAfee, 2012). A recent work on the identification of cancer in lymph node cell pictures provides another example (Wang, Khosla, Gargeya, Irshad, & Beck, 2016). An strategy that combined inputs from both AI as well as pathologists produced an error rate of 0.5 percent (an 85 percent reduction in mistake), instead of 7.5 percent for an AI-only approach and 3.5 percent for pathologists. These situations recall us of J. C. R. Licklider's idea of "human-machine symbiosis," which is a partnership in which the benefits of one complement the disadvantages of the other. A new human-machine connection is coming due to the revival of AI. How humans and emerging artificial intelligences may work together to support corporate decision-making has remained an open subject. We use the difference between analytical and emotional decision-making as well as the three problems that organizations face when making decisions—uncertainty, complexity, and equivocality—to answer this fundamental query (Choo, 1991; Simon, 1982). Management researchers have made a distinction between analytical and intuitive methods of information processing and decision-making by examining the day-to-day activities of managers and other members of the corporation (Dane, Rockmann, & Pratt, 2012). On the one hand, by using an analytical approach, people thoroughly and methodically collect and analyze data in order to develop alternative answers. The techniques of analysis frequently entail using rational analysis and conscious thinking to analyze knowledge. AI's capacity to solve problems is more suited to assisting with analytical than intuitive decision-making. As explained, artificial intelligence includes a wide variety of methods and applications. In this article, however, we concentrate on analytical AI methods and uses that duplicate and build on human reasoning, and hence human reasoning to make inferences from vast amounts of data. For instance, artificial intelligence (AI) tools like expert systems and predictive analytics offer affordances for thoughtful analyses that incorporate otherwise unmanageable volumes of data, generate analysis, and assist with weighing various possibilities for decisions.

However, a large portion of human cognition and decision-making originates from the subconscious in the area of vision rather than being the direct consequence of conscious information collection and processing (Dane et al., 2012). As defined by Sadler-Smith and Shefy (2004), intuition is a capacity to create direct information or insight and reach a conclusion without using logical inference or rational cognition. A "gut feeling" or "business instinct" regarding the success of an investment or a new product is an example of superior intuition. Imagination, sensitivity, rumination, creativity, and what psychologists like Carl Jung refer to as "intuitive intelligence"—the ability to evaluate options with an increased views, surpassing ordinary-level functioning based on basic rational thinking—are each part of intuitive decision making (Bishop, 2000). Using an intuitive approach, the person makes decisions or reacts without thought by drawing on prior embodied behaviors, experiences, and judgments. Logical methods to decision-making deal with a complete and abstract representation of the situation, focusing on breadth while analytical techniques depend on depth of knowledge. These two approaches are used as concurrent decision-making systems to better handle different situations and are not exclusive of another. While artificial intelligence systems facilitate analytical decision-making, they are less able to deal with "sensible situations" (Guszcza et al., 2017) and are not as practical than humans in unpredictable or uncertain situations, in particular when they are not within a predetermined field of expertise (Brynjolfsson & McAfee, the year 2012). "Humans bring common sense to the work; by definition, common awareness is not a fact-based undertaking," says IBM Chief Research Officer Bernie Meyerson. Choice is a final call. Captain (2017). As result, when presented with decisions that call for intuition, humans typically do better. In the sections that follow, we demonstrate how AI, which takes an analytical stance, is superior at resolving decision-making complexity. Even though AI has certain advantages in this area, humans will probably continue to have an outside edge in handling ambiguity and uncertainty in decision-making because they are better at using their intuition, imagination, and creativity.

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Uncertainty :

Lack of knowledge about all the options or their effects is known as uncertainty, and it makes situation interpretation and decision-making more challenging (Choo, 1991). Lack of awareness of the internal and external corporate environments—such as a shortage of human resources, the rise of disruptive technology, new markets and rivals, and new government regulations—can lead to uncertainty. Through probabilistic and datadriven statistical inference techniques, machine intelligence (AI) and other intelligent technologies can produce novel ideas. Additionally, AI's special affordances for recognizing relationships among numerous factors can help human decision makers gather and act upon new information more efficiently. For instance, creating fresh data and predictions about clients, assets, and operations is one of many main purposes of predictive analytics. Partially automated strategy articulation is made possible by advanced technologies that consulting firms like Deloitte and McKinsey have already created. These tools provide monitoring and sensing of an organization's external environment. Another example is how AI systems can assist managers in identifying irregularities by giving them real-time information on early indicators of more serious problems, which enables them to take prompt corrective action. Moore (2016) proposes applying AI algorithms to examine the comprehensive maintenance log of a fleet of aging F-16 fighters in order to spot failure trends that could only affect a small number of aircraft at the moment but could eventually become more common issues. An emotional approach to making choices may be more beneficial when there is a great deal of ambiguity (as is the case with most organizational decision making) or when organizations are faced with circumstances for which there is no precedence. This is a perfect example of how "the ratio of examples of past similar decisions to stuff that may prove important for those decisions is often abysmally low" in many organizational decisions. Sam (2016). Even the most information-centric, logical systems can have their judgments and tactics unexpectedly affected be issues ranging from global crises to technical hiccups. Although cognitive technologies are capable of analyzing contexts involving probability-based decisions, they are not ideal to address new problems or circumstances (Guszcza et al., 2017). Real-world choices is complex, and focusing only on statistical, analytical thinking is sometimes insufficient, unlike board games where the likelihood of the next move can be determined (Campbell, 2016). Human decision-makers frequently expand upon an intuitive approach in this situation by utilizing insight and qualitative evaluation that are derived from years of implicit experience and their own judgment. Beyond the fact that they "feel right," it is quite difficult to provide the reasoning behind these selections (Sadler-Smith & Shefy, 2004). As a result, people are still very good at making decisions on uncertain real-world issues. As a well-known example, Apple has rarely taken surveys, studies, or thorough research into account when creating new products. Despite the fact that they "feel right," it is quite difficult to explain the reasoning for these choices (Sadler-Smith & Shefy, 2004).

As a result, people are still exceptionally skilled at making decisions on uncertain real-world issues. As a wellknown example, Apple has rarely taken surveys, studies, or in-depth research into account when choosing new products. Additionally, big decisions rarely require months to make; instead, Steve Jobs gained an image for making snap decisions based on instinct. Steve Jobs made the quick decision that Apple should offer the original iMacs in a rainbow of delicious hues. According to Apple Executive Design Officer Jony Ive, "that decision would have taken months in most places." Steve completed it in thirty minutes. Smith (2016). This suggests that Jobs' inventiveness and originality in making decisions did not always come from analyzing data and calculating the likelihood of success, but rather from developing solutions that seemed logical and holistic based on his "gut feeling," which shaped the consumer technology the market and consumer preferences. Although Steve Jobs' choices weren't always successful (such as picking the incorrect market for NeXT computers and releasing failures like the Macintosh TV), a strong intuition is partially fueled by implicit learning from past errors and tests. Except for Apple, senior decision makers often place a higher value on intuition than on analytical evidence. "A lot of the time, people will do a brilliant job up through the middle-management levels where it's heavily quantitative, in terms of the decision-making," said a top executive of one of the biggest pharmaceutical firms in the world about his approach. However, as they get to senior management, the issues get more complicated and unclear, and we find that their intuition or judgment is flawed. And it's an acute problem when that happen. Hayashi (2001).

Unique and creative decision-making situations can be solved via abstract thinking and a gut feeling (Gardner & Martinko, 1996). It is nearly hard to replicate this innate, unexplainable sense that "comes from within" (Parikh, 1994)

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with artificial intelligence. The hidden patterns and inner logic of human intuition are often far too complex for machines to duplicate. As a result, in these domains, AI will fail to replicate human problem solving. In settings that call for comprehensive and creative thinking, humans have a tendency to maintain their comparative advantage. Since strategic planning activities may involve larger levels of ambiguity and uncertainty, this could be found in companies with higher levels of seniors (Sadler-Smith & Shefy, 2004).

Complexity :

A great deal of components or factors characterize complicated situations. They need that vast amounts of data be processed at a rate that is faster than even the most intelligent human decision-makers can think. Artificial intelligence (AI) has recently outperformed humans in complicated tasks due to its better quantitative, computational, and analysis abilities. Algorithmic decision-making, when applied to big data, has opened new avenues for handling complexity and offers more efficient means of providing human decision makers with thorough data analytics.

As a scientific device for acquiring and analyzing vast amounts of data, artificial intelligence (AI) has the benefit of brute force, which reduces the complexity of a problem area. By determining causal linkages and determining the proper cause of action among numerous options through causal loops (if this then act so), for instance, computer vision (AI) can assist in simplifying an issue (Marwala, 2015).

AI may help with everything from determining a person's credit risk by looking at their Facebook friend list to pricing advertisements in digital marketing to underwriting mortgages in the US residential housing . This has been taken to a whole new level in recent years with the introduction of deep learning, which enables the computer to learn from the raw data itself and to keep growing by including bigger data sets. Humans may not be able to handle the volume of data in these complex scenarios; robots routinely produce better-quality

decisions. Combining the speed at which AI gathers and analyzes data with the greater intuitive judgment and understanding of humans is one way to bring about the beneficial collaboration between AI and humans. For example, Correlations Ventures, a startup-financing venture capital firm, evaluates investment prospects in two weeks by combining the predictive capacity of AI analytics, which handle vast amounts of data with ease, with a more comprehensive evaluation of the outcomes by human specialists. For instance, by sifting through and analyzing enormous amounts of user-generated data, bots can now identify offensive or heated web or social media content. However, the on-demand workers "behind the AI curtain," who employ superior human judgment, frequently make the final decision to delete social media posts or videos (Grey & Suri, 2017). Since AI "can sift via vast amounts of data to highlight most interesting things, at which point managers can drill down, via human intelligence, to reach inferences and take actions," according to Reid Hoffman, executive chairman of LinkedIn, AI systems allow individuals to make better decisions.Hoffman (2016) .

Equivocality :

In the words of Weick as well as Roberts (1993), equivocality is the existence of multiple concurrent but different interpretations of a decision domain. The opposing priorities of stakeholders, consumers, and policymakers frequently lead to equivocality. As a result, decision-making becomes intrinsically subjective and political, striving to satisfy the competing demands and goals of many parties, rather than the neutral, objective process that is presumed in an analytical, rational approach. Parties whose power and interests are impacted by the planned and random effects of a decision can, in practice, thwart even the most analytically-calculated reasonable decision. AI can provide specific resources that help decision makers resolve pertinent competing needs and get over ambiguous situations. AI systems that perform sentiment analysis of internal as well as external channels, like social media, for instance, typically offer a more accurate representation of possible responses to organizational decisions.

But human actors bear the primary duty to handle confusion. Their ability to understand the political environment both inside and outside the company and to create the necessary invisible foundation for effectively making, negotiating, and carrying out choices (such as forming alliances and coalitions) is probably going to remain superior. Even while machines can identify a great deal of "optimal" option, they have a harder time motivating a wide range of stakeholders. Remember the chess example. "Chess machines make moves that sometimes make no sense to their human

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challengers," claims Murray Campbell, a major player in the IBM Deep Blue research. They [still] lack sense of style .They can play any move, regardless of how ugly it is, and they play whatever they believe to be the objectively best move in any position, even if it appears crazy (Campbell, 2016). Many of the choices made in companies are subjective, emotionally charged, and contextually sensitive, which can conflict with the machine's objective, impersonal approach. By creating a decision consistent with different priorities, both official and informal leaders play an important part in motivating others.

The ability to create realistic objectives and plans and then influence others—including their staff and external stakeholders—of the necessity of their choices is a crucial skill for organizational leaders. This necessitates emotional and social intelligence, which forms the basis for applying interpersonal skills. Moreover, informal leaders—who aren't always managers with official authority—are key in addressing the ambiguity of decision making .Through their social connections, abilities, as well as their knowledge of the social dynamics within their companies, informal leaders have long been seen by organization scientists as being in a good position to bring people's interests together, resolve potential conflicts, and foster consensus (Cross, Borgatti, & Parker, 2002). Analyzing intricate social networks is typically beyond AI's capabilities. Organizational members "will 'follow' the AI system in the same manner that they could be expected to follow the compelling story of a capable human leader," based on Parry, Cohen, and Bhattacharya (2016). As a result, people still have a distinct advantage over machines in social procedures like persuasion and negotiation, as well as in comprehending the complex social and political dynamics that underlie situations involving ambiguous decision-making. It is essential to remember that all three of these traits—uncertainty, complexity, and equivocality—are frequently involved in the decision-making process (Koufteros, Vonderembse, & Jayaram, 2005), and they shouldn't be viewed as mutually exclusive. To different levels, a combination of analytical and intuitive methods is the best method to manage almost every aspect of organizational decision-making (Hung, 2003). "Aspects of both analytical and intuitive thinking are necessary but not sufficient for optimal business performance," as Martin (2009) puts it clearly. The most prosperous companies in the years to come will strike a balance between creative intuition and statistical expertise. Burke and Miller (1999) mention a manager who explains why depending solely on analysis or intuition is not enough, especially when it comes to persuading people to participate in collaborative conclusion-making: "Every decision is a combination of deduction and intuition." In my opinion, intuition by itself isn't really practical. I guess you might face supervisors who think using intuition is equivalent to making up an answer. In my opinion, intuition cannot function unless you are given access to data that you can digest and integrate with both data-driven analysis and prior experience, which serves as intuition's primary driver. Even the most complicated choices may contain some degree of uncertainty, making human input essential. Humans, for example, can determine which variables or future events (among countless factors) may have a greater impact on outcomes by applying intuitive approaches. This helps decide which factors should be prioritized in data collection and analysis, which is primarily carried out by the analytically-based approach of smart technologies. Moreover, study frequently yields several alternative paths with nearly equal factual basis; humans can assist in selecting the one that seems more intuitively logical.

Thus, there are two possible outcomes for collaborating between AI and human decision makers:

1. AI and humans can work jointly to address different decision-making issues. Artificial intelligence (AI) is probably well-positioned to address complexity issues through analytical methods, freeing up humans to concentrate more on ambiguity and uncertainty via more imaginative and intuitive methods.
2. As already stated, even the most demanding choices—where AI has a competitive advantage—are probably going to involve some degree of ambiguity and uncertainty. Thus, in the face of confusion and unpredictability, humans and AI both continue to be involved in nearly all challenging circumstances, as seen in fig 1.

Figure 1: Human-AI complement in decision-making instances, which are generally characterized by ambiguity, complexity, and uncertainty .

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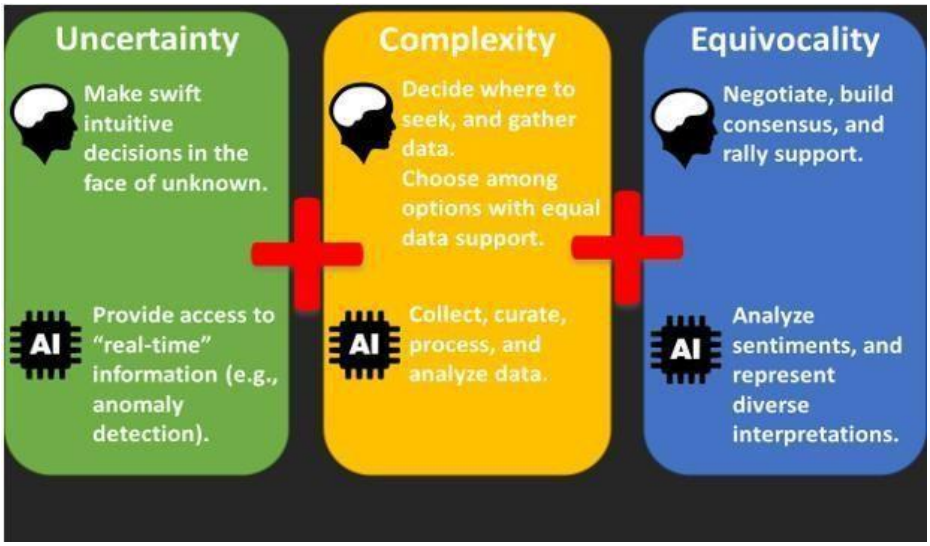

II. CONCLUSION

A new human-machine partnership is required by the emergence of AI, which implies a changing division of labour between humans and machines. Common conceptions of human-machine collaboration imply that routine chores should be handled by robots so that people can concentrate on more creative endeavors. In light of the major improvements in AI capabilities in recent years, this article goes beyond this straightforward vision and promotes the idea of human-machine collaboration by highlighting the relative advantages that humans and machines possess with regard to the three traits that plague practically all organizational decision-making scenarios. The role of human decision-makers and their intuition in handling ambiguity is important, even while AI capabilities assist people in overcoming complexity through the machines' superior analytical approach. When latent choice heuristics are required to assess and promote decision outcomes, machines depend on humans.

According to Parry et al. (2016), AI systems have already surpassed humans in achieving certain quantitative goals with calculable criteria, which reduces the complexity of decision-making. When assessing subjective, qualitative issues (such as norms, intangible political interests, and other complex social, contextual aspects), humans will probably perform better than AI. Human capitals include past experience, insight, as well as holistically vision. These are internalized as automatic, subconscious, and intuitive thought processes that continue to give people special advantages despite dealing with confused and uncertain situations. Humans are still stronger at big-picture thinking because of their intuitive nature. In the words of Davenport (2016), data alone is insufficient to answer deeper strategic concerns, which call for a comprehensive approach. According to Henry Mintzberg (1994), strategic thinking is based on intuition, creativity, and synthesis; as a result, it largely produces a "integrated perspective of [the organization]" as opposed to a "too-precisely articulated vision of direction" (p. 108). The use of AI and other cognitive technologies can undoubtedly be helpful, but thinking strategically in particular calls for a level of sense-making and comprehension of the world outside of particular decision contexts that is only possible for humans. The possibility that AI can pick up, mimic, and reproduce human personality traits, subconscious thought processes, and life experiences that lead to better natural decision-making is remote.

Because of their inherent capacity to think naturally, humans continue to be better at big-picture thinking. In the words of Davenport (2016), a complete approach is necessary to address deeper strategic challenges, while data alone is insufficient. Henry Mintzberg (1994) says that because strategic thinking is grounded on synthesis, creativity, and intuition, it typically results in a "integrated perspective of [the organization]" rather than a "too-precisely articulated vision of heading" (p. 108). While there is no denying the potential benefits of using AI alongside various cognitive

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technologies, strategic thinking in particular requires a level of sense-making and understanding of the world outside of specific decision contexts that is unique to humans. Product designers (e.g., working for affective design), human resource specialists (e.g., training and organizational learning specialists), market analysts, and other knowledge workers who might frequently adopt an analytical, logical decision-making approach are scenarios of these non-managerial roles. Organization studies (e.g., Cross et al., 2002) also demonstrate that leaders are not always the same as formally designated managers; in fact, lower level members of an organization can hold key positions in the informal network of organizational influence and play an essential role in mobilizing support to address decision-making ambiguity. Consequently, lower-level decision-making may not be amenable to AI capabilities.

This article advances knowledge about how artificial intelligence (AI) can support and enhance human decision-making rather than take its place. Kevin Kelly (2012) makes the following claim that "This is not a race against the machines. The machines are competing in this race. Viewing AI as a tool for "augmentation"—extending human capabilities—rather than "automation"—replacing them—is more timely and in keeping with the idea of human-machine symbiosis. Instead than obsessing over superintelligent machines that can mimic every facet of human intelligence and eventually replace them in the job, this can act as a more useful roadmap for the future. Human intervention is arguably necessary to develop such "strategic human-machine partnerships" (Davenport, 2016); thus, the opportunity of an organizational decision system that is solely AI-based is stupid.

Implications for organizations and managers :

Many managers use the substantial immediate staff reduction as a means of defending return on investment, or ROI, in cognitive technology when it comes to AI-enabled company investments (Davenport & Faccioli, 2017). via this study, we propose that the majority of AI's benefits will probably only become apparent via long-term collaboration with special human capabilities. Therefore, it requires patience and an eye toward the future to evaluate the economic value of AI adoption (instead of focusing on short-term ROI evaluation for analyzing immediate financial benefits). It is irresponsible to think of AI as a cure-all. a few centuries of research, organizations are complex sociotechnical systems (Sawyer & Jarrahi, 2014), and technology advancements only succeed when they are carefully woven into the corporation's social fabric . Studies on earlier technologically driven projects, such business process reengineering, indicates that the immediate financial benefits of replacing people may be fleeting and overcome by more significant and unseen consequences, like a disillusioned staff (Mumford, 1994). In order to achieve the human-AI relationship outlined in this paper, it is necessary to proactively identify domains where AI may enhance human decision-making rather than merely replace or by algorithms manage it. American Express and Procter & Gamble serve as helpful examples. Although both businesses have been using AI for years, their general objectives have never been to merely automate procedures or replace human labor. Instead, they perceive and employ AI as a tool that workers can use to do their tasks (Davenport & Bean, 2017). In contrast, many forms of algorithmic management today embody a pervasive modern-day Taylorism that, whether on purpose or by accident, aims to deskill employees by treating them as "programmable cogs in machines" or eliminating them completely from organizational processes in the name of productiveness (Frischmann & Selinger, 2017).

When humans and AI communicate, it can eventually make both of them smarter. This is known as humanAI symbiosis. The majority of AI algorithms have the capacity to gain knowledge to become more useful with increased data exposure and human partner interaction. In a comparable manner human decision makers are likely to gain a more sophisticated grasp of cognitive machines, their workings, and how they may aid in decision-making over time. Additionally, cognitive technologies can help people become more analytically proficient. For instance, a recent online game experiment at Yale School of Medicine indicates that intelligent bots improved the effectiveness of human player teams (Shirado & Christakis, 2017). By reducing the median time for human teams to solve problems by 55.6%, the technology improved team performance. Managers and staff have to change and readjust as AI grows and becomes better over time. Human decision makers must constantly improve both their competitive edge in this partnership (e.g., intuition, holistic vision, and emotional intelligence) and their AI literacy (e.g., how to invoke and put into practice the most recent AI developments) in order to maintain a balanced human-AI symbiosis. Humans still need to develop cognitive abilities even though their main advantage in decision-making is their intuitive ability. To be AI literate,

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humans must learn to understand how cognitive technologies make analytical decisions and figure out how to incorporate these technologies' analytical capabilities into organizational procedures. As a result, the concentration on analytical abilities in both on-the-job training and formal academic training (such as MBA curriculum) is unlikely to change. Actually, understanding how smart technologies make analytical judgments or suggestions is a crucial component that fosters human trust and improves people-technology interaction (Davenport & Kirby, 2016). Transparency in this process improves communication between humans and AI and gives people the chance to develop their analytical abilities. Lastly, digital transformation plans should rethink work and decision-making around uniquely human or artificial talents in order to embrace AI's potential. More precisely, a successful AI strategy should 1) capitalize on existing strategic capabilities and 2) pinpoint areas of mutual benefit between knowledge workers and AI. General Electric (GE), for instance, has undergone a significant digital transformation in recent years, evolving from an industrial product and service company to a "digital industrial" one. By using AI technology to make sense of the vast amounts of data generated or captured by an enormous variety of industrial devices (called legacy systems), GE has been able to provide insights in this environment. Optimizing decisions about operations and supply chains through a better understanding of how the equipment is operated is one of the obvious outcomes (CIO Network, 2017). In addition, in order to create a functional human-AI symbiosis, GE supports and leverages "dual experts" or "hybrid scientists," who are first employed as subject matter experts (such as physicists, aerospace engineers, or business analysts) and subsequently receive training in machine learning or other AI domains (through GE's data analytics certification program). These people are probably going to come up with the most practical ways for implementing AI into their specialized fields. GE wants to assist these professionals in deploying AI, not replace them.

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