

Technology, a peril or a helm?

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Abstract:

For more than a century, we have been robotically automating organizations by segmenting value chains into simple tasks that are then optimized. Robots are now a full part of everyday life, and we must help “collaborators” regain humanity by relying on their special qualities: empathy, creativity, complex problem-solving. After all, who can do better than a robot — save another robot? The value added by human collaborators has to enable us to reinvent value chains by redistributing roles. To do this, we must radically overhaul procedures of recruitment and management so as to acquire the necessary skills and qualifications that will turn humanity into the factor that makes a difference in the future.

Now past is the era when people are born into the same world where they will die.¹ Technology has undergone unprecedented growth at a pace so fast that, during the 21st century, we will undergo the equivalent of the progress made during the past 200 centuries. Within a few scant years, the technological transition has become a reality for many firms. “Smart” machines — more rapid, more efficient and less expensive than human beings — can perform not just routine tasks but also activities requiring cognitive abilities. Nowadays, the biggest challenge to firms is as much human as organizational. At stake is, on the one hand, to reinvent the value chain by breaking up traditional bunkers in order to take full advantage of the complementarity between technology and “revalued” human beings; and on the other hand, to reconsider the management of human resources (HR) by bolstering the unique qualities of human coworkers. Artificial intelligence (AI) is disrupting companies’ rules of operations; but above all, it is about to lead humans to invent a new humanity.

Reinventing business models and value chains

“None of my friends uses an automated system or trusts AI to choose the investments to make” — a surprising reply from an outstanding engineer in Silicon Valley whom I had asked about his view of changes in the banking sector.² He then added, “Even if there probably is a tool thanks to which I could benefit from simple advice after having entered some personal information about myself, I prefer spending 45 minutes with my investment advisor. I have full confidence in her and her expertise.”

¹ This article has been translated from French by Noal Mellott (Omaha Beach, France). The translation into English has, with the editor’s approval, completed a few bibliographical references.

² Quotations come from exchanges with the persons indicated, who have agreed on these quotations being cited herein.

Scenarios of catastrophes suffused with Taylorism

This reply contrasts with many a negative scenario for the coming decades that focuses on the job insecurity caused by AI. True, the advances made in computational power, data storage and analytics make possible what used to be (till quite recently) pure science fiction. However this progress bears several advantages: productivity will improve, and the offers made to customers will be more relevant. As a consequence, studies have concentrated on its potential for automating tasks; but they have been carried out in an economy still suffused with Taylorism. They ratchet up a notch the splintering of the value chain by dividing the roles in each process into tasks distributed among robots and human beings, the purpose being to optimize efficiency while maintaining the *status quo*.

Overhauling the organization is seldom imagined. This error is typical of plans for installing digital technology that ask no questions about the organization as it now exists. This is one reason why start-ups are successful. To optimize efficiency and value, the distribution of roles and responsibilities has to be redesigned across the board: between customers, employees and robots. The value added by each party has to be unique.

An unparalleled occasion for reinvention

Take the example of Alan, a French fintech that offers business-to-business (B2B) insurance products. To optimize the customer experience and make it a discriminant, the company has chosen to concentrate customer relations in the hands of two persons who, fully responsible, see to the meticulous coordination of their actions: the pre-salesperson and the post-sales account manager. For Vincent Brachet, chief financial officer and HR at Alan, *“From the first interaction between a prospect and a salesperson, the latter becomes responsible for his colleague’s decisions.”*³

Considered to be a world leader in operational efficiency, Michelin has invested heavily in ongoing improvements and in making employees responsible. Jean-Christophe Guérin, director of manufacturing, has a very humanistic formulation of the complementarity between people and techniques: *“AI will be a tool for assisting decision-making that will contribute to the acceleration and efficiency of many processes in a factory. But the final decision will always fall on people, since they have the sense of meaning, the ‘why’ of what they are doing. Besides, people are endowed with a very hard-to-replace quality: good sense!”*

So, the future before us, disrupted by the technological revolution, is a wager. It offers people the occasion to reinvent themselves, reinforce their inherent qualities and reverse the tendency bred by one hundred years of Taylorism, by hyperspecialization. Reinventing the value chain so that people are the genuine discriminant requires a thoroughgoing change in human resource management.

Rethinking human resource management

Tomorrow’s winners will be the firms that have not tarried to commit themselves to deep changes in their human capital and its organization so as to have the unautomatable human qualities that will make a difference and to anticipate the aptitudes and qualifications requisite for being efficient in a sophisticated technological environment. These changes must be conducted fast and thoroughly if everyone is to be able to fulfill themselves and attain their potential. According to Yves Martrenchar (in charge of HR at BNP Paribas), *“Offering long term development opportunities, treating people with respect and being socially responsible are three of the most powerful employee engagement drivers that can be observed in our Group. Our responsible anticipation of our future*

³ Vincent Brachet (29 May 2018) “Alan, nos commerciaux ne vendent pas” at <https://medium.com/alan/nos-commerciaux-ne-vendent-pas-e1cd95a8f6>.

needs will strongly nurture those three drivers, building engagement and advocacy, thus contributing to attract, develop and retain the employees we need.”⁴

For some firms, the transformation of human capital starts with strategic workforce planning. Usually stemming from what Ray Kurzweil, chief engineer at Google, has described as “*the intuitive linear view versus the historical exponential view*”,⁵ these exercises help to lead managers to project themselves into a world in the throes of change. However workforce planning methods have to be completed with actions to be undertaken right away.

Simple, immediate actions to prepare for the future

In parallel to complex analyses, some winning actions can immediately be undertaken in HR management.

Put recruitment to the test of time

The teams that recruit employees must adapt their selection filters in order to attract the skills necessary for tomorrow’s world. There are two simple, indispensable criteria:

- for all new recruits: flexibility and agility along with a solid base in STEM (science, technology, engineering and mathematics); and
- for employees in contact with customers and for managers, present and future: emotional intelligence, empathy and problem-solving skills (autonomy and creativity).

Accompany the development of employees’ skills

Everyone must be able to imagine their future with technology. The mature, well-structured and most predictable sectors, which now account for 50% of jobs in many countries, will probably feel the brunt of the technological revolution. This is where the acceleration of technology will spawn the most anxiety.

Three initiatives can be launched to improve employees’ skills and qualifications:

- The intensive use of technology in employees’ everyday activities. This can motivate employees by sparing them fastidious tasks and thus freeing time for them to concentrate on honing their skills.
- The development of flexibility and resilience is vital at a time when each employee’s job is likely to change significantly. Programs of job rotation and “transversal mobility” that are relatively easy to launch can foster agility.
- An in-depth transformation and reorientation of employees who have contacts with customers. These employees will be relieved of most of their administrative tasks, which will be assigned to robots. Customers, more autonomous, will expect an outstanding quality of service and better problem-solving skills from employees. Firms will attach more value to rapidity, “reactivity”, global problem-solving and customer satisfaction.

Boost expertise

Many firms have difficulty developing chains of expertise alongside managerial chains. Nonetheless, only experts are capable of training and exercising machines so as to fully profit from the opportunities offered by AI. A team at Harvard recently identified cancer cells with 92% accuracy thanks to AI; but pathologists won out over AI with 96% accuracy. By pooling the expertise of pathologists and of AI, accuracy reached 99.5%.⁶ This shows how important expertise is and, too,

⁴ Yves Martrenchar (3 April 2018) “Anticipate tomorrow’s skills” at <https://www.linkedin.com/pulse/anticipate-tomorrows-skills-yves-martrenchar>.

⁵ Ray Kurzweil (7 March 2001) “Law of accelerating returns” at <http://www.kurzweilai.net/the-law-of-accelerating-returns>.

⁶ Bonnie Prescott (22 June 2016) “Better together: Artificial intelligence approach improves accuracy in breast cancer diagnosis”, *Harvard Medical School News & Research*, available at <https://hms.harvard.edu/news/better-together>.

how AI can complete and improve it. Developing solid expertise and investing in experts by giving them the possibility of learning and experimenting by using new techniques is a bet on future performance.

Human capital, a pull factor

Combined with new approaches to HR management, new techniques provide an opportunity for bolstering skills in a firm: excellence in expertise, creativity in problem-solving, agility and empathy. These skills, in line with the values of Millennials, are relevant and attractive to recruits from the new generation.

The evolution of technology underscores the importance of diversity, now a key to collective creativity and complex problem-solving in a multiform world. A plurality of viewpoints helps eliminate blind spots. The Silicon Valley engineer whom I interviewed stated this quite well: *“I don’t know what I don’t know. That’s why diversity is vital. It helps us imagine inclusive products that will satisfy everyone.”* Generational diversity is worth mentioning. The new generations might show more enthusiasm for the tools than for the reasons underlying their development. This engineer gave an illustration: *“AI is a tool, not a final objective. Age and experience help to understand it and can also help young generations of scientists to concentrate on real priorities.”*

Foster a new generation of managers

In a world upended by both technology and roiled by the younger generation’s mentality and behavior, company cultures have to adapt. This is decisive for managers: they must not only adopt new techniques and adjust their methods of project management, but also understand the evolution of their role from an individual toward a more complex management that stimulates a healthy, productive momentum within work teams in pursuit of a common goal.

“Enhanced” managers

Several factors combine to modify the manager’s role: *a)* the acceleration of technological developments and of schedules for projects; *b)* the increasing complexity and rising expectations about changes in firms; and *c)* the deployment of multidimensional work teams that, active in agile environments, make it nearly impossible to resort to bygone controls of performance.

These changes lead to reconsidering governance in firms. In more advanced companies, the dashboard can be replaced with a round-the-clock alert system (with parameters to be reset as criteria evolve). Controls and decision-making can descend to the right level in the organization, thus making employees more responsible and giving satisfaction to Millennials in particular. AI can set off alerts about unusual situations and help managers make tactical decisions by providing them with the right level of information. This will relieve upper white collars of their cognitive load and thus free time and resources for them to concentrate on the firm’s strategy, objectives and dynamics.

At the mid-management level, “enhanced” managers who benefit from AI can pass from direct supervision and *ex post facto* analyses to “anticipation”. Bruno Guillemet, senior vice-president of HR at Valeo, recently explained this to me: *“AI and big data modify the role of our managers, for instance in maintenance. Much more work is devoted to predictive maintenance, decision-making is facilitated, and we expect, therefore, more reactivity and anticipation.”*

Technological progress is a fantastic driving force of behaviors up to the highest levels in a firm. At stake is to accompany managers as they adopt these methods and tools so as to improve their decision-making, free their time and help them reinvest in their own transformation.

“Polar star” managers

At a time when flexible work has become the norm, a firm’s tactical responses often mask its strategic orientation. “Agile” teams are sometimes satisfied with incremental improvements that do not allow for the disruption necessary for reaching more ambitious objectives. Besides, the new technology offers us the opportunity of working in “transversal” organizations, which assemble wage-earners, entrepreneurs and academics around a single project. As these untraditional networks form, creativity and innovation are freed inside the firm.

Since these complex organizational models might make us lose sight of the firm’s major objectives, managers have a key assignment: develop, formalize and share a convincing vision and tout it at all levels in the organization. In an accelerated, ever less foreseeable world, this vision has to be a course to be steered and not a plan with a horizon three or five years down the line — a direction, like the polar star, toward which teams are heading while adapting to a rugged terrain with pitfalls, a set of guiding principles and convictions to be frequently repeated and reassessed.

Managers more human

IBM recently observed that *“employee engagement explains two-thirds of our client experience scores”*.⁷ Corroborating this result, several studies have emphasized the importance of accompanying change so as to give it meaning and set value on what is human. In an ever more virtual world, where people might be behind the smart machines and alert systems, it is necessary to recognize the value of the staff’s human qualities. This recognition will weigh increasingly on the firm’s performance.

Stimulating engagement is a complicated task. According to recent research, the young generations deeply want to demonstrate their own skills and aptitudes and be recognized individually for them. These young people want to make decisions about how their teams can improve and succeed. But how, as a manager, to make team work and group responsibility compatible with the individual’s responsibility and personal fulfillment?

Once again, technology holds part of the solution. As Jean-Charles Rebour, vice-president HR at GSK has explained, *“The new technology and AI open major fields of possibilities for HR interventions, in line with the need for individualization. In terms of engagement, big data and AI will enable us to understand everyone’s driving forces and to draft personalized action plans.”* Managers will thus help their collaborators reach their true potential by boosting and reinforcing their individual skills while demonstrating how these skills can help improve a team and reach the firm’s objective. To be fully convinced and “engaged”, collaborators will need tangible evidence. Here too, emotional intelligence will be a catalyst of managerial activities.

New forms of technology and artificial intelligence are now leading us to reverse the trend from a century of Taylorism — to divide roles into simple, optimized tasks tending toward a robotization of the staff. They offer us an extraordinary occasion for pondering the qualities that are our own: creativity, agility, emotional intelligence. To seize this opportunity, we have to rapidly and deeply conduct our own transformation. This requires a joint effort by the private and public sectors with, in addition, an indispensable reform of education. This reform must lead young people, and the less young, to reinforce their “situational” intelligence, creativity and empathy while developing individual and collective intelligence.

⁷ Lisa Burrell (2018) “Co-creating the employee experience”, *Harvard Business Review*, March/April, available at <https://hbr.org/2018/03/the-new-rules-of-talent-management#co-creating-the-employee-experience>.