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RÉSUMÉ – L'IA est actuellement largement intégrée dans les processus de production des produits/services. Son adoption n'est pas mise en cause. Si ses avantages fonctionnels et économiques sont pris en compte, son impact sur les employés ne l'est pas. En 2018, nous avons réalisé 62 entretiens semi-directifs avec des salariés travaillant en Suisse romande. Nos répondants sont optimistes et ne craignent pas de voir leur expertise remplacée par des robots intelligents. Les impacts négatifs pourraient donc générer une dissonance cognitive susceptible de conduire à des risques humains. Il est inquiétant de noter que la mise en œuvre de l'IA et d'autres technologies de numérisation est gérée comme s'il s'agissait d'une mise à niveau informatique. Lorsque cela ne fonctionne pas, les employés impliqués doivent prendre en charge les problèmes, sans y être préparés ni disposer des ressources nécessaires.

MOTS-CLÉS – Intelligence artificielle, numérisation, risques humains, Suisse, enquête qualitative

DUBOSSON (Magali), FRAGNIÈRE (Emmanuel), ROCHAT (Denis), SITTE (Marshall), BERDEAUX (Eric), « Confusion between Artificial Intelligence and digitisation at work. Ignorance or blind trust? »

ABSTRACT – AI is currently largely integrated into the production processes of products/services. Its adoption is not in question. While functional and economic benefits are considered, the impact on employees is not discussed. In 2018, we conducted 62 semi-directive interviews with employees working in French-speaking Switzerland. Our respondents are optimistic and do not fear that their expertise will be replaced by even intelligent robots. The negative impacts could therefore generate cognitive dissonance that could lead to human risks. It is disturbing to note that the implementation of AI and other digitisation technologies is managed as if it were a computer upgrade. When this does not work, the employees involved must take charge of the problems and their resolution, without being prepared or having the necessary resources.

KEYWORDS – Artificial Intelligence, digitisation, human risks, Switzerland, qualitative survey

CONFUSION BETWEEN ARTIFICIAL INTELLIGENCE AND DIGITISATION AT WORK

Ignorance or blind trust?

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INTRODUCTION

Artificial intelligence (AI) and digitisation as a whole will profoundly change the business world (Loebbecke and Picot, 2015). In particular, AI will play a preponderant role in the aspects of work related to digitisation, data analysis, interpretation, problem diagnosis and decision support. While AI is supposed to support intellectual work and not simply replace it, there is probably no universal approach to the introduction of AI. This study seeks to understand why AI and digitisation are likely to take different paths in different occupations and sectors, and why it is crucial to consider the human factor as a priority (Arntz *et al.*, 2016). Our main finding is indeed that the emerging and uncontested digitalisation of services could lead to cognitive dissonance, and thus to human risk, due to a misunderstanding of the new role of artificial intelligence at work: AI is often confused with the broader

generic concept of digitisation. That is why we use both terms, AI and digitisation, as equivalents in this document.

The research is based on a qualitative survey. In 2018, we conducted 62 semi-structured interviews in French-speaking Switzerland. The profiles selected corresponded to people working in different service sectors (banking, insurance, health, education, etc.) with different professional statuses (employees, executives, directors, etc.).

All the interviews were transcribed in full to allow a rigorous analysis using the Nvivo software. The objective was to highlight research propositions that would be confronted with the scientific literature.

On this basis, we can highlight that AI and digitisation will not affect jobs and companies uniformly, but the specificities linked to each sector and each profession will have to be taken into account. For example, for the banking sector, AI and digitisation will focus more on regulatory compliance or in the health sector, it will rather impact on operations with digitised management of patient records to allow time and efficiency gains.

At present, it seems that AI and digitisation are considered more from a technical or functional point of view, but rarely from the point of view of the impact on the human factor. On the basis of our results, we propose two conceptual frameworks highlighting the human risks that are generated by the introduction of AI, and of digitisation as a whole.

The paper is organized as follows. In Section 1, we propose a scientific literature review about the adoption of Artificial Intelligence at work. In Section 2, we explain the methodology that has been employed to conduct this research. In Section 3, we present a detailed synthesis of the interviews' transcripts. In Section 4, we develop a series of propositions, based on which we develop two conceptual frameworks. In last Section, we conclude and propose directions for further research.

1. LITERATURE REVIEW

Over the past decade, investment in the development of AI-based solutions has begun to catch on. According to the OECD, between 2011 and 2018, US\$50 billion has been invested in venture capital for

AI-related start-ups. This amount almost doubled between 2016 and 2017 (OECD, 2018). The rapid and sharp rise in these investments indicates a growing and significant interest in exploiting the promise of AI to perform economic functions at lower cost, while being more reliable and flexible than human labour. For example, AI has already been deployed in organizations, with varying degrees of intensity, in sectors ranging from banking to industry, to support a variety of business functions from marketing to risk management (McKinsey, 2018).

The current scientific and professional literature focuses primarily on questions about the economic contribution, potential risks and societal impacts of AI, using the term “AI” generically without distinguishing the complexity surrounding it in terms of the operational, economic, cultural and human contexts in which an AI-based solution is embedded. For example, an AI solution dedicated to the evaluation of medical images with diagnostic and predictive functions (Park and Han, 2018) will necessarily have different characteristics, limitations, regulatory and human implications than a ‘chatbot’ developed to perform simple marketing or customer service tasks for a tourism company (Ivanov *et al.*, 2017).

It is therefore important to be able to catalogue and consider contextual factors in assessing the impact of AI adoption on an organization’s human resources, and to be able to compare this assessment with that of similar businesses (Arntz *et al.*, 2016). Research conducted to date, such as that of Frey and Osborne (2017), which focused on occupations as a whole, or that of Arntz *et al.* (2016), which went into more detail by analysing specific tasks, have all postulated that the tangible benefits of digitisation in terms of efficiency and productivity would be accompanied by a significant transformation in the nature of the work to be performed and thus the workforce required to do it. For example, chatbots threaten to replace customer service agents (Crosman, 2018).

1.1 EMPLOYEE PERCEPTIONS

According to Brynjolfsson and McAfee (2012), recent advances in technology within organizations have been made possible by efforts to transform non-routine tasks into clearly formalized problems. As a result, digitisation is no longer confined to routine tasks that are written down as rule-based computer queries. It can now affect all activities where

a large amount of data is available. While it is a boon to productivity, “there is no law that says that everyone, or even the majority of people, should automatically benefit from a technological advance” (Brynjolfsson and McAfee, 2012).

Currently, the anxiety surrounding the adoption of AI in companies focuses mainly on the problem of job cuts, primarily affecting repetitive tasks (Akst, 2013). However, research by Acemoglu and Restrepo (2018) and Brynjolfsson and McAfee (2012) both show that there is a strong potential for the overlap between AI and human-engineered tasks, freeing employees from the burden of simplistic, repetitive and mechanical activities to focus on more complex, interesting and creative work (Loebbecke and Picot, 2015).

This optimism seems to be quite widespread as shown by research conducted by The Workforce Institute of Kronos Inc. (2018), which conducted a survey of 3,000 employees across 8 countries: “Employees in 8 countries would welcome AI as long as it simplifies or automates time-consuming internal processes (64 %), helps to smooth out workloads (64 %), increases fairness in decision making (62 %) and ensures that managers make better decisions when they impact individual employees (57 %). However, the same survey revealed that a lack of transparency about the deployment of the use of these technologies was fuelling respondents’ fears.

1.2 MANAGEMENT AND ORGANIZATIONAL APPROACH AND IMPLICATIONS

While it is reasonable to expect that companies will continue to promote the adoption of AI and digitisation, 58 % of employees surveyed by The Workforce Institute (2018) indicated that their organization had not discussed the potential impact of technology on their employees. According to a Brookings Institute study (Muro *et al.*, 2019), while technologies such as AI have the potential to support current jobs and even create new jobs or new activities, there will be substitution that will disproportionately affect low-skilled jobs, routine tasks and populations of colour.

Research conducted by PWC (Hawksworth *et al.*, 2018) acknowledges the potentially disruptive effects of AI on the workforce and recommends that employers take proactive steps to prepare and train employees for retraining and to control human risks. Unfortunately, “while business

leaders anticipate that only a quarter of the workforce is ready for the adoption of AI, only 3 % of them plan to significantly increase their training budgets to meet the skill challenges posed by AI” (Sage-Gavin *et al.*, 2019). These findings are in line with the current trend to view automation and AI as a technological and operational issue, not a human issue – placing the responsibility on employees to adapt, rather than on organizations that are expected to invest in actively managing and shaping change (Christensen, 2018). Recommendations for organizations seeking to adopt these technologies remain vague (Muro *et al.*, 2019), suggesting the need for further study in this area.

2. METHODOLOGY

The chosen research strategy is based on the principles of ethnography. The objective here is to describe and explain the social context of the respondents as they describe it. This is an appropriate strategy for the management field if one is seeking information about a particular context, to better understand and interpret it from the perspective of those involved (Saunders *et al.*, 2007). An inductive approach was therefore preferred as the most appropriate for this research.

The research is based on a qualitative survey. In 2018, we conducted 62 semi-structured interviews in French-speaking Switzerland. The profiles chosen corresponded to people working in different service sectors of activity (banking, insurance, health, education, etc.) and different hierarchical statuses (employees, executives, directors, etc.).

The questionnaire was based on the following main questions:

- Has your work been influenced by AI and digitisation? If so, do you have any examples?
- Do you think that your work will be (still) modified by AI and digitisation? If so, how? If not, why will your work not be impacted by them?
- Does your company talk to you about AI and digitisation? If so, by what means (i.e. training, newsletter, seminars, conferences, etc.)?

- Have you observed any reorganizations following AI and digitization (merging of services, disappearance of certain departments, process changes, etc.)?

In terms of socio-demographic characteristics, our sample was composed of 56 % men and 44 % women, distributed as follows over the following age categories: 18-24 years 7 %, 25-34 years 38 %, 35-49 years 30 %, 50-64 years 19 %, 65 years and over 6 %. About one third of the respondents were active in the public sector (33 % in the public sector, 67 % in the private sector) and 15 % have a managerial function. Although the sampling strategy was purposeful as this is exploratory research, in the end the sample profiles collected are quite representative of the service economy of the Lake Geneva region. All interview transcripts were then analysed using Nvivo software to synthesize the results.

3. SYNTHESIS

Based on the responses received, the general feeling about digitisation and AI is very positive. From a private point of view, digitisation is spontaneously associated with easier access to information and increased storage capacity. However, in some cases, interviewees mentioned that the use of connected tools results in less human interaction – and that digitisation could lead to the exclusion of some people who would not be able to adapt to these new technologies, such as older people, the disabled, or those with lower incomes.

3.1 FOCUS ON DIGITISATION

From a professional point of view, the comments and experiences reported are generally positive. Digitisation is spontaneously associated with time and efficiency gains, increased productivity, and even the creation of new jobs – mainly in the ICT field.

While few people spontaneously associate digitisation with redundancies, the risk of losing one's own job is hardly an option. Although respondents are aware that digitisation leads to changes and job losses,

they believe that this risk is much more present for others than for themselves. They do not seem to be able to imagine that a robot or machine will ever be able to do their job. They still think that their work is too specific and that it could not be completely, or even largely, automated (“... a computer will never be able to do what I do to the extent that I do it”. Male, 40-45 years old, information services).

In addition to the difficulty of replicating human contact and relational aspects, respondents believe that quality control is not an area that can be automated (“Quality control activities have not changed. They are still carried out by human beings, and this is a necessity”. Male, 31-35 years old, wood industry). This suggests that the nature and potential of AI is probably far from being fully understood, and also that risk assessment is easier for others than for oneself.

Respondents generally, and primarily, associated digitisation with process changes rather than organizational changes. While this may seem odd, it does not mean that respondents did not experience organizational changes. Organizational changes may have been seen as job reductions, as a logical evolution made possible by new technologies, rather than as a planned consequence of a digitisation strategy.

3.2 DIGITISATION AND RESISTANCE TO CHANGE

In terms of resistance to digitisation and the changes it brings about, the vast majority of respondents consider that the “older generation” (50 years and older) is reluctant to change because they are unable and/or unwilling to train and adapt to new technologies and new ways of working. However, this remark is always made for generations older than ours. Resistance to change is attributed to others, and the other is older.

Age affects the perception of new technologies. The younger generations (under 30) naturally associate digitalisation with progress and innovation, and therefore only rarely question the costs and impacts of this process – since this is a normal and inevitable evolution. On the other hand, older generations (mainly those over 50 years old) consider that digitisation is a new form of control available to management through a stranglehold on information and through a precise and imposed definition of the “right way” to do one’s job (“we have less and less freedom in the way we work, and our managers have total control over everything”. Woman, 40-45 years old, sales).

It is interesting to note that some of the resistance is due to what managers see as their role. Some managers are afraid that they will have to give up some of the power and control they have gained through their skills and area of expertise. Having to adopt new ways of working could undermine the recognition they have from peers and subordinates (“some managers are really reluctant to change because they are afraid of being overwhelmed by events and they fear they will not be able to keep pace with the new constraints in terms of deadlines and skills”. Male, 50-55 years old, public sector). This feeling is more widespread among respondents working in SMEs where the professional skills of managers are more important than human resource management skills.

3.3 PERCEIVED IMPACT OF DIGITALISATION

Communication about digitisation and the changes brought about internally is almost entirely carried out through newsletters and training courses. None of the respondents could mention any proactive internal communication that explained the reasons, context and scope of digitisation. This does not imply that there is no such communication, but at least that, if such communication has taken place, it has not achieved the expected objectives (i.e. a general awareness of the key issues surrounding digitisation).

Respondents often observed changes in the behaviour of their colleagues. However, they very rarely mentioned cases of burnout. Nevertheless, although they believe that digitisation has undeniable benefits, it also leads to increased stress. The reasons and sources of this additional stress are interesting to note. Respondents do not attribute this stress to the need to learn new techniques or routines, or to use new tools, much less to the fear of losing one’s job. They feel more stressed by an increased dependence on machines, computers and software, by the need to compensate for a lack of performance by colleagues, and by a wider range of tasks to be performed, representing an increased administrative burden (“paperwork”).

While the benefits of automation are recognized, respondents often report situations where technology does not deliver on its promises (e.g., bugs, technical problems, system downtime), leading to lost time. These problems are seen as an additional stressor (“machines and computers do not deliver on their original promises. Because of this, we are overloaded

with work, leading to a lot of stress". Men, 46-50 years old, researcher). This is all the more true for team managers. They will be held responsible by their direct superiors for the poor performance of their subordinates even if it is a technical problem over which they have no control ("In the end, if things go wrong because of technical problems, I will be held responsible by my direct superiors and by my management". Male, 40-45 years old, watchmaker). Moreover, respondents are convinced that no job can be fully and perfectly automated. As evidence of this, many noted that they had inherited tasks that had been neglected but which had previously been performed by colleagues who had lost their jobs because much of their work had been automated. In particular, such reports were common in sectors where digitisation has led to major restructuring and downsizing, such as the banking sector ("Bank branches that have not been closed and replaced by automated teller machines are now under enormous pressure because they receive all the alarms sent by the machines and have to resolve all problems with the machines very quickly. All of this is taking place within a very strict regulatory framework". Woman, 26-35 years old, retail bank).

Colleagues who resist digitisation and the changes that come with it were also cited as a source of additional work and stress. Indeed, some employees have to work even harder to compensate for the reduced productivity of colleagues who are reluctant to adopt new technologies and work methods. In particular, in small organisations, where the behaviour of a single individual will have a much greater marginal impact on the workload of colleagues and where job reductions seem to be less directly correlated to digitisation/automation processes. This reflects to some extent the greater importance given to human and relational factors in a smaller organisation (in terms of size).

On the other hand, respondents often mentioned the increased workload due to increased administrative tasks ("I have to provide much more information now than in the past and especially in a very, very short period of time. The amount of time I have to spend on paperwork has increased considerably". Female, 40-45 years old, teacher). This is a very sensitive subject for people who have never needed to use a computer before in their daily activities, but who are obliged to do so now.

An emblematic example of this problem is that of the life support workers who provide home care. They now have to record the interactions

and treatments performed on their patients at the end of each day. In addition to the additional workload this creates, some people feel increasingly “exposed” and very “dependent”, especially if they are not very proficient in using ICTs. They may not have the adequate infrastructure at home, or they feel incompetent if they encounter technical problems. However, while none of them dispute the merits of these additional requirements, they point to side effects such as the risk of carrying out administrative tasks at the expense of the time needed to provide quality care to their patients (“I feel I have to spend too much time on my computer, and less and less time with my patients. It’s really a worry for me and I don’t know how to do it anymore”. Female, 35-40 years old, medical auxiliary).

One of the supposed benefits of digitisation through task automation is supposed to be the elimination of repetitive and low-skilled tasks, thus leaving more time for qualitative, knowledge-based activities. Surprisingly, although this benefit is well known and understood, it does not seem to be in line with the reality of the true nature of work as it is perceived. In fact, many respondents complain of having to take on a number of tasks that were previously performed by subordinates. They feel that their work is slipping dangerously from a specialist expert to a generalist type of position. The increasing breadth and diversity of tasks in a position is strongly associated with a feeling of devaluing one’s job, while many studies have shown a positive correlation between employee satisfaction and task diversity (“Now I have to do a lot of tasks that were previously done by a colleague, such as spell checking and text formatting. It’s really demeaning”. Male, 40-45 years old, computer scientist).

3.4 DIGITISATION ACCORDING TO BUSINESS SIZE AND SECTOR OF ACTIVITY

We observed a very clear difference in the perceived impact of digitisation by company size. In large companies, digitisation is often associated with process changes, downsizing and corporate restructuring. In small and medium-sized enterprises (SMEs), digitisation is also associated with changes in processes and working methods requiring a reorganisation of work, not necessarily with staff reductions. (“The automation of work has made some jobs redundant, but those affected

have been reassigned to other tasks within the company". Male, 40-45 years old, wine company). Although this highlights, as already mentioned, the importance given to human and relational factors in small businesses, some respondents mention that it is also a significant risk if an entrepreneur postpones a digitisation process for fear of losing control, which could have fatal consequences for the prosperity and sustainability of his or her business. ("There is no visible willingness to change, no one is trying to force older colleagues to change their working methods. The necessary cultural change can only happen in a few years, when the current management is retired". Male, 25-30 years old, civil engineering).

Last but not least, the perception of digitisation in terms of its current and future consequences also varies according to the sector of activity. Where the level of human expertise and contact required is high or where it is perceived as important for the product/service delivered, people believe that digitisation will be limited and will never lead to human labour playing a minor role. This is for example the case for watchmaking or crafts and for all jobs that are considered to have a high level of expertise or specialisation. ("A computer will never be able to do what I do". Male, 45-50 years old, publishing).

In sectors where human input is important in customer relations, digitisation is considered a real opportunity to differentiate oneself from the competition. In sectors such as private banking and wealth management, it is difficult for clients to establish a relationship of trust with a machine or rely on an algorithm. Maintaining the right level of human intervention in an automated process is clearly identified as an excellent way to gain competitive advantage. ("The greatest resistance to change currently comes from our customers. In wealth management, the average age of clients is quite high and these clients are generally not very open to big changes, and certainly not digitisation. They want human contact and trust is very important to us". Male, 35-40 years old, private banking). In fact, human advice is often positioned in companies as a central component of a premium service for high value-added clients, whereas automated service is reserved for "regular" clients.

The respondents who express the greatest concerns about digitisation and its current and future impact work in large companies where the digitisation process is seen as a top-down imposition with the aim

of improving efficiency and saving costs. In the banking sector, this process is perceived as a real threat with the automation of the work of the financial advisor. (“There are fewer and fewer wealth management assistants and advisers ... And many positions are being cut in the back office. I’m really worried. Maybe it’s going too far...”. Male, 30-35 years old, manager of a large bank). In contrast, respondents working in small organizations face the challenge of finding the additional resources needed to implement the digitisation process.

4. DISCUSSION

Through this research, we found that respondents are aware that AI and digitisation will affect their jobs and businesses in the future but with differences by industry. Digitisation and AI are not a single, undifferentiated approach. In particular, the scope of application of these technologies will vary according to whether they can, for example, take on control or management functions. We also noted that AI and digitisation as a whole seem to be approached in businesses from a technical and functional perspective, but not from a human perspective. The following discussion will be based on two main propositions:

- *Digitisation of service might lead to cognitive dissonance due to a misunderstanding of the real potential and implications of AI, leading to human risks.*
- *Work digitisation symptoms reinforce acceptance of poor communications, and ultimately human risks.*

4.1 SERVICE DIGITISATION MIGHT LEAD TO COGNITIVE DISSONANCE DUE TO AI MISUNDERSTANDING

The overall perception of AI digitisation in a work context is positive. None of the respondents rated it negatively. Some people mentioned job losses, but they are in the minority. In our regions, digitisation is a real craze supported by media hype. The subject is unavoidable. The

main argument in its favour is easy and quick access to information. As smartphone users in our everyday lives, we tend to project many benefits. Nobody really feels threatened by digitisation.

However, when we ask for clarification, we find it difficult to explain what AI and digitisation really means and what the real impact on work could be. This is largely explained by the extreme scarcity of information that is transmitted in a professional setting in relation to the changes that it will bring about. A very important risk lies in the fact that employees are not aware of the potential impact of AI on their work. Digitisation is a broad and vague concept. While people are aware of its impact on the processes of producing products and services, they do not see the link to a questioning of their expertise.

The situation can be summarized with the diagram presented in Figure 1. People show both positive behaviour because (1) the subject is trendy, supported by a general craze, we let ourselves be carried away by the sense of progress (2) we lack precise and specific information, but we reassure ourselves because there is nothing to look further into and panic (3) we can observe all the contributions of technology in our daily lives with a smartphone that accompanies us in all hours of the day and night. At the same time, we complain (1) because the technology in our work environment increases our workload, but above all causes administrative work, paperwork, and we have to do tasks that were previously done by subordinates (2) because technology always generates technical problems, bugs, that we cannot solve ourselves; we expect a repair, it creates delays that must be caught up causing occasional overloads. The positive reception of technology and the recriminations about the impact on work are a contradiction experienced by our respondents. This cognitive dissonance seems to be resolved through two possible mechanisms (1) one realizes that reality is not in line with expectations and gradually abandons the positive values and beliefs attributed to technology, which results in human risks in the company (e.g., reduced performance, errors, fraud, burnout, etc.) (2) one remains positive for the time being, because one thinks that these are normal problems associated with the beginning of a process of implementing a new technology. These problems will be solved and everything will be better in the best possible world. If conditions do not improve, there is a risk of slipping back to the first behaviour.

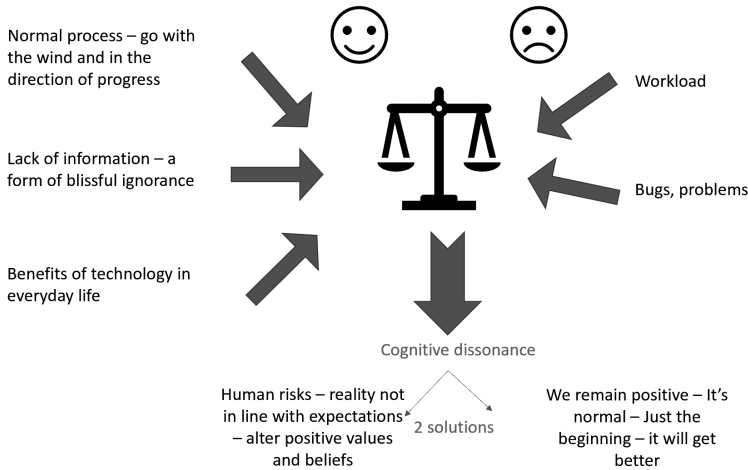


FIG. 1 – Service digitisation might lead to cognitive Dissonance due to AI misunderstanding.

IA is often confused and equated with the generic notion of digitisation. For this reason, we have, as explained already in the introduction, used both terms as equivalents in this article. We define digitisation here as the integration of various digital technologies into all aspects of daily life by converting analogue information into digital format so that it can be processed, recorded and transmitted over digital circuits, equipment and networks (BusinessDictionary.com; Gray and Rumpe, 2015). AI can therefore be considered as a subset of digitisation, essentially associated with diagnostic and decision support functions, which are previously performed by employees. In fact, AI can be considered as the ultimate stage of digitisation.

If employees believe that they cannot be replaced, it is because they consider digitisation as a management process. With its diagnostic and decision support capabilities, AI represents completely new opportunities for automation. It is not really possible today to define the impact of AI on the world of work. Respondents often stated that a robot cannot do what they do. But AI will most certainly disrupt the organization and methods of work, with the risk of rendering the human obsolete.

We assume that if our respondents really understood the potential of AI, the overall perception of digitisation would be much less positive. Individuals would then be concerned about the personal and systemic risks they face. So it's a real problem to have such a poor understanding of the impact of digitisation through the integration of AI.

There is no open and critical debate on the digital transformation of the organization. Organizational change is simply accompanied by newsletters and training (often delivered online). However, employees are likely to undergo a radical transformation of their jobs. In practice, this corresponds to an accelerated transformation of the organisation. But it is seen as a *fait accompli* which, surprisingly, provokes no reaction, no resistance.

Risk exists not only at the individual level, but at the level of the entire organization. Managers who are leading this change must integrate technologies provided by external providers over which they do not have full control and understanding (and which are often based on algorithms for which they do not have access to source code). There is therefore a risk of relying on unreliable technology or integrating it into the organization without questioning or adapting it. There are also fears of putting one's destiny in the unscrupulous hands of unavoidable multinationals (such as GAFAM). We watch their inevitable advance without knowing what to do.

One can observe a materialisation of the risk associated with cognitive dissonance in the sense of exacerbation manifested by some managers who find themselves between a rock and a hard place. They are responsible for achieving higher goals made possible by digitisation and they are held responsible for the introduction of these technologies by their subordinates, especially when they do not work properly.

There is a risk of cognitive dissonance between perceived reality and promises made or heard about AI. Digitised technologies are complex and do not always work perfectly. When they no longer work, the company is paralysed and disarmed, with no resources to find an alternative solution. We offer a very simple analogy with car repair. Previously, a mechanic would make a diagnosis and if necessary, could even create a custom part to repair an engine. Nowadays, a mechanic connects the car directly to a software program. His role today is limited to receiving a diagnosis made by the machine and executing the repair as proposed

by the software. When the digitised process (with AI for diagnosis) is disrupted, the mechanic is inoperative.

Another impact of digitisation is the impoverishment of tasks and the devaluation of the work of those who keep their jobs after a reduction in the company's workforce. Employees must then take over the work that was partially done by those who left the company – their work cannot be fully automated. For example, a clinic manager or team leader previously had a secretary. Now he has a computer and takes over the tasks of the secretary who has lost her job (such as keeping the diary or answering e-mails). Thus, for employees with high added-value, the new position includes tasks of widely varying complexity, sometimes with very little added value (which goes against the promises of digitisation, which announced the elimination of tasks with low added value). Employees no longer feel valued for their skills but rather for their ability to adapt to the new tools. This devalues the social status of qualified employees because they can no longer make a difference in terms of professional expertise. This has lost much of its value.

4.2 WORK DIGITISATION SYMPTOMS REINFORCES ACCEPTANCE OF POOR COMMUNICATIONS

We observed that although AI and digitisation are most often presented as a global phenomenon, the notion of “one size fits all” does not apply to the reality of work. In relation to the first proposition (discussed in section 4.1) that digitisation could generate cognitive dissonance due to a misunderstanding of the potential of AI, we put forward another proposition that shows how negative or insufficient communication within organizations about AI can perpetuate and reinforce symptoms (see Figure 2).

Symptoms of complicated digitisation include system “bugs” (e.g., chatbot failures), stupid new tasks to be performed (tasks with little value added generated by the system), loss of control over work (perceived “algorithmic governance”), and increased workload (to compensate for staff reductions). These symptoms of “failure” in a digitisation process will increase job stress, which could, in turn, lead to different forms of resistance to change. These will include the usual forms of resistance, such as refusals, performance declines, errors, criticism, fraud, sabotage, stress, absenteeism, and especially the more subtle form of presenteeism.

In order to stop this infernal cycle, management should take over by truly managing digitisation and its changes, starting with a formal and structured communication process. As our research has shown, companies do not really communicate on this subject, and especially not on the stakes and impacts. As a result, this poor communication leaves the field open to rumours and criticism. These aspects will therefore reinforce the initial risks outlined above: (1) negative communication will reinforce the negative side in the difficult imbalance of cognitive dissonance (2) negative communication will upset the fragile balance of those who have chosen to wait to give time to resolve the technical and organisational problems of the beginning. Thus, there will be more and more employees who will side with the “disappointed” side of digitisation and who will abandon positive values and beliefs for new beliefs and values related to the negatively perceived reality.

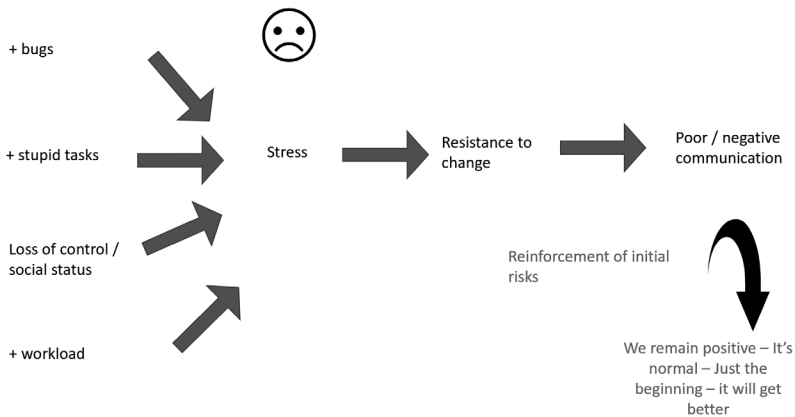


FIG. 2 – Work digitisation symptoms reinforces acceptance of poor communications.

Surprisingly, digitisation is very rarely the subject of a structured, formalized and deployed change management process. Digitisation is simply mentioned and very little discussed in newsletters, general information sessions, and training (often through online courses). Even if digitisation represents a radical change in the company, it is treated as if it were a software update. While the nature and amount of work will be strongly impacted in the long term.

Digitisation offers the possibility to share more customer information and to find it more easily. In particular, AI offers diagnostics of each customer's situation and adapted solutions ("augmented conversations" because supported by new technologies). On the contrary, with the arrival of chatbots and the automation of conversations thanks to AI, it is now possible to reduce the number of employees and increase the workload of employees who remain in the company.

Thus, with digitisation, there is a tendency to eliminate human contact and the advice given by these humans. However, there is also a certain resistance to change on the part of customers. Some of them want to be able to talk face-to-face with a real human. For example, the big banks have radically transformed the relationship with customers by introducing digitisation. Smaller institutions that could not keep up with the trend decided to take the opposite tack and put the human relationship first. There are different degrees of digitisation and different approaches. It is important for companies to make a clear and assumed choice.

In the future, it is likely that small structures will opt for limited automation. They will not be able to invest and rely on "all automated". This may be an opportunity to differentiate themselves and address customers who want to resist robots and algorithms, and who are willing to pay for it. For many companies, the relationship of trust with customers is crucial. It is up to them to define how they want to build it, and with which competency profiles.

Employees who stay in the companies will have to take on different roles. The oldest respondents (over 50 years old) noted this. There is a risk that roles will evolve towards less autonomy and a very high degree of control through the collection and processing of large amounts of information. There is a lot of talk about the protection of personal data and personality. This shift is therefore one more representation of a broader societal problem of control of the individual.

The AI with job cuts forces the remaining employees to take over low value-added tasks previously performed by subordinates. It moves from being a recognized professional to being a "jack of all trades". This results in an additional workload and, above all, a devaluation of the function, a reduced interest in one's work and a questioning of the role and contribution of the person to the organization. All of these are stressors. To this must be added possible technical problems that further increase

tension and stress. If the machine does not work properly, employees will lose time, tension will rise, and it will then be necessary to work even harder and faster to make up for lost time. People usually feel helpless when technical incidents occur. They can no longer work and cannot find an alternative solution. This problem has already been observed repeatedly in enterprise risk mapping as a low probability but high impact risk (Fragnière and Sullivan, 2006). When this happens, strong and rapid mobilisation is required to intervene and address the problem.

There have always been and always will be breakdowns and problems in the production of products and services. What is different today is the employee's ability to resolve them. Employees have lost their independence and autonomy. In the past, a high level of expertise in a particular field made it possible to find alternatives and to deal with the most pressing problems thanks to recognized professional skills. This is no longer the case. Everything is fine as long as technology is operational and supports human activity. Awareness is brutal when we are confronted with a breakdown whose resolution does not depend on us. This awareness can also be the result of customers who, confronted with a problem not identified by the machine, find themselves disarmed, unaided and crushed by the system, which remains hermetic because there is no longer any physical agency, no human at the end of the phone line or chat room, and stereotyped responses that do not answer their question.

Digitisation has thus generated entire populations of infantilized, categorized and dependent people. This is a societal problem and not just a private enterprise issue. Everyone is caught up in this spiral, as if in a spider's web, to the detriment of the human relationships on which our societies have been based for so long.

CONCLUSION

In this research, we looked at digitisation, not from a purely technological point of view, but from the point of view of the human impact as perceived by employees today. To this end, we conducted 62 semi-directive interviews with employees working in French-speaking Switzerland.

The gradual reduction in the number of jobs due to the introduction of AI is of course a general concern, relayed by the press and the political world. On the other hand, respondents are not alarmed because they are confident that their work cannot be done by a robot. This gives a false sense of security. They are rather worried about the transformation of their work context. They don't really know what the term AI hides and don't really try to find out. As proof, they don't distinguish between digitisation and AI. They are in a wait-and-see position: if necessary, management will eventually give them the information they need. This is the policy of burying one's head in the sand, of "soft ignorance". ("It's a very cool, scalable and cheap technology that allows us to make gains in productivity, and will allow us to position ourselves as innovators". Male, 30-35 years old, bank employee). For the moment, management does not seem very inclined to communicate on the subject, preferring to take advantage of the passivity of the crowds to introduce changes and reduce staff in large companies, essentially.

As understanding is low, employees cannot really project themselves into an ultra-digitalised future world. If they do, the risk is for others. One always places more value on one's own job, more specificities and skills than on those of others, colleagues or providers. There is no thorough and critical reflection, no debate, no open discussion, and no specific training. There is reliance on technology to solve problems, but there is no anticipation of the problems created by technology, especially when it is flawed.

New questions emerge from this research, and may be the subject of further research in the future. What limits and safeguards should be put in place in the adoption of AI, and digitisation in general? How can the human risks associated with the introduction of these technologies be taken into account and reduced? What will be the real and perceived impacts on the work environment? How can companies be helped to better manage cultural and operational change instead of relying on organizational resilience?

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