VOLUME 5 ISSUE 1 NOTES

UNIVERSITY OF BOLOGNA LAW REVIEW

https://doi.org/10.6092/issn.2531-6133/11393

Achieving the Right to Work in the Face of Technological Advances: Reflections on the Occasion of the ILO's Centenary

ANA PAULA SILVESTRINI VIEIRA ALVES †

ABSTRACT

The process of transforming human labour into machine work has long been on the agenda of the International Labour Organization. The difference is that today, in industry 4.0, artificial intelligence and big data are undermining highly technical qualified work as well as "heavy labour". Therefore, on the ILO's centenary, it becomes relevant to reflect on its roles in the face of the challenges posed by technological innovations. Of these, we highlight the need to reinvent education to increase employability and to create protection mechanisms for those in uninterrupted 24-hour online employment, because summarize the contradictions experienced in the current world of work facing new technologies. The ILO cannot be indifferent to this focal point: promoting training and legal protection for workers so that they can keep up with technological innovations and simultaneously have health and welfare.

KEYWORDS

International Labour Organization; United Nations; Fourth Industrial Revolution; Automation; Educational technology

TABLE OF CONTENTS

† Ana Paula Silvestrini Vieira Alves, Ph.D. Candidate in Public Law, University of Coimbra (Portugal). Mrs. Silvestrini Vieira Alves is specialized in Administrative law and Emerging technologies, with a deeper interest on public regulation of the economy and of telecommunication.

INTRODUCTION

The International Labour Organisation [hereinafter ILO], a United Nations [hereinafter UN] agency dedicated to social justice through formulation and application of international labour standards, completed its centenary. Headquartered in Geneva, it has about 2000 staff and more than 800 experts on mission, acting with the guarantee of independence and autonomy in relation to national governments. It has a budget composed of obligatory contributions from Member States and its organizational structure is classic: an Assembly, a Council and a permanent Secretariat under the direction of the Board of Directors. However, it stands out as the only UN agency with a tripartite structure, with representatives of governments, employers' organizations and workers from the 183 Member States, acting on an equal footing.

According to the preamble of its Constitution, the ILO's existence is justified by the poor working conditions, which cause injustice, misery, deprivation and fears of the negative social effects that may result from unfair international competition. Its mission is the pursuit of universal and permanent peace based on social justice. Its principal mode of operation is through the establishment of international standards, via conventions and recommendations. These conventions are submitted to the Member States for ratification. Recommendations establish the "directive" principles to guide national policies and practices.

The ILO was created at the end of World War I (1919), through the Treaty of Versailles, to work together with the League of Nations, an international organisation that centralised the new world order. From its beginning to the present day, it stood out in its defence of workers' rights, in different moments and contexts in which it was inserted: it survived World War II and in 1946 became the first specialized international organization of the UN, and it was awarded the Nobel Peace Prize on its fiftieth anniversary, while it was still observing the Cold War.

Currently, it continues to work on behalf of old labour demands, such as ending slave and child labour, but at the same time it faces new questions coming from a new wave of globalization, financial crisis, and the use of innovative technologies in the entire production chain. Artificial intelligence, big data, and industry 4.0 are shaking both "heavy labour" jobs and high-tech jobs ("white-collar" jobs). Therefore, in the ILO's century of work, it is relevant to reflect on its guidelines and identify ways to be able to act in the face of all this news.

1. WHAT CHALLENGES DO NEW TECHNOLOGIES IMPOSE?

The twentieth century was marked not only by world conflicts, but also by technological innovation. The inventions of this period include the airplane, the cloning of Dolly - the sheep, the invention of television (1923), the discovery of penicillin (1928), the emergence of the transistor (1947), the discovery of the DNA molecule (1953), the invention of optical fibre (1952), and the orbit of first artificial satellite (1957).

Moreover, as Manuel Castells points out, notably from the seventies onwards, a new economy, society and culture began to be built on the basis of information technology. From Silicon Valley, a new technological paradigm expanded in several countries that, despite their differences, have produced more technological innovation and enlarged the scope of transformations, diversifying their sources.[1]

As a result, in 1990, a new socio-economic, informational, networked, and global context was consolidated. The World Wide Web was also created in this decade and expanded the applications of artificial intelligence, with the emblematic example of the robot Deep Blue (IBM) defeating the chess champion Garry Kasparov.[2]

From the nineties onwards, many other technological innovations emerged and shook labour relations in a profound way. Kasparov's defeat by Deep Blue boosted investment in human-computer cooperation; today, computers are becoming so sophisticated that their human collaborators have begun to become irrelevant.

In December 2017, a new milestone was reached when the AlphaZero (Google) program defeated the Stockfish 8 program, which was the 2016 computer world champion of chess. The most surprising thing was that the outdated computer had access to centuries of human experience accumulated in chess as well as decades of computer experiments and was able to calculate 70 million positions per second. The newcomer and winner, AlphaZero, estimated only 80,000 positions per second, was never taught chess strategies by its human creators, and it was prepared for the match in just four hours. AlphaZero played against itself, using the latest principles of machine self-learning and thus made "creative" moves and strategies.[3]

In addition, since 2008, a global financial and economic recession has made it difficult to bear repercussions and has undermined the foundations of states to levels which were previously unimaginable. This has led to the expansion of multilevel governance in various public and private sectors and to the breakdown of territorial and

[1] Manuel Castells, The Rise of the Network Society 142-76 (Wiley, 2d ed. 2000).
[2] *See, e.g., Deep Blue*, Stanford CS221 (2013), https://stanford.edu/ cpiech/cs221/apps/deepBlue.html.
[3] *See* David Silver & Demis Hassabis, *AlphaGo Zero: Starting from scratch*, DeepMind (Oct. 18, 2017), https://deepmind.com/blog/article/alphago-zero-starting-scratch.

sovereignty barriers, as was the case of Portugal, Greece and Ireland when they requested financial rescue from the Troika.

Indeed, everything has changed since the creation of the ILO. Since the beginning of the twentieth century, society, politics and economics do not represent any identity. Technological innovations have always been the fuel of these transformations throughout history. It is no different now: reflecting on achieving the human right to work and on the role of the ILO in its centenary is completely entwined with the new technologies in our lives.

In this respect, the following issues stand out: In the face of unemployment, what skills are necessary for a professional to return to the market? In current labour relations, do employees present new weaknesses and therefore, do they have to be given new rights?

1. 1. REINVENTING EDUCATION TO INCREASE EMPLOYABILITY

Human work has been replaced by machines equipped with artificial intelligence, capable of working with big data and of being inserted throughout the production chain of the digitized industry (industry 4.0), typical of a fourth Industrial Revolution. In turn and far from keeping up with the changes, most schools continue to teach based on a syllabus developed many years ago which, as the Canadian Rod Allen states, needs urgent revision because it is preparing students for a world that no longer exists.[4]

The study "Ready to Work?", carried out by around 800 employers, identified the most valued skills in the job market. The skills chosen as priorities were: analysis and problem solving, creativity and innovation, adaptability and flexibility, planning, organization and motivation for excellence, linked to the ability to maintain a positive attitude and to be persistent. The specific technical-scientific skills acquired in formal education and training programs (*hard skills*) appeared in sixth and last place, evidencing that the employers "attach greater importance to the personal and interpersonal skills", also called transverse or *soft skills.*[5]

If the recruiter does not seek to first identify what the candidates know cognitively, it seems clear to us that an update of the education system is necessary in order to invest in the socio-emotional and behavioural skills that are being demanded.

[4] *See* Francisco R. Pereira, *Escolas preparam alunos para um "mundo que já não existe"* [*Schools prepare students for a "world that no longer exists"*], Observador (Jun. 4, 2019, 6:32 PM), https://observador.pt/2019/06/04/escolas-preparam-alunos-para-um-mundo-que-ja-nao-existe/ (Port.).

[5] Diana Aguiar Vieira, *Transição para (ou durante) a vida profissional: quais competências mais importantes e como desenvolvê-las?* [*Moving to (or during) Professional Life: What Are the Most Important Skills and How to Develop Them?*], Dirigir&Formar (IEFP), Jan.-Mar. 2019, at 36 (Port.).

The development of these skills can be done, for example, through physical, artistic, dramatic or musical activities, as they are relevant vehicles for stimulating creativity and self-confidence.

However, in addition to these transversal competences, current society must have digital literacy, and this highlights the role of technology in education. On the one hand, we have seen many high-standard private schools introduce attractive state-of-the-art equipment for students without a clear pedagogical purpose for its use and on the other hand there are a majority of low-income schools that fear for the future of education that they provide because they are unable to acquire technological equipment.

Neither of these perspectives is correct. First, having cutting-edge gear in the classroom is not enough. Technology has to be introduced with the aim of encouraging students to think, to question, to be creative, to be flexible when facing quick changes, and to be supportive in crisis management. The excess of technological equipment without these well-defined purposes can generate undesirable side effects, contrary to the development of the aforementioned transversal competences.

Second, there is no need for high-tech state-of-the-art equipment because students do not have to deal with major market launches to acquire cross-cutting skills and technological skills. As an example, even a small robot with an average cost of twenty euros can be used in a satisfactory way in the teaching of several subjects, with the students programming it to overcome challenges launched by the educator.[6] Besides, not every single student needs to have electronic equipment for individual use. On the contrary, it is important that they work in pairs, at least, to develop certain skills related to team spirit, collaboration, solidarity and constructive criticism.

Teaching computational thinking is an excellent way to combine the development of transversal skills and digital literacy, even for those with low purchasing power. It is about using fundamental concepts of computer science as the basis for teaching problem solving, systems projection, and understanding of human behaviour.

According to Jeannette M. Wing, when facing a problem, we can question how difficult it is to solve it and the best way to do it. Following computational reasoning, we have solid theoretical bases for answering these questions accurately. In addition, "equipped with computing devices, we use our intelligence to solve problems we would

[6] *See* Rita Laranginha, Juliana Lopes, Maria Catarina Sousa & Neusa Branco, *Representar Retângulos com um Robot* [*Representing Rectangles with a Robot*], Educação e Matemática [Education and Mathematics], Jan./Feb./Marc. 2019, at 45 (Port.).

not have dared to even try before the computer age, and to build systems with features limited only by our imagination."[7]

To do so, it is necessary to have enough political will for a minimum investment and partnerships with the private sector. This is what is happening, for example, in Kenya, where the Kiltamany Elementary School in the Samburu Reserve has become an example of wireless, technology-enabled classroom success thanks to the country's expanding technology community. Using Kio tablets designed by Nairobi-based software company BRCK, children and adults in Samburu are learning not only languages and math, but also acquiring digital literacy, cross-curricular skills and self-confidence.[8]

1.2. RIGHT TO DISCONNECT

In addition to technological innovations may have the potential to both eliminate and create jobs, they also greatly affect existing labour relations. According to a survey conducted in Brazil by PWC and Fundação Getúlio Vargas, 80% of global CEOs believe that technology can have a significant impact on their business within five years. In fact, the digital revolution has empowered people, with collaborative networks transforming traditional corporate operating models, consumers swapping large amounts of information, and citizens taking on roles that were once the media's monopoly on communications and information.[9]

Current labour relations are different not only from the employer's perspective, who demands new skills and competences but also from the employees, who value more flexible work regarding schedules and locations. It has not yet been properly evaluated what real benefits and disadvantages for the worker's health this dynamic can bring.

The ILO recently launched the "Working Anytime, Anywhere" report with research conducted in fifteen countries with employees using new technologies to work outside their employers' facilities. Its conclusions showed several positive effects, such as greater autonomy of working time, more flexibility and the possibility of organizing working and personal life, while reducing travel time and increasing productivity. However, the study also identified disadvantages to employees, such as the tendency to

[7] Jeannette Wing, *Computational Thinking*, Comm. ACM, Mar. 2006, at 33.

[8] *Na África Rural, os Tablets Revolucionam a Sala de Aula* [*In Rural Africa, Tablets Revolutionise the Class*], National Geographic (Jan., 2018), https://www.natgeo.pt/ciencia/2018/01/na-africa-rural-os-tablets-revolucionam-sala-de-aula (Port.).

[9] *O futuro do trabalho: impactos e desafios para as organizações no Brasil* [*The future of work: impacts and challenges for organizations in Brazil*], PwC (2014), https://www.pwc.com.br/pt/publicacoes/servicos/assets/consultoria-negocios/futuro-trabalho-14e.pdf (Port.).

work longer hours than they would work in the traditional dynamic, resulting in poor health and well-being.[10]

By the end of the twentieth century and during the first years of the twenty-first century, overwork due to uninterrupted connectivity raised great concerns regarding employees with senior management and managerial positions. There are even labour laws that exclude these workers from the right to a limited working day, to rest-breaks, to daily rest, to weekly paid rest, and to the night works additional payment, as it is the case of the Consolidation of the Labour Law in Brazil (Article 62).

In the current scenario, this description is no longer typical only for employees in senior management and management positions. It has spread to middle-level workers, who are now also connected in an uninterrupted fashion. There are some employers who already claim to pay a higher salary to employees who are online twenty-four hours in order to avoid the payment of additional overtime hours. However, we must be aware that a limited hour working day is a health issue in society and not a mere economic problem that concerns only the worker.

In the year 2013, in Germany, Volkswagen and BMW agreed with their workers to limit the use of mobile devices to exchange work messages outside the normal working hours. In the year 2014, in France, the employers' federations of engineering, information technology, consulting and market research firms agreed with the main trade unions on the right to disconnect distance communication tools and in 2017 the country added that agreement into their labour legislation.[11]

2. FINAL CONSIDERATIONS

The need to promote digital education and the right to disconnect summarizes the contradictions experienced in the current labour environment in the face of new technologies. There is great concern about unemployment, but we are also worried about overwork. It is said that the new technologies are *stealing* people's work, but simultaneously people are being enslaved by technology. It is convenient to have quick

[10] *See* Jon Messenger et al., Eurofound and the ILO, Working anytime, anywhere: The effects on the world of work (Publications Office of the European Union and Int. Labour Office, 2017), https://www.ilo.org/wcmsp5/groups/public/—dgreports/—dcomm/—publ/documents/publication/wcms_544138.pdf

[11] *See* Raquel Martins, *Devemos ter o "direito a desligar" do trabalho? Governo abre debate* [*Should we have the "right to disconnect" from work? The government opens a debate*] Público (Jan. 6, 2017), https://www.publico.pt/2017/01/06/jornal/devemos-ter-o-direito-a-desligar-do-trabalho-governo-abre-debate-32496252 (Port.).

access to information, but we fear not being constantly up to date and losing our place in the job market. We grew up hearing that work dignifies a person, but we feel our dignity being violated by the invasive work that excessive technology can lead to.[12]

In its centenary, the ILO cannot be indifferent to this focal point of labour humanization and the social justice: promoting training and legal protection for workers so that they can keep up with technological innovations and simultaneously have health and welfare.

Technological innovations have brought new ways of working, but these do not dispense with legal regulations. The internal labour law of states and international labour law, with the highest standards set by the ILO, should continue to protect people and promote humanization in labour relations.

Just as information technology infrastructure needs to be regularly updated to maximize performance of the system, the ILO must also renew its efforts in order to best meet the expectations of its tripartite composition - employees, employers and government - and to fulfill its mission of development of social justice.

[12] Jorge Luiz Souto Maior, *Do direito à desconexão do trabalho* [*About the Right to Disconnect from Work*], Revista do Tribunal Regional do Trabalho da 15ª Região, July- Dec. 2003, at 296 (Port.).