Global Workplace Law & Policy

A Future for Work After Digitalization

David Mangan (Maynooth University (Ireland)) · Monday, March 2nd, 2020

Reflecting on digitalization (as a collective term for artificial intelligence, robotization and new technologies) of the workplace draws out the confused intermingling of outcomes and ambitions. The aims of technological innovations entrench an economic understanding of efficiency, often at the expense of social considerations, which pose significant potential to displace human workers. These aims, as applied to the workplace, invite critical assessment.

Luddites in the 21st century

A factor in this assessment is history. Recent books on technology and work (such as those by Carl Benedikt Frey and Daniel Susskind) recount the story of Queen Elizabeth I refusing William Lee's patent request in 1589 for a stocking-frame knitting machine because of her concern over the economic impact of her subjects.

The character of Ned Ludd has given history the dismissive adjective 'luddites'. Luddites smashed the human-replacing technologies related to textile manufacturing. Legislation was passed by Parliament to address the issue. First, there was the *Protection of Stocking Frames, etc. Act 1788* (28 Geo. 3 c.55). The later version *The Frame Breaking Act 1812* (52 Geo. 3. c.16) permitted the death penalty for the same offence of breaking stocking machines.

Do we see similar levels of concern in the early 21st century?

Since the Great Recession, similar fears have been held; notably as reports of computer-based technological advances lend an air of imminence. If a push against these technologies is being expressed by citizens in some form, not to downplay the violence which ensued in the instances noted above, it draws attention to the long and legitimate fears held by people in losing their livelihoods.

Ambitions and realities

When it comes to technological advances, it may seem as though we have been at the edge of a breakthrough that will replicate human existence for some time (though replicating the way humans work is not the only model for these technologies). Consider the following first line of a 1958 report. "The Navy revealed the embryo of an

electronic computer today that it expects will be able to walk, talk, see, write, reproduce itself and be conscious of its existence." "New Navy Device Learns by Doing" *The New York Times* (8 July 1958).

While efforts have long been directed toward this end, it has been long in development. Nevertheless, the seeming slow pace should not diminish attention to the purported aims of these advances. One of the considerations has been the automation of work performed by humans. Discussion of digitalization of the workplace insinuates a complete conversion to an entirely digital way of working; coupled with the presumption of necessarily abandoning the vestiges of older ideas of work. The disparity between perceptions and current realities points out how the discussions of the digitalized workplace have been largely prospective. Communications technologies (and most pervasively, social media) have been the most used form of new technology presently. They facilitate information sharing and personal connections. The smart phone has been an entry point for digitalization because it is a more accessible form of technology. Social media usage, however, falls short of the ambitions for digitalization of the workplace (and has also been seen as a hindrance to work). Rather, data collection, assessment and intelligent oversight technologies are the ones which are more commonly cited as innovations that will improve the efficiency of and output from the workplace. The more widespread current use of social media suggests not just the fledgling stage of digitalization, but it also elaborates upon the present phase of 'industrial revolution', to adapt Klaus Schwab's language of a fourth industrial revolution.

Stages of digitalization of the workplace

Viewed in the early 21st century, digitalization of the workplace is a multi-stage process.

The first stage (innovations in communications) has seen a change in the means by which communications have been conducted where there are now multiple, rapid and reliable platforms for connecting with others around the world. The infrastructure of these platforms has created two important by-products. Communications tend to be conducted in written form (as opposed to orally). With some form of traceable copy in existence, these communications can also be viewed as sources of data analysis.

Overlapping with the first, the next stage (data processing) recognizes the utility in the data created by these communications technologies. To this end, data analytics employ algorithms to comb through this data and to package it in a manner that can then be used for secondary applications. These analytics recall Frederick Winslow Taylor's 'scientific management', particularly Taylor's emphasis on controlling outcomes. How these algorithms are being employed also remains diverse. They can be used in order to collect information for decision-making by human managers or automated means. The role of these human managers may also be diminished to the point that artificial intelligence collects the data and makes the decisions. The link with 'scientific management' is the continued reliance upon data to almost exclusively assess commercial productivity.

A third stage (performance and predictive analytics) considers whether this raw data

may be aggregated and classified in ways that may lead to predictive outcomes. Algorithms increase in their sophistication by including workplace performance incentives.

A fourth stage (human oversight and human displacing technologies) extends the applications for performance and predictive analytics. Attention turns to adapting the third stage data to more complex algorithms that can modify themselves and create new algorithms in response to data. Precision performance mechanisms ('nudging' workers) are honed and expanded for use in professional types of workplaces. Efforts turn to human replacing technologies on a wider scale; premised on an absence of reliability or the limitations of humans.

If we accept that not all human labour may be automated, the type of residual work comes into question. Will these include jobs be the kind that are shunned by non-immigrant workers? Will there be a clustering of jobs into what economist David Autor calls 'wealth work'?

The Threshold is the Place to Pause

Using these categories, we are firmly in the first stage and have ventured some ways into the others. One noteworthy aspect of this movement is the seemingly unwavering confidence that we are headed in the optimal direction.

General Data Protection Regulation (GDPR)

The law remains somewhat behind regarding the intersection of information technology and the workplace. The General Data Protection Regulation (GDPR) is of questionable adequacy for meeting this effort as it concerns the workplace; with much being left to Member States though Art.88. Instead, the GDPR facilitates the on-going trend in employment law of offering wider protection for commercial purposes than sustainable workplace rights. If these decisions are made by way of algorithms, persistent monitoring must accompany such forms of decision-making so that the factors considered are adequately balanced between capital and social interests. (How are the social pillars reflected in decision-making algorithms?) Additionally, it must be asked what rights to access in the GDPR entail (such as 'meaningful information' about the 'logic' of automated decision-making) if the requesting individual does not understand what is provided?

Routine Work

Particularized tasks have been a target for digitalization of work: routine tasks or rendering certain tasks routine. Synonyms for routine include 'monotonous' and 'mundane' and there are similarly negative implications for productivity: 'We believe that intelligent automation will, above all, enhance human capabilities and allow us to free people from routine work, empowering them to concentrate on more creative, value-added services. The overall benefits to the economy from such enhancements could be large, as could the benefits in terms of enjoyment of work and quality of life.'Tasks that may be typical and repetitive can be undertaken by machine or, as is the case more recently, computer.

Inequality

Digitalization carries significant potential to further entrench existing gaps. One of these gaps is between urban and rural areas of countries where a significant concern is the adequacy of the infrastructure for digitalization available in each area.

Reliable and fast internet access is not at the same level in rural areas as it may be in large cities. With 74% of premises having access to high speed broadband in Ireland, the National Broadband Plan (NBP) focuses now primarily on 1.1 million people (approximately 23% of the population), including 56,000 farms which constitutes 68% of the total number of Irish farms.

A skills infrastructure is also required. These are educational and developmental needs for residents in the area of information technologies. It should be borne in mind that digitalization requires individualized skills development. Literacy, numeracy and e-literacy, together, make up the building blocks of the movement to digitalization of work. The dilemma is whether digitalization will further entrench existing inequalities, thereby contributing to a widening of disparities.

This entry was posted on Monday, March 2nd, 2020 at 7:30 am and is filed under EU, EU Law, European Labour Authority (ELA), ILO, Labor Law, Regulating
You can follow any responses to this entry through the Comments (RSS) feed. You can leave a response, or trackback from your own site.