

FUTURE OF WORK AND EDUCATION FOR THE DIGITAL AGE

Providing a broader framework to social and labour relations

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Abstract

Despite seeming dramatic for developed countries, the so called “fourth industrial revolution” appears as an opportunity to undeveloped communities. The “productivity jump”, the local development and the spread of technology to everyone, are some of these good news. States and organizations should open political and legal frameworks so as to allow new structures to emerge and compete. New technologies make new citizens and we must let the outcomes be, since no state could foresee their unintended consequences. Since new strategies and institutions would emerge, custom, institutional competition and imitation could enable the flourishing of the emerging economies.

Challenge

Rapid changes in global economy, labour relations and the information managing, as well as uncertainty about the global and local consequences of these changes, leave us in a point in which a “new social contract” is demanded. These changes seem to be dramatic for those countries or societies that have been enjoying certain institutional and economical stability during the last decades, but it seems to be a window of opportunities for those societies – generally classified as frontier, developing or emerging economies – that could never reach those levels of development and stability. Despite not having experimented totally the industrial or post-industrial eras, the “fourth industrial revolution” seems to open a complete new world of opportunities for those societies that could not reach total development before¹.

We believe that we are in the middle of what Thomas Kuhn² could call a “crisis of the old paradigm”, situation in which the old paradigm is chronically unable to provide solutions for new problems or “anomalies” and a new paradigm or a “paradigm shift” has not occurred yet. These circumstances can let multiple and different schemes and competing paradigms emerge, and compete with each other.

Recent debates about the future of jobs have mainly focused on whether or not they are at risk of automation³, generally minimizing the potential effects of technological

1 In this sense, we are confronting the daunting vision of certain works in which most of the changes are seen as disadvantageous compared with previous Welfare State stability, for example: Tapscott, Don: “A Declaration of Interdependence. Towards a New Social Contract for the Digital Economy”, Berkman Klein Center for the Internet & Society at Harvard University, <http://dontapscott.com/wp-content/uploads/New-Social-Contract-May-10-2017.pdf>

2 Kuhn, Thomas S., “The Structure of Scientific Revolutions”, University of Chicago Press, several editions.

3 See Arntz, Gregory and Zierahn, 2016; Frey and Osborne, 2013; McKinsey Global Institute, 2017.



change on job creation, and the complexities that arise. Findings about skills suggest that occupation redesign coupled with workforce re-training could promote growth and reduce loss of jobs⁴. According to the Accenture Workforce Marketplace report (2017), technology is not just changing workplace tools, it's also radically reinventing the way business are designed, built and run.

This policy brief is focused on two points: a) To provide an new and challenging view of the situation in which interconnected individuals, businesses, technologies and information provide the best framework for the emergence of new paradigms in social and labour relations. In this way, certain changes that could be seen as negative in developed economies and societies might represent an opportunity for emerging economies that, through the new tools, could finally find new ways to produce wealth and resolve chronic unemployment, metaphorically "to make one's escape from the maze by going up". b) Foreseeing these benefits, invite national and local states, as well as global organizations, to broaden political and legal structures so as to let new ways of relation and production emerge, always guaranteeing individual rights. Instead of insisting on promoting laws that correspond to the old labour paradigm (i.e. 8 hour shifts, vacations paid, etc), let the political and legal scheme be open to new forms of contracts and work relations that could provide a solution to chronicle unemployment and poverty.

Proposal

Proposal 1

To envision the benefits of the Fourth Industrial Revolution for Emerging Economies, encouraging the debate about the new social and labour relations, taking into account the productivity jumps, the impact on the local economies, and the advantages of the information technology for everyone.

A. New social and labour relations: The product of the mixture of novel visions and technologies - new, diverse and unexpected ways of production of goods and services, new labour relations and contracts, as well as fresh social interactions may appear in different societies and contexts, and could provide diverse solutions to new challenges. We believe that changes are so profound ("holistic" in Kuhn's terms⁵) and exponential that we cannot cope with them

4 Bakhshi, Downing, Osborne and Schneider, 2017

5 Khun, Thomas S., "The Road since Structure", The University of Chicago Press, 2000, p. 28.



with the old notions and with a “classic” XX Century political and legal scheme. In this sense, national states and the international organizations as known, may or may not have the central position in envisaging new institutions and rules as they used to do in the XX Century. For the Accenture Workforce Marketplace report (2017), we are in presence of a management model evolution, from legacy models (with a traditional structure where individuals are hired for a single position and engaged in fixed business functions) to orchestrated talent marketplaces (with people being dynamically teamed by project, based on skills, knowledge, and staffing needs) where business will set a path to become built-for-change companies. In that sense, there are two main aspects that are driving the digital transformation of labor: the online management of work and the on- demand labor force. In the words of Tim O’Reilly: “We have to stop thinking about people working for companies and start making companies work for people”. This implies that companies are re-writing the social contract (the relationships and responsibilities that organizations, governments, and society have with workers).

B. Productivity Jump: New technologies, the introduction of robots, automatic processes and artificial intelligence, could allow new goods and services to be offered as well as new labour relations to be conceived. In this sense, a “productivity jump” can be experienced in societies and economies whose take off have been delayed for decades⁶. This could represent the opportunity to many individuals that nowadays are unemployed or sub-employed to produce much more wealth with less hours of work⁷. The extra wealth produced could also represent benefits for many others that could receive certain help in terms of education, health or compensation.

C. Local Development: Promoting new ways of social and labour relations, we could also conceive new configurations at the level of familiar, neighbourhood and local relations, a more widespread and less concentrated map of city activity (specially thinking in the big and populated cities of the emerging countries). People working from their homes or local offices, not necessarily having a fix schedule and/or not having to travel to the city downtown/centres everyday at the same time, could imply a number of benefits in terms of local development, among others: a) A benefit to local shops and providers that could have a more stable demand during the day, b) New ways of relation between families, homes, children and other institutions -such as schools, church, health centres- since most of the people would not

6 These reflections are in the line of Matt Ridley’s “The Rational Optimist. How prosperity evolves”, Harper Perennial, 2011.

7 Kimmitt, Annette and Bolshaw, Liz, EY: “How emerging markets are using technology to overtake developed countries” <https://betterworkingworld.ey.com/growth/growth-barometer-emerging-economies>



“migrate” during the day; this could also imply a benefit in the participation of families in children’s education, c) Benefits in terms of less environmental impact, since less people would use public or private transport every day and would produce less contamination, d) A reduction in overcrowding at cities centres/downtown, reducing traffic as well as city violence, e) A better relation between individual’s work and personal space/time; a non-structured schedule could produce not only a benefit in time managing and enjoying free-time but also in health and personal relations.

D. Information Technology for Everyone: The spread of new devices as smart phones and their applications allows to more and more people each day to enjoy the benefits of the economy of information. It is well-known the example of the fisherman in the middle of the lagoon that, until twenty years ago or even less time, did not know how many fish to catch in order to achieve an optimal sell later in the local market. Too many fish would result in a waste of resources, whereas too few fish would imply a forgone opportunity of earning a better income. Nowadays, the said fisherman can calculate when to end his journey by connecting through his cell phone, optimizing his time and earnings. This represents a sharp drop in the transaction costs of the free-lance activities that turn them to be more profitable. It is not odd to envisage a future of free-lance workers and tiny and volatile enterprises to structure the economy.

Proposal 2

Invite local, national and global states and organizations to broader political and legal structures so as to allow new ways of relations and production to emerge and compete.⁸

A. New technologies make new citizens: the changing circumstances demand a new social contract, but the individuals to sign it are different as well. New technologies have transformed social environment and social environment has produce a change in the minds of the citizens. Old securities could be perceived as barriers by the new generations. To legislate for a new environment is to legislate for a new type of subjectivity. Problems could turn from traditional into obsolete. Moreover, obsolete problems could overlap contemporary demands and make them invisible. For example, Deloitte Review (2017), highlights one important aspect, that cognitive technologies perform tasks and not jobs or entire processes; but a human worker within a business

⁸ We follow certain lines presented in 2017 Policy Brief: “Accelerating labour market transformation”, particularly in terms of “Acknowledge acceleration as a path to prosperity”: http://www.g20-insights.org/policy_briefs/accelerating-labour-market-transformation/



process can typically perform a variety of tasks. So, this suggests that cognitive work re-design efforts within companies should focus on how specific tasks that are supported with cognitive tools fit within broader processes, as a good method to think about how humans can be redeployed to activities and tasks within processes that make the best use of their capabilities.

The only way to deal with this situation is to regard new anomalies as possible new standards. Many traits of the youth are usually treated as anomalies, whereas they might be adaptive responses to new environments. Since the principal aim of the education of the youth should be to prepare them to adult life, the educational system has to take into account the social and technological changes that the forthcoming adult will face.

B. Let the outcomes be: apocalyptic images of the future that try to prevent the technological changes are useless, because the unintended consequences of those changes are overwhelmingly more complex than any anticipatory study could take into account. Some questions emerge: Who provides worker training for non-traditional employees? Who pays for benefits if someone is a fluid worker, moving between different companies? If freelance workers are between assignments, are they unemployed? (Accenture, 2017). In general, start-ups disrupting work argue that existing regulations were designed for another era and do not apply to the gig economy (a labor market characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs).

In this context, the wisest attitude to take is to observe the different outcomes and subsequently adopt the institutions that have fitted to the new environment the best. Since the technologies of information are spreading all around the globe, it is possible to evaluate their impact in the societies with different sets of institutions. Many countries with different legal frames will deliver different outcomes from the impact of new technologies⁹. Thus, it will be possible to select the best fitted set of institutions from the experience of each country. Some of them will provide an example to follow and others will let know what mistakes should be avoided.

C. In times of fast innovation, custom is the rule: every process of fast innovation rest in a remnant of immutability, but is impossible for any government to discover with enough timing which would be the set of norms that will command the changes. Preserving or introducing the custom as a

9 Cf. Keith. Kevin, "We need to build a new social contract for the digital age", The Guardian. Link: <https://www.theguardian.com/commentisfree/2018/apr/04/we-need-to-build-a-new-social-contract-for-the-digital-age>



source of law would be warranty for the innovation to flourish, since custom is the set of norms best-known by every subject taking part in commerce or any productive activity. In a time of fast innovation, the law enacted by the legislatures will become obsolete at a faster rate. This will make countries with a high degree of enforcement of the law to become stagnated, whereas countries with low rates of rule of law will deepen to even worse spheres of marginality. So, the best way to cope with the unintended consequences of a new world of fast innovation is to acknowledge custom as a source of law and, at the same time, to focused the activity of the government on the protection of the fundamental human rights.

In conclusion, we believe that the Fourth Industrial Revolution could represent for frontier or emerging economies a unique opportunity to reach a level of productivity, a deep local development and a spread of technology that would help many individuals to face unemployment or sub-employment, and even free-lancers to be much more profitable -especially in those countries where the benefits of a stable Welfare State was never reached. At the political and legal level, we propose that national and local governments, as well as international organizations, adapt legal schemes so as to be prepared for the emergence of new and unpredictable ways of production and provision of goods and services as well as new schemes of relations, transactions and legal obligations. The main role of local, national and international organizations would be to guarantee individual rights for everyone that would like to participate in this new digital age.



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