The end of work as we know it1

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200 million people worldwide are currently out of work –30 million more than in 2008. It is in this context that a new Great Fear has emerged, that of a world where human beings will have been made redundant by machines.

Robots indeed have not yet invaded our lives, but they are invading our minds and scholars speculate that as predicted in 1983 by the late Wassily Leontief, the Nobel economist, human labour may ultimately suffer the fate experienced by horses in the early twentieth century. Most economists are sceptical, for two reasons. First, they have heard similar stories several times before, and have learned that on the aggregate, productivity increases rarely destroy jobs. Each time that machines have gained in efficiency (including when motor vehicles and tractors replaced horses), old jobs were destroyed but new jobs were created. Second, economists are number crunchers and what they see in their data is a slowdown rather than an acceleration of productivity gains.

But this controversy misses the important point. Whatever the quantity of human labour that will be employed in the coming decades, there is no doubt that the quality of work will be deeply transformed.

Two trends are at work here. The first is indeed the rise of robots and the alteration they bring to human labour. As observed by MIT economist David Autor, machines do not only substitute some human workers for routine tasks such as data processing. They also make other human workers more productive when performing creative tasks. And they change little to the productivity of a third category of workers who provide in-person services. So robots are making accountants redundant, they boost the productivity of surgeons and they do not change anything for hairdressers. The consequence of these changes for the structure of the workforce and the relative fate of the various categories of workers is at least as important as their overall quantitative effect.

The result is what economists have termed the polarisation of employment: more in-person service jobs are being created at the bottom end of the wage scale and more abstract, creative jobs are being created at the top end (and these jobs are more productive and better paid), while there is a hollowing-out of the middle. Polarisation has taken place in the US for a few decades and it is taking place in Europe too.

This transformation has deep consequences not only for the economy, but also for society. In the post-WW2 era the middle class served as an inclusive magnet for other social categories. The poor aspired to join it and many of the rich thought, or at least pretended, that they were part of it. It was thought that through hard work, everyone could get access to it. It defined consumption

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patterns and the way of life. It was the backbone of democracy and civil engagement. So the consequences of its demise would go far beyond the realm of jobs. It would alter the fabric of society and the role of work in the formation of social identity. It would unleash —perhaps it has already unleashed— a new era of class rivalry and antagonism.

The second trend is what is increasingly called the "uberisation" of work. Uber, the digital cab company, epitomises a new type of work arrangements whereby individual suppliers of services get access to clients through a platform. When a customer calls an Uber driver, she does not only buy a service from Uber but actually one from Uber –access to a driver and the quality control provided by the rating by other customers— and one from the driver itself. Unlike the giants of the past Uber does not count zillions of employees on its payroll, yet it indirectly organises and standardises the work of zillions of drivers.

This is a major trend because Uber and sister digital platform companies redefine work and make the celebrated firm of the industrial age redundant. The firm was an essential institution because it organised better than the market efficiency-enhancing interaction between individual workers. It allowed specialisation and saved on transaction costs. Yet the likes of Uber offer an alternative interaction platform that does not rely on the employment contract. Instead of being mediated by the bosses' authority, the individual's labour is being mediated by a software.

Again this transformation portends far-reaching consequences. One for example is that labour is becoming marked to market in the same way any commodity is: the wage contract, once the cornerstone of an individual's work valuation, is being replaced by the sale of a service whose quantity and price vary in real time depending on supply and demand.

We may think that this arrangement is fraudulent. And perhaps it is, with respect to the existing legal framework. Yet one should have no illusion: ultimately, old legal frameworks cannot win against technology. So better think about the consequences of new work patterns that put in jeopardy all the social institutions that are predicated on the permanence of the wage contract, such as social security contributions.

Other, admittedly less disruptive changes could be added, such as the rise of human capital. More and more young graduates shun seemingly attractive jobs in major companies and prefer to earn much less working for start-ups or creative industries. This is in part because they value the corresponding lifestyle, but it can also be because it is a way to increase their overall lifetime income. In other words it may be a better economic use of their set of skills and competences. Instead of renting it for a pre-set price, these young graduates prefer to maximise the lifetime income stream they may derive from their human capital.

Again such behaviour undermines the employment contract as a basic social institution and it makes a number of the associated features such as annual income taxation suboptimal.

Each of these individual trends is significant. But their interaction is even more powerful. It undermines long-established institutions we had grown so accustomed to that we considered them natural and eternal.

How will societies respond? Some are tempted by resistance to change —witness the recent clashes between taxi drivers and Uber drivers in Paris. Willingly or not, some are resigned to adapt and reform existing institutions. Some are determined to invent social institutions that will build on both collective values and preferences, and the ongoing transformation. This is certainly the most promising attitude —by far. Because tomorrow's society should be determined by the citizens, not by the robots or the digital platforms.