

Technology and the Future of Work*

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The latest fear factor to hit the world relates to the disappearance of jobs. Everywhere now the buzz is about how technology is going to transform work – and reduce it dramatically. The Davos World Economic Forum CEO Klaus Schwab (whose book *The Fourth Industrial Revolution* was released this week) is just the latest in a long line of recent predictors of this gloomy possibility. From 3-D printing to robots that will perform not just some basic services but even more skilled activities like those of accountancy and so on, the fear is that human labour will be increasingly displaced by machines, and so there will simply not be enough work to provide employment to all the people who need jobs.

But there is some confusion in all this doomsaying about the future (or lack of it) of work. Let's distinguish first between two types of technological change: productive and disruptive. The first describes those changes that increase productivity and change the nature of economic activities. They certainly include increasing automation, as well as a host of new developments in biotechnology and other areas, which clearly reflect the “creative destruction” inherent in a lot of technological change.

There is little point fighting against such advance of technology or even trying to slow it down in some way, because that simply would not work and in any case is not really desirable. But that does not mean that we should be in despair simply because it would displace a lot of human work – in fact, where it replaces arduous work full of drudgery, or makes doing things more easily, we should celebrate it.

However, this means that the greater surpluses generated in these more productive activities should be transferred to demand for more employment-intensive activities that enhance the quality of life in society. A lot of these would be in services both old and new, which would include care activities in which the human element is essential, as well as creative industries and knowledge and entertainment activities and a range of other services.

Care work in particular is likely to become an increasingly important and necessary part of future work, given projected patterns of demography and morbidity. In its broader definition that means not just relational care (care of the young, the old, the sick, the differently abled) but also all activities that contribute to the existence and well-being of others, which includes a wide range of what are commonly known as “household tasks”. Such work is currently provided along a broad continuum from relatively highly paid skilled professionals (doctors, for example) to lower paid workers with skills that are less socially acknowledged (such as nursery school teachers whose work is actually very demanding and requires substantial skills and training to be effective) to unpaid labour (much of the work performed largely but not solely by women and girl children within households and local communities). Recognising and redistributing such work and according it dignity and proper remuneration is not only important, but will serve as a major driver of employment generation in future, even as it improves the quality of life for all.

In addition, new jobs that could potentially be generated by the surpluses thrown up by productivity increases in some sectors could also include certain types of

production (organic agriculture, for example, or more craft-driven handicraft production that is increasingly discovering new niche markets) that become more valued by society and require more human labour by their very nature. A wide range of services that result from the “creative economy” also fall into this category.

Many of these activities actually require more people working at them to deliver better quality, so standard indicators of productivity in such work are not of much use, and really should not be used to assess them at all. Rather, insofar as these two reflect improvements in quality of life, we should welcome the potential for such employment that is enabled by increases in productivity in other activities.

However, it is evident that this is not an easy process, and it is definitely not naturally thrown up by market forces. Rather, the processes of capitalist market workings are more likely to throw up mass unemployment and greater inequality if left to function unchecked, which is why technological change is generating such pessimism about job creation.

So managing this process for the greater public good definitely means greater public intervention, which in turn needs to occur through more democratic and accountable states. This can happen through more public spending that will generate more employment directly, to provide goods and services that improve the quality of life of people in the society, and indirectly through the positive multiplier effects of the initial spending that in turn increases demand in that economy. The process of encouraging expansion of labour intensive activities that improve quality of life rather than only GDP can also be pushed by states through changing incentives for private players.

This in turn means that dealing with the impact of such technological change requires a change from the currently conventional mind set of policy makers across the world. But it is still something that is potentially positive and should be welcomed if societies (and their governments) are able to shift strategies and generate processes so that everyone can benefit.

But there is another kind of technological change that is more disruptive rather than productive, because it does not really increase productivity but simply creates enabling conditions for changes in the way that goods and services are produced and distributed. Such organisational changes are exemplified by what is now called “Uberisation” – whereby improvements in ICT allow “aggregators” to emerge who simply link up providers and buyers of goods and services and apparently eliminate middlemen.

Funnily enough, this is the technological change that many celebrate, even as they worry about the implications of productive technologies that will displace labour. That is because this has immediate effects on prices to begin with – as the many who have benefited from cheaper taxi services because of Uber or reduced hotel costs because of AirBnB will vouch for. But this happens really because the workers have become the direct producers, contracting out their goods or services to customers enabled by new technology. The services end up being provided at what are effectively “piece rate wages” for the workers concerned.

We know that through history – as well as now when it is so common in production chains in manufacturing across the developing world – piece rate work has been a

classic vehicle for the greater exploitation of workers. Such workers try to ensure sales by driving down their own prices or accepting lower prices offered by buyers, and then work longer hours to compensate or to ensure higher incomes. They face all the risks of production and market variability. They often take on multiple activities in order to diversify and increase their incomes. And since they are effectively “self-employed” (even when they are in effect dependent sub-contractors of much larger companies) they are responsible for their own safety at work, their own social security and all else that would normally be covered by employers.

It is ironic that such re-organisation of work is being treated as a major technological advance, when in effect what it is doing is reviving the putting-out arrangements that were typical of early capitalism. So we should not get too excited about it – some of the “new economy jobs” are just the old piece rate work, in new guises and extending to old and new services.

In the contemporary context, these are also mechanisms of slipping through regulatory cracks and allowing the “aggregators” to avoid bearing any responsibility for the protection or well-being of workers. So, unlike the creative destruction of the first kind of technological change, which has positive effects even when it displaces workers, this kind of disruptive organisational change enabled by new technology is neither inevitable nor ultimately that desirable.

This process is certainly something that can be tamed and made more socially palatable through appropriate regulation. The idea that “aggregators” or those who subcontract out several parts of the production processes are not employers and therefore not responsible for the conditions of the actual workers involved, is something that must be fought. And regulatory mechanisms must be put into place to ensure that workers’ rights and protection are not lost because of this. Interestingly, enforcement of regulations in many instances may well be facilitated and made easier by the same technologies that have created these changes in the first place.

So we need to take a new and fresher look at technological change. That’s the only way we can stop being afraid of new technology or being ruled and manipulated by it.

*** This article was originally published in the Frontline Print edition: February 19, 2016.**