What is the new landscape of work

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THE FOURTH INDUSTRIAL REVOLUTION: UNPRECEDENTED AND EXPONENTIAL CHANGE

This 'revolution', as the founder of the World Economic Forum, Klaus Schwab, suggested, may "in its scale, scope and complexity … be unlike anything humankind has experienced before1". But surely such 'epoch-changing' shifts in production, organisational design, ideation and labour relations have occurred before? Indeed, this may be so. However, as Schwab noted, it is the scale and intensity of these changes that makes them unprecedented:

The speed of current breakthroughs has no historical precedent. When compared with previous industrial revolutions, the Fourth is evolving at an exponential rather than a linear pace. Moreover, it is disrupting almost every industry in every country. And the breadth and depth of these changes herald the transformation of entire systems of production, management, and governance[1].

What are some of these exponential changes?

There's an increasing accessibility of and connection to mobile devices (and what these devices can do), unprecedented processing power and unlimited access to information. Add growing innovations in artificial intelligence, robotics, blockchain, the Internet of things, and nanotechnology and you have, if one is unprepared, a recipe for widening the 'digital divide' and entrenching inequality.

The Fourth Industrial Revolution has one further component: biotechnology. The extraordinary advances occurring in biotechnology have the power to completely change the timeframe over which we can live productive lives. This will mean we're not just changing how we will live in the future, we're also changing how and when we will die.

Each of these elements will impact on the world of work. How businesses respond to these changes may well be a differentiating factor between which of our industries, organisations and workplaces survive and which are rendered obsolete by these changes.

How do these changes affect the workplace?

In the 21st century, with the pervasive influence of easily accessible information, digital communication and interfaces, the nature of work has shifted from workers of the same organisation working one job in a co-located environment, to multiple jobs (gigs) being performed by skilled workers across the globe. Moreover, the Fourth Industrial Revolution extends into key changes and shifts in production, organisational change, ideation and labour contracting that are markedly different from the previous 'revolutions' and, in particular, from the shifts we saw in the 20th century.

Longer, healthier lives mean the whole convention of the three-stage life – learning, earning and retirement – may well be obsolete. We now need to prepare ourselves for a multistage life, where success will be based on our ability to recreate and repurpose our relevance in the working world.

This article touches on these changes and explores their bearing on our world of work. We look at the changing nature of production, the rise of contingent and remotely located forms of work (subject to fluid and flexible employer–employee relations), the growing use of machines as 'talent', and the phenomenon of ageing in South Africa and its impact on both the economy and the workplace. We conclude the discussion with looking at how regulation can respond to this shifting reality in a country that must respond to these future developments while at the same time address a legacy of inequality.

The changing nature of production

The way production has interfaced with geopolitical and trade policy changes in the wave of globalisation that started towards the end of the previous century has resulted in significant changes to the nature of production – changes which, in turn, contributed to the transforming world of work.

Let's look at some of the drivers of these changes.

Diffuse global value chains

The late 20th century saw the rise of diffuse global value chains, with parts of the production process of one good or service located in different and numerous geographical locations. An Apple iPhone is one example of this: it's designed by Apple in California and assembled in China. This is at odds with old industrial models, which are characterised by co-located labour, design capability and managerial structures.

Globalisation of production and the on-demand economy

The globalisation of production has also contributed to the development of manufacturing and inventory processes such as 'just-in-time' (JIT), which gave early inspiration to the development of the gig economy. JIT systems focus on the production of goods to meet demand rather than creating surplus in anticipation of any future demand. This can be seen as the earliest precursor to the 'on-demand economy'. The on-demand economy is characterised by economic activity driven by technological companies meeting consumer demand through the rapid (often immediate) provisioning of goods and services. Who, then, meets supply? Unlike in the old industrial model, supply is not met through a co-located and centrally organised value chain of production. Provisioning and the allocation of supply is done, as Business Insider describes, through "an efficient, intuitive digital mesh layered on top of existing infrastructure networks[2]."

The gig economy

The question of how supply is met for markets to clear is one that also gives rise to another dynamic: the 'gig economy'. What do we mean by this? Tacita McEvoy, founder of Cape Town-based digital marketing agency Social Media Now, describes the gig economy as a "job market dominated by freelancers and entrepreneurs":

…apart from being a 'live performance', gig can also mean a 'job' or an abbreviation of gigabyte. But in 2017, when someone tells you they have a 'new gig', it immediately takes your mind to their job, and not a two-wheeled carriage pulled by one horse (yes, that's also a gig). All in all, a gig is a contracted job tasked to a professional to complete in a defined period of time.

The sharing economy: breaking the ownership–use nexus

Alongside the gig economy is the 'sharing economy', which breaks the ownership–use nexus. In the past, you would need to own an asset to guarantee its use. The rise of new technology platforms changes this – you don't have to own a fleet of cars (or even one car) to have a ride-hailing business, or a well-stocked showroom to sell clothes. When applied to employer–employee relationships, the example is instructive: an employer (or the owner of the 'linking' technology platform) doesn't need to have a contractual relationship with the personnel providing the 'service'.

This explains the rise of contingent workforces and livelihoods in the absence of formal employment agreements. This development has been accompanied by the rise in digital marketplaces offering individuals avenues for income generation in exchange for completing specific assignments and tasks. Examples of these marketplaces include BetterWage, Upwork, TaskRabbit and Amazon Home Services. They link freelancers with assignments in a wide array of areas, including domestic work, repairs, software programming, application development, graphic design, marketing and mobile development. If we are to take seriously the sentiments of tech and creative entrepreneur, Gil Oved, then more and more organisations (even those that are not technology companies), will see such functions and services as being a crucial part of how they reach consumers and of their overall value propositions.

What's in it for organisations in such arrangements?

These freelance agreements can be used by large organisations in instances where certain functions and tasks are marginal to core operations and therefore do not justify a full-time hire. For smaller businesses, the same logic applies. As Susan Lund observes, this can be a helpful costcontainment approach for small firms: "... they can dramatically lower costs for small companies that need specialised help, from accounting to marketing assistance for a product launch[3]."

The rise of machines as talent

Another interesting phenomenon set to change the landscape of work is the rise of machines as 'talent'. These machines are no longer confined to industrial robots but also extend to services sectors of the economy. As a PwC CEO Survey found, these advances are often mind-boggling: "3D printing can be used to make cars and aircraft; biotechnology is changing the way we produce food and medicines; and nanotechnology and artificial intelligence will transform numerous industries[4]." Most concerning here is the fact that there is little evidence to date that these new technologies are actually creating new job opportunities elsewhere in the world.

In addition to these shifts in the way we use physical (or tangible) machines is the rise of powerful logarithms and artificial intelligence (AI) applications that can synthesise large datasets and distil useful analytics. This has created a competitive race for human talent that has the ability to deploy machines, algorithms and the Internet of things to unlock commercial value. Firms like Google have joined this race for talent in response to the growing relevance of artificial intelligence and machine learning. Recent reports show the increasing 'poaching' of AI engineers across organisations such as Amazon, Twitter, Snapchat and Facebook.

These changes, which will make machines a prominent feature of much of what is produced and how services are delivered, require organisations to think creatively about how technology can complement (rather than displace) human capability. In the PwC survey mentioned, of the 1 379 CEOs surveyed across the globe, most found that the skills they considered important were those that couldn't be replicated by machines. The study also acknowledges that 'augmented reality', where a person and machine work together, provides the most optimal solution in a number of applications now. It then becomes clear that the unique selling point for employees in the future we are moving towards won't be "I'm a human and I can do a certain task". Rather, the differentiator will lie in having a skill that can't be automated. Non-cognitive functions and more emotional intelligence-driven capabilities (sentiment, experience, leadership, empathy and care) will take precedence over the ability to complete routine tasks.

The demands of increasing longevity

A demographic factor that will contribute to this need for a contract-based or gig economy will be the demands of increasing longevity. The good news is that we are seeing a substantial increase in our health-related quality of life before death. This means we can have productive lives for significantly longer than our current retirement dates suggest. Moreover, a number of studies show that older, experienced employees can actually increase the productivity and employment opportunities for a company if they are employed in appropriate work contexts **(See our Case Study on assessing older workers' contribution to productivity in the workplace)** This stands in sharp contrast to the prevailing view that older employees stand in the way of transformation.

The bad news is that funding a longer period of retirement will demand that people find ways to continue generating income long past these somewhat arbitrary retirement dates. By necessity, retirement as we know it will be due for a shake-up. As with the other elements of the Fourth Industrial Revolution, increasing longevity will demand that we rethink employer–employee relationships, careers, skills development, organisational structure and, of course, employee engagements and benefits.

How do we respond?

The rise of exponential information flows, boundless digital communication and interfaces has not only changed how we connect and transact, but also how we work and the landscape in which work happens. The provision of products and services is (and will be) driven by efficient and intuitive digital interfaces, giving rise to contingent workforces, freelance gig-economy workers and the growing use of machines as 'talent'.

These developments also bring about a competitive race for talent, and organisations across all sectors, and of all sizes, need to be alive to this. No industry will be left undisturbed or 'undisrupted' by these changes. From 3D printing changing how we manufacture, and thus transforming trade and consumer dynamics downstream, to changes in climate change and automation affecting the production of the food we eat, these changes will inevitably challenge our assumptions about how economies work. They will contest the notion of a linear trajectory – moving from agriculture to manufacturing and then services in the tertiary sector – and we may (as we've seen in many instances on the African continent) see 'leapfrogging' beyond manufacturing-related infrastructure and other overhead investments to a 'service and experience' driven economy.

It's therefore important for organisations in different sectors, with different production processes, to be appreciative of these shifts, in a generalised form at least. These shifts involve making organisational change more quickly in response to changing economic realities. The important message for organisations is that prescience is a strategic need, and the pace of some of these changes without such prescience may find many firms considerably unprepared to respond appropriately. To some extent our best hope here will be to leapfrog the upskilling of our people. The real threat to our future is not the possibility of our workers being replaced by robots but our inability or unwillingness to train unskilled workers for this new world of work.

In addition, the quandary of funding an ever-lengthening period of retirement challenges us to rethink our notions of retirement, particularly in a world where experience and skill are in short supply. Policymakers, alongside employers of all kinds, must respond in a way that ensures the economy is able to secure portable benefits and much-needed social security reforms that protect the worker and the workplace of the future.

Policy and regulation governing 'the new worker'

The world over, policymakers and regulators are at pains to clarify how self-employed, part-time and contract work in this digitised environment should be regulated, especially where employees are defined as 'independent contractors' or 'contract workers', many of whom work more than 40 hours a week with no benefits. In Germany and Canada, labour law covers 'dependent contractors', granting additional protections to workers who rely strongly on one employer or organisation and therefore find themselves in the murky middle ground between being employees and independent contractors.

Lund notes that in countries like the United States (and even here in South Africa), employers have for a long time been the channel through which many workers receive benefits: "Employers are the primary mechanism for delivering a wide range of benefits (even if employees share the costs with them). These include health insurance, disability insurance and retirement plans, as well as unemployment insurance, maternity and paternity benefits, worker's compensation for job-related injuries, and paid time off[5]." What happens to freelancers or independent contractors? Should they buy their own savings instruments, cover and benefits, and rely on their own resources should they need to take time off, for any reason?

From a regulatory perspective, there are two related issues. Firstly, there is a need for labour legislation to clarify the role of workers or independent contractors working for technology platform organisations, such as Uber, and those engaged in digital freelance work for various companies. (Recent conflict in South Africa between metered taxi drivers and Uber drivers indicated how some of these regulatory questions can flare up violently if unattended to.)

Secondly, once this has occurred, there is a need to develop a system of portable benefits frameworks to meet the needs of this segment. Lund argues that "unions could fill this gap, providing benefits and even training and credentialing for members, as they have done in the construction industry and for Hollywood writers and movie professionals".

A multistakeholder approach to designing a system of portable benefits

It becomes clearer that as the digital revolution moves forward, alternative models of work and employment relationships will require a multistakeholder approach. The starting point is in regulation (including involving the freelance industry in unemployment insurance benefits). It's then up to industry, alongside the regulators, to design a system of portable benefits that will disrupt the employee benefits landscape.

The likely consequence of such a move will be to place a greater focus on retail funds and benefits platforms, overlaid on a digital interface, with flexible term structures and payout frameworks.

Where to from here?

The only thing we can say for certain about this revolution in learning and working is that it will take us all – governments, policymakers, employers, workers and students – into uncharted waters. Because it will touch on every aspect of how we live our lives, the implications go far beyond simply rethinking our policies on retirement dates. It will impact on our notions about education, partnerships, social security, financial advice and job security. No doubt a battleground will emerge in the HR departments of many employers.

Conversely, although the benefits of prescience may be numerous, there will be significant challenges with the Fourth Industrial Revolution which will have a direct bearing on organisational effectiveness and holistic employee well-being.

It's these shifting dynamics – and potential responses – that we explore throughout this section and the remainder of the 2017 edition of *Benefits Barometer.*

References

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