Outside the Cubicle: Transforming Time, Space and Real World for Women

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Abstract

In the past two decades, we have seen exponential growth in digital space. Technological changes have transformed our lives, in areas from health, travel and logistics to entertainment, medical and biotechnology, providing us with new visions for the future - from intelligent homes to genetic human modelling. This has drastically changed how we communicate, how we work, what we do and our vision for the future. The innovations this has led to are exciting, but also disruptive, because they create a market and a demand for products and services that did not exist before or are something we never imagined before.

Technology has provided several tools and techniques to shift the pattern of how we work. Research indicates that the use of a flexible work environment improves work-life balance and reduces work pressure. Flexibility in the workplace is initiating modern working practices, especially for working mums and women in general. Although in recent years, flexible working schedules have gained considerable attention from certain organisations, women are often constrained by lack of flexible working hours which have negative impacts on their job satisfaction. If we consider technologies as tools, commodities or shared resources, how can we create a stronger framework between technologies and work-life balance to transform working time, space and life of working women? In this paper, we research how the disruptive nature of technology can build flexible working opportunities for women, explore a technology-based framework to create work-life balance, promote tools and techniques that facilitate flexible working and provide recommendations to encourage work-life balance in the workplace.

Keywords: Transformative Technology, Working Women, Work-life Balance, Flexible Hours

Introduction

Over the past decade, technological advancement has caused disruption in many traditional industries. Car sharing, hire car services disrupt the taxi industry, robots replace hundreds of blue-collared workers, mundane tasks are replaced by automation and even start-up companies with minimal experience compared to incumbent firms can triumph when armed with advanced technology (En, 2017). The growth of transformative technology has changed human lives and the way they work. Advancement has brought immense convenience and benefits for both consumers, producers and businesses by bringing their productive capacity to a new height. This is considered as the fourth industrial revolution creating innovations and markets across all fields such as biotechnology, health, food, travel, logistics, medical and entertainment.
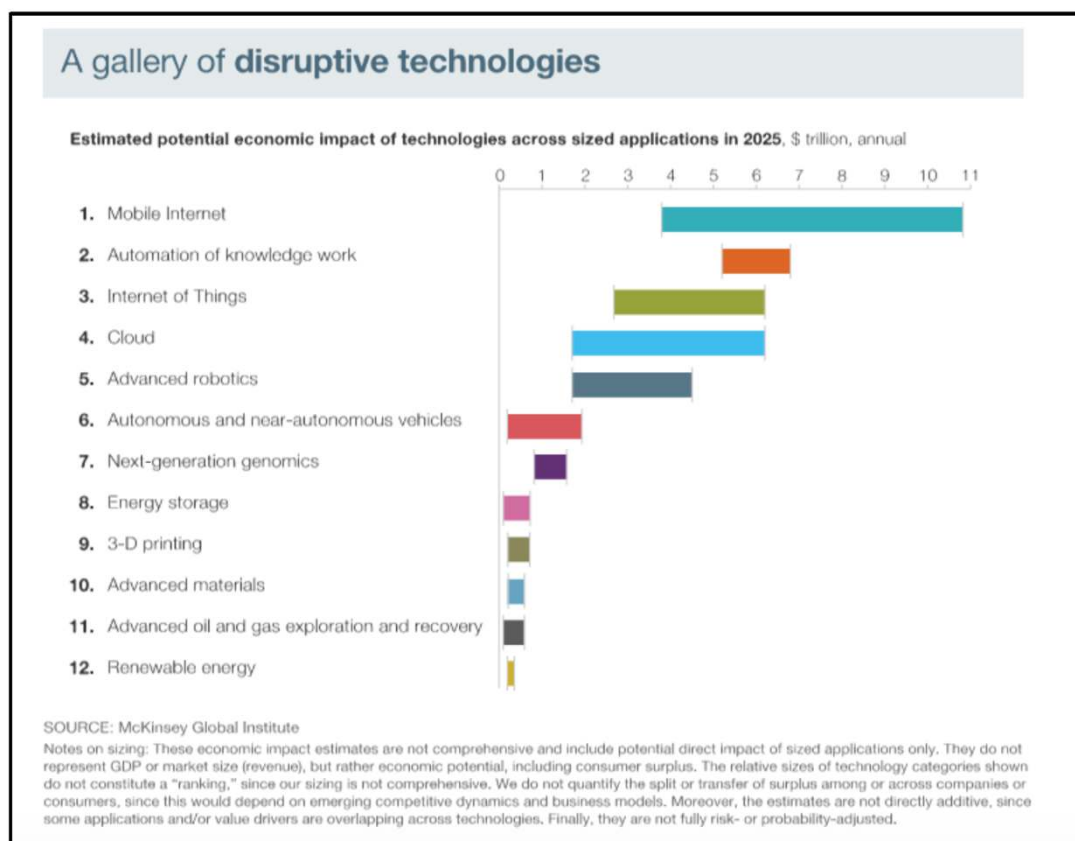
Figure 1

The estimated economic impact of technologies across various applications (Figure1) will exceed $7 trillion by 2025 (En, 2017). It often disrupts workforce participation and offers revolutionary changes in the conduct of processes or operations (Kostoff, Boylan, & Simons, 2004). Growth in technology has also provided tools and techniques for creating work-life balance and flexibility in working style.

Research and evidence indicate that flexible working hours lead to a balanced work-life for both employer and employees. It promotes healthier and more satisfied workforce, increased efficiency, reduced absenteeism, better health, reduced work conflict, higher job satisfaction and reduces work stress (Wheatley, 2017), especially for women. Although there are some organizations, with a good framework that supports flexible working hours for women, this is not practiced widely. In this paper, we explore how disruptive technology can be used to build a technology-based framework to create work-life balance and promote tools and techniques that facilitate flexible working. We also provide some recommendations that can be implemented by organizations to encourage work-life balance among women.

Transformative technologies – Impact on the Future Workforce

Transformational technologies bring mega trends in its own way and radically reshape economies and societies. It provides new opportunities for strategic advantages and challenges the basic way people think and work. It provides businesses with new opportunities for strategic advantage while challenging previously successful 'historical' paradigms. In recent developments, digital diversity has offered opportunities for firms, industries, governments and citizens to shape technology and its adoption (Development, 2018).

Transformational technologies go beyond the personal and societal changes into technological advances such as automobiles, smart phones, medical facilities, entertainment industries and communications. The growth and development in technologies has completely changed the way people meet, interact, learn, work, travel and operate businesses (Jarvenpaa & Ives, 1996; Karmokar, 2019). It leverages smartphones, Internet of Things, sensors and wearables, big data, neural networks and computing power, machine learning, AI and AR/VR to support work life balance. Focusing and aligning with multidisciplinary expertise such as artificial intelligence, quantum, systems, virtual reality and visual communications with real world problems from various sectors, a novel technology innovation can be delivered that will benefit society and transform the way we do things (Karmokar, 2019).

The growth of disruptive technology is a double-edged sword for the future workforce. On one hand, growth has replaced the jobs of low-skilled workers such as taxi drivers, tellers, cleaners, junior accountants and checkout operators with automation and new business models. Even for those employed, the decreased demand and constant flux in the nature of their work has created insecurity, fear and inequality in income growth (En, 2017). Currently, there is job polarisation with medium workers already reaching a low point. On the other hand, transformative technologies have created new startups and created a knowledge-based economy. Many high-risk activities have been replaced by robots such as using drones for safer firefighting, use of robots in delicate medical procedures, 3D printed body parts in the disability sector, use of AR/VR in health education and space exploration. It has transformed old traditional working styles into more sophisticated models with more efficiency and flexibility.

Due to the exponential growth in disruptive technologies, the nature of the workforce is changing. More people have access to tools and techniques that has empowered them to work from anywhere and anytime such as Microsoft Teams, Barter boards and Collaborators. This has also led to the decline of traditional forms of employment. Most of the routine jobs can be outsourced to almost anywhere in the world, creating a far more flexible, temporary and dispersed labour force (Manyika et al., 2011). They are termed 'virtual workers' who work to complete a specific task for an employer from any location with varied timings (Greene & Mamic, 2015). A distinct workforce has been created of individuals who are digitally literate, adaptable to flexible working locations and times, used to working in the virtual environment and with a 'Just in Time' (JIT) attitude.

Future Workforce – Women

Despite rapid growth in the disruptive transformation of the globe over the past decade, only a few studies have assessed the consequences of digitalisation on the workforce, especially for women. Digitalisation of the workspace has increased women's workforce participation via telecommuting and flexible work arrangements, outsourcing of projects and reduction in the time spent undertaking household labour (Dettling, 2017). Transformative technologies have increased the demand for cognitive and non-routine skills over manual and routine skills. There is some evidence that women are more efficient and experienced in non-routine analytical and interactive tasks when compared to men as a consequence of digitalisation and automation (Watson, Corliss, & Le, 2018). There are several factors contributing to the increase of women in workforces, such as increased number of women in higher education, cyclical labour market conditions, growth in service industries, government support for parenting leave, supportive childcare policies and increase in part-time/ flexible employment.

There have been dramatic changes in the digitised workforce landscape. Women comprises nearly half of the workforce, with more families having dual earners. Part-time or flexibility in the workspace is one of the prominent factors for the increased number in women's participation. Growth in women's participation has increased demands for flexibility in the workplace so that they can have a balanced work and life. The following section discusses flexible working arrangements and its advantages and limitations in relation to women.

Flexible Working Arrangements - Advantages and Limitations

Flexible working arrangements (henceforth referred to as FWA) have two components - flexplace and flextime (Allen et al, 2013). The former refers to 'where' the work gets done, while the latter refers to 'when' it is done. The flexibility in these two areas alleviates work-family conflict to a large extent and promotes a healthy work-life balance for a woman employee. Workplaces worldwide are moving towards compressed work weeks or encourage a results-only work environment (Hornung et al, 2008). The working days could be intense, but it ensures that the job at hand is completed and there are enough days left in the week to devote to non-work activities with family and friends.

There are only three finite resources that come into play when it comes to work or family. These are: time, attention and energy (Allen et al, 2013), that a working woman has to stretch in every possible direction to meet the demands at work and the expectations at home. In most families, men are considered the bread-winner. Increased economic pressures on households, following the introduction to neoliberal economic changes in the 1980s, has made dual income a necessity rather than a choice. In some cases, the 21st century women, who want to be financially independent, have to perform the dual role of bread-winner as well as manage domestic chores. As a result, these resources, especially for women, are in high demand, as both work and family vie for them. FWA helps allocate these resources evenly, leading to the employee's personal development and fostering a positive job attitude. In fact, FWA makes employees proactive, who come up with innovative solutions to problems - perhaps the same way they tend to domestic responsibilities. They usually work by themselves at home and so have to figure out solutions to problems on their own. This improves their cognitive skills, making them self-sufficient and efficient.

But this also means working for longer hours than are accounted for and FWA seldom comes with over-time. Often these hours go beyond their work week, but it allows them to choose their work and leisure times (Elbing et al, 1975) - a fact that has been speculated on for decades. When working from the comfort of home, it is quite easy to get distracted by never-ending household chores or entertainment options, as a relief form the chores. Under these circumstances, practising self-control and following a rigid schedule become essential. This is not everyone's cup of tea. Often, this results in blurring the roles of family and work, giving rise to trust issues on the part of the employer (Elbing et al, 1975). The feeling of isolation experienced when working from a remote location can easily become demotivating, spurring the urge to engage in activities that are non-work related, which can actually work as a stimulant. If the line manager is not accustomed to such outcomes of FWA, this can fuel mistrust, leading to the breakdown of employer-employee relationships. More often than not, these managers are men who are not comfortable around working women with families.

The conservatives also argue that FWA increases individualism and limits collaboration. But if we consider work to be the 'economic' and family to be the 'social' pillars of our lives (Crompton, 2002), we would invariably find that the two are intertwined for working women

with family responsibilities - one does not exist without the other. This understanding should reduce the tension between the two, by giving each their due time. Research has shown that female employees who are offered FWA have higher levels of job satisfaction and commitment towards their employers when compared to their non-flexible counterparts (Terri et al, 1997). These employees respond to FWA "by exerting additional effort, in order to return benefit to their employer" (Kelliher et al, 2010, p. 83). It is interesting to note here that giving back earnestly is a quality associated largely with women. FWA also helps being productive in the hours spent travelling through congested traffic, gives an alternative to overloaded facilities at the workplace, as well as brings a panacea to counter boring and repetitive work (Elbing et al, 1975). In this way, FWA raises morale and decreases absenteeism among the female workforces.

Technological Framework – A Recommendation

To support this re-modelling of the workplace, in order to accommodate shifting family patterns and to reduce workplace conflict, we have developed a three-pronged technological framework. It is built by innovating on existing frameworks that are already in practice in contemporary workplaces.

Technology for surveillance

The very first cog of the framework involves a shift in work culture among senior management. Emphasis should be on building trust (Harell, 2009) among employees by hiring efficient and responsible staff who are held accountable for their share of the workload. Transformative technology, similar to blockchain technology, can further this cause, because the new capabilities it enables prompts societal change. Although considered a technology that is set to transform the world of financial transactions, the same concept of "peer-to-peer... distributed ledger" (Mearian, 2019, n.p) of blockchain can be applied to non-financial exchanges as well, where everyone can see the others entry in real time. This prevents any one person from tricking the system and thereby fosters mutual trust.

An open source software, blockchain operates by sharing information among collaborators and prevents users from erasing any information that's on the system (Crosby et al, 2016). A decentralised mechanism in the workplace, it could operate on "distributed consensus" (Crosby et al, 2016, p. 7) informing colleagues about an act that has been completed. This update, once recorded, would be irreversible. The knowledge of such a system ensures that the employee on FWA is aware of her responsibilities, thus making her accountable to others in the team. Any social, ethical, moral issues that might arise from such a flexible working arrangement would lead us back to developing trust within the organisation and among the employees. Technology-enabled surveillance can enable this to a large extent. Once this trust is established, it would foster employee loyalty towards the employer. Moreover, this form of technology can help overcome space constraints at the workplace by encouraging staff to work from home and thereby keep overheads to a minimum with the existing facilities going a long way.

Social determinism of technology

Use of appropriate technology is largely determined by the social arrangements around it. In other words, social determinism of technology (Lievrouw et al, 2006) helps identify the most appropriate device or internet application for FWA. This brings us to the second cog of the framework, whereby it is the users who decide which technology is most relevant to get the

job completed. About a decade ago, G Suite was the chosen platform for corporate organisations. It was used not only for linear communication via emails or chats for an immediate response, but also for collaboration using Google docs and the shared folders. Meetings were conducted on Hangouts, using VOIP and video calls. These paved the way for big data and cloud storage services, which meant employees could access work files from just about anywhere.

Lately, the preferred platform with most organisations appears to be Microsoft's revamped Office 365. One Drive is used for cloud storage as well as for document sharing, while SharePoint works as a repository of folders and files. Skype, also owned by Microsoft, makes up for the VVOIP (video and voice over IP) platform, useful for meetings and video calls. Rumour has it that Skype will be replaced by Office Teams in the not very distant future. There are other regular features, like the Calendar which acts as a diary of meetings and appointments, and the PowerPoint and Word.

The choice between Google and Microsoft, of course, depends on the nature of work an organisation engages in. If the work is predominantly collaborative, then G Suite is the best option. But if the focus of the organisation is primarily on the use of "powerful and sophisticated features" (Gralla, 2020, n.p), then Office 365 would out-weigh Google by a big margin. Thus, it is imperative for employers, along with employees, to determine which technology would work to their advantage when it comes to implementation of FWA.

Technology-enabled FWA

When compared to a regular employee on a regular work shift, a woman on FWA is often perceived as an unambitious employee, not very keen on career advancement (Rogier et al, 2004). If the managers go beyond such stereotypes and examine the capabilities of both of these employees, they might be surprised to learn about the dedication of the employee on FWA, for reasons mentioned above. Thus, the third cog of the framework concerns improvement in working arrangements. With the rapid changes in work environments and competitive salaries, "job enrichment has become a fundamental tool for management in improving employee's motivation and organizational growth" (Choudhary, 2016, p. 1020). Money is no longer the ultimate decisive factor, rather a host of other things that pertain to the work culture in the organisation that play an increasingly prominent role. Choudhary (Choudhary, 2016, p. 1020) has listed them as follows:
   a) Giving more freedom.
   b) Encouraging participation.
   c) Giving employees the freedom to select the method of working.
   d) Allowing employees to select the place at which they would like to work.
   e) Allowing workers to select the tools that they require on the job.
   f) Allowing workers to decide the layout of plant or office.

In keeping with these guidelines, we recommend the following pointers to improve the work environment:
   • Flextime: Vary beginning and end of workday.
   • Extended leave: Sabbaticals at regular intervals. They could be paid or unpaid leave for personal reasons.
   • Part-time work: The option to work less than 40 hours a week.
   • Compressed work week: Fulfilling work week obligations in fewer than five days.
   • Telecommuting: Some work taking place outside of the office.

- Work from home: All working hours carried out from home.
- Job Share: Two people sharing the job of one, by dividing the hours and responsibilities between them.

Conclusions

Alongside an increase in women's workforce participation, in recent decades, the knowledge economy has provided opportunities for career flexibility, which can clearly be beneficial for women who have children and other responsibilities. With the rapid growth in technology and subsequent change in lifestyle, flexible working is the preferred option for both employers and employees. Technological transformation has reformed time, space and our style of work. A lot of organizations are offering FWA because of its benefits to both employer and the employee, more so in the post-COVID19 world.

This article was originally written prior to the lockdown – when circumstances forced us to "work from home" (Dockery & Bawa, 2020, n.p) for a sustained period of time, in order to enable business continuity. Since then, most workplaces have gone back to working from their premises, but there are many who are smitten by the advantages of FWA and have made it a reality of their "new normal" (Dockery & Bawa, 2020, n.p). According to Stats NZ, 90 per cent of those who lost jobs due to the COVID19 situation are women (Vergara, 2020). As these women return in full force once job opportunities begin to mount, the proposed technological framework may result in increased job satisfaction and productivity for them, despite the various constraints imposed by the family and household responsibilities.

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