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The Fourth Industrial Revolution and its Impact on International Relations

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Introduction

The Fourth Industrial Revolution, also referred to as 4IR is affecting every layer of society. Relations and interactions between and within state or non-state actors too are no exception. 4IR will require everyone to unlearn and relearn the way things are perceived and conducted in world politics. If the previous industrial revolutions are marked by certain inventions – steam engine in the first, electricity in the second and computer in the third – the cornerstone of 4IR is the digital revolution. The founder and executive chairman of the World Economic Forum, Professor Klaus Schwab characterizes 4IR as a revolution that has much more ubiquitous and mobile internet in compact but more powerful and cheaper sensors (Schwab, 2017: p. 7). Contrary to some views, he posits that 4IR has already begun and is not an extension of the Third Industrial Revolution. Instead, it is fusing the physical, digital and biological realms altogether. The velocity and scope of 4IR combined with emerging technological trends in Automation, Artificial Intelligence (AI), Big Data, Internet of Things (IoT), Machine Learning, and Robotics, among others, will fundamentally metamorphose the entire field of International Relations. These impacts need to be assessed so that states' readiness to face the future could be gauged.

What to expect in 2025?

Professor Schwab highlighted 23 specific technological advancements or tipping points that would hit mainstream society in less than ten years (Schwab, 2017: p.121-172). Among the tipping points are by 2025: the first implantable mobile phone is available in the market; the first government to utilize Big Data as sources for its census; the first AI machine on a corporate board of directors; the first 3D-printed car in production; the first 3D-printed liver transplant; the first artificial memory implanted in human brain; and the first human with genome intentionally altered is born. By 2025, driverless cars constitute 10% of the total number of cars on US roads, 90% of the world population have regular access to the internet and free unlimited storage, while 80% of them have their digital presence imprinted on the internet.

Impacts on International Relations

4IR combined with these groundbreaking technologies that are steering the hyper-connectivity between people and people, people and things, things and things at an exponential pace and beyond physical borders have five paramount impacts on international relations.

First, the diffusion of power from nation-states to individuals or loose networks of individuals will be accelerated. When powerful supercomputers in the form of smartphones are in almost everyone's pocket, virtually anybody could exert influence that would have been unthinkable in the past. Julian Assange of the WikiLeaks saga portrays how an individual is able to humble down a powerful state, the US government, by publishing thousands of secret files on Afghanistan, Iraq-war log, diplomatic cables and hacking the emails of a presidential candidate (Thuburn, 2018). Edward Snowden's intelligence exposé on internet and phone surveillance is another instance that demonstrates how an individual micro-action could be detrimental in destabilizing foreign relations of a nation-state. Whether it is on transparency, manipulation or disinformation of foreign policies, international relations are no longer under the sole purview of the nation-states.

Second, ubiquitous internet permits international relations to global scrutiny. President Trump's announcement on recognising Jerusalem as the capital city of Israel and ordering the move of US embassy from its current location in Tel Aviv to the holy city sparking worldwide outrage is a pertinent example. Solidarity-with-Palestine protests are seen on the streets of Beirut, Jakarta, Istanbul and Kuala Lumpur. The fulminations of Trump's declaration are also shown in multiple social media platforms including by New Zealand singer-cum-songwriter, Lorde and US model, Bella Hadid. The US President's slur on tweeter, the claim of having a bigger and functional nuclear button than the North Korean leader too has been criticized as 'spasm of a lunatic' (CNBC, 2018). Beside public scrutiny, prompt and immediate feedbacks are often demanded on 24/7. Nation-states who fail to live up to public expectation are seen losing the control. Thus, 4IR will constantly be challenging the centrality of nation-states as the rational actors that determine what is good or bad for mankind.

Third, the international border of a nation-state will be more porous. Manufacturing, accommodation, food services, agriculture, transportation, warehousing and retail trade are among the most anticipated sectors to be severely hit by rapid cutting-edge advancements. PwC UK claims that by the 2030s, US risks 38% of its jobs to automation whereas Germany with 35%, UK with 30% and Japan with 21% (McKenzie, 2017). Automation is also believed to affect 56% of the total labour market in ASEAN-5: Cambodia, Indonesia, the Philippines, Thailand and Vietnam (McKenzie, 2017). The replacement of human jobs with automation, Robotics or AI reduces huge labour costs and eventually slows down Foreign Direct Investments (FDIs) from coming into the 'cheap-labour' nations. With thousands of worldwide jobs affected, job seekers are expected to turn to online labour platforms for potential and future employments. Workers get hired to work for companies which are based in other states without leaving their own countries. The porosity of borders enables virtual workers to cross in-and-out international frontiers without valid visas or working permits and in the absence of immigration or customs

clearance. Hence, having multiple jobs and job hopping would be the 'new normal'.

Fourth, the domestic and international political domains are blurring. The issues surrounding virtual or online workers could accentuate the blurring of these two realms. In the case of virtual workers, online platforms are not the real employers. Who then safeguards the workers' entitlements, pensions, basic rights or minimum wages? Which labour laws are applicable to them: their countries of origin or the countries where the companies are based? Are virtual workers subject to certain taxes? If so, who collects them? The current model of employment which houses the employer-employee relationships under a domestic territory could not accommodate the issues associated with virtual workers. In 2016, two UK drivers won a lawsuit against UBER claiming that their basic rights of sick pay, holiday pay and a guaranteed minimum wage were denied (Johnston, 2016). The groundbreaking decision signifies a monumental victory not just for the two drivers but 40,000 UK drivers who are no longer classified as self-employed workers, but as employees of UBER (Johnston, 2016). As the domestic-international political lines are blurring, collaborations between state and non-state actors that supersede the traditional dichotomy become mandatory.

Fifth, the scope of power politics will be further widened. The classic claims of Thucydides, 'power is the final arbiter' and 'might makes right' still prevail in today's International Relations. The scope of power politics nonetheless, has been expanded to consolidate military might, economic dominance, political supremacy and AI advancements. The span of power politics cuts across land, sea, space and cyber space. Machines or robots that have human-like abilities are often perceived as make-believe in movies. However, the convergence of machines with human capabilities has finally arrived with 4IR. Tomorrow's wars are not just fought by drones but by machines with human cognitive ability and intelligence. The future of arms race will be in the domain of AI. As Russian President Vladimir Putin aptly puts it, the development of AI brings huge opportunities and unpredictable threats but "whoever becomes the leader in this sphere will be the ruler of the world" (Meyer, 2017).

Recommendations

No single nation-state is capable of facing the magnitude of these prime impacts alone. Nation-states have to adapt and lodge several key action plans to cushion the tsunami-like-effects of 4IR:

Regular dialogues with major stakeholders are a must. As broached by TN50, the era of the government knows everything has ended. Policymakers ought to be in the lead to engage with the players in industries, businesses, education sectors, non-governmental organisations, think-tanks, researchers, societies and informed individuals so that the depth of the impacts could be assessed and plans to address them could be drafted.

The stakeholders' dialogues should be venturing more into the opportunities rather than fearing from it. 4IR is not merely about risks. Despite the anticipation of vast job losses, major breakthroughs in health sciences, Robotics, AI too help to improve the quality of millions of lives.

Heavy investments in education ought to be among the top priorities to prepare the readiness of the people in embracing massive unemployment. Teaching, learning and training for every layer of society must integrate the agenda of 4IR. Therefore, some skills that were acquired in schools, colleges or universities before should be replaced with new needed specific skills.

Nation-states need to utilize Big Data to decipher, monitor and determine the behaviours and values of individuals or loose networks of individuals. This vital information could assist nation-states to face potential threats, manage future crisis and tabulate certain de-radicalization programmes.

Conclusion

Everybody will be impacted by 4IR regardless of which generation one belongs to. Despite the colossal challenges, the seed to embrace these impacts needs to be implanted today rather than tomorrow.

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