

# **LKAS Symposium – University of Glasgow – May 26-27, 2021**

**Professor Hopeton S. Dunn – Keynote Presenter**

## **Presentation Title:**

**Re-imagining Human Development in the Fourth Industrial Revolution – AI and IA:  
Artificial Intelligence and Internet Access in the Search for an Inclusive Digital Future**

## **Presentation Synopsis**

Despite an impressive array of technologies driving what has been called the Fourth Industrial Revolution (4IR), I argue here that the intended transformational processes must inescapably include a greater emphasis on preserving our shared humanity and on benefiting people, if Veblen’s concerns (1899) about a capitalist techno-determinist global future is to be avoided. According to 4IR’s conceptualiser, Klaus Schwab, “major technological innovations are on the brink of fuelling momentous change throughout the world, inevitably so.” (Schwab 2017: 1)

We must be cautious in the wholesale adoption of industrial strategies or ‘periodisation’ that appear primarily to serve the interest of wealthy global elites in a renewed hegemonic process of ‘globalization from above’ (Dunn 2012). For a start, if large sections of the global population are not to be left behind, credible transformational processes must include strategies for greater access by people, including the youth, to affordable digital technologies and other development tools. This should involve more widespread low-cost access to the internet, the provision of stable electricity supplies in many underserved countries of the world, and the deployment of more extensive training programmes in digital literacy, data analytics and technology innovation. These are essential in the search for an inclusive digital future among large population segments worldwide.

In his 2016 book, Schwab invited his readers to “think about the staggering confluence of emerging technology breakthroughs covering wide-ranging fields such as artificial intelligence (AI), robotics, the internet of things (IoT), autonomous vehicles, 3D printing, nanotechnology,

biotechnology, materials science, energy storage and quantum computing, to name a few.” (Schwab 2016: 1). However, the Covid 19 pandemic has exposed the cruel disparity between those with access to such smart enabling technologies, and the vast majority of people without basic Internet Access (AI). These access gaps will need to be redressed as people and countries attempt to re-build in anticipation of the end of the pandemic. While these immediate human needs do not loom large in 4IR’s starred array of technological applications, they have become, in less than 18 months, the technologies of necessity and of choice for millions of people globally.

In Africa, the ITU points out that only 28 per cent of households in urban areas had access to the internet at home, but that this was still 4.5 times as high as the percentage in rural areas, which stood at 6.3 per cent. (ITU Development Sector Report 2020). Many households in other global regions are experiencing a similar absence of meaningful internet connectivity or even connections to electricity grids, to help provide such necessities as online-based home schooling and the wherewithal for e-commerce under Covid 19.

Schwab acknowledged that one seeming by-product or economic externality of this transformative, disruptive process is what he called “exacerbated inequality” as a systemic challenge. (2016: 11). In supporting what seems to be a gross understatement, he indicated that innovations will affect people’s living standards and welfare both positively and negatively, but that in this instance, “The consumer seems to be gaining the most.” (2016: 12). There is no credible class or gender impact analysis of his prognostications and little consideration to those for whom high end technologies are entirely out of reach. His technological determinist approach appears to undervalue human agency and to create a somewhat mechanical measure of human progress: that of the extent of adoption of the contemporary tools of western modernity.

Schwab’s description of the 4<sup>th</sup> industrial revolution appears to have overlooked or underplayed some of the more formidable and inter-related human challenges of the twenty first century. These include endemic poverty, gender disparity, pandemic disease and climate change.

It is estimated by the World Bank that the Covid 19 pandemic has already pushed an additional 88 million to 115 million people into extreme poverty, with continuing increases and dire consequences for national economies and the global outlook. (World Bank 2020). It defines extreme poverty as people living on less than US\$1.90 a day, a situation that it calculates affected between 9.1% and 9.4% of the world's population in 2020, marking a close to 10% regression on the situation in 2017. While less than a tenth of the world's population lives on less than \$1.90 a day, close to a quarter of the world's population lives below the \$3.2 line, and more than 40% of the world's population – almost 3.3 billion people – live below the \$5.50 line.” which is still regarded as severe poverty. (World Bank 2020: np)

Among those most acutely affected are women and girls. The agency UNWomen pointed out that women who are poor and marginalised face an even higher risk of falling further into poverty as a result of the Covid 19 pandemic. “The pandemic induced poverty surge will also widen the gender poverty gap, meaning more women will be pushed into extreme poverty than men.” (UNWomen 2020 (1) (np) Women were found also to be at even greater risk of sexual violence, human trafficking and economic exploitation in the confining pandemic context. UNWomen 2020 (2).

In terms of the global climate crisis, it is clear that with or without the pandemic, climate change continues to wreak its devastating effects and risks. Human actions present the greatest threat to the planet, its lifeforms on the land, in the air and in the oceans, as part of a process degradation and a period crisis now characterized as the Anthropocene.

For the global South, as for the North, these major, crucial trends are already affecting people's development prospects, their access to technology and their relationships to their social and political eco-systems.

The technology of artificial intelligence (AI) which 4IR underscores, can indeed play and is already playing an important role in improving internet access (IA), environmental protection and human development. However, if basic access devices remain unaffordable or unavailable,

and large segments of the global population remain in poverty, the ‘smart’ integrated AI benefits will continue to elude citizens that are in need of them to survive.

In these circumstances, it would appear that new interventions, especially from advocates in Academia, non-governmental organizations and popular movements the Global South are needed to realize the promise of 4IR to create “a new technology revolution which entails nothing less than a transformation of humankind” (Schwab 2016: 1). Otherwise, it could remain a mirage that fails to benefit the great majority of people globally. To help mitigate this on-going challenge, inputs from varied sources are required to develop campaigns and manifestos, such as those being proposed by this symposium, in order to build inclusive and progressive futures for all.

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