

Chapter 9

Implications of the Fourth Industrial Revolution (4IR) on the Development of Indigenous Languages of South Africa: Challenges and Opportunities

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ABSTRACT

Indigenous languages are the carriers of the communication, culture, and identity. It is through language that one expresses one's thoughts, emotions, and feelings. Unfortunately, colonialism created serious problems and obstacles in the development of African indigenous languages. European languages are used in Africa, rated as official languages of African countries while indigenous languages are sidelined and marginalized. Africa's own vision of decolonization, self-realization, and African Renaissance will always be a dream if African languages don't reclaim their rightful position in Africa. Intellectual decolonization is prudent for the realization of emancipation of the indigenous languages.

INTRODUCTION

According to the literature of various scholars (Marwala, 2017; Ally & Wark, 2019 ;Van Zaneen, 2020) on the subject of industrial revolutions, they all agree that the industrial revolution started in Europe around the 1700s. The first industrial revolution took place around 1760 and the main driver was the availability of power particularly in the form of water and power steam that resulted into the mushrooming of mechanized factories (Van Zaanen, 2020). The second industrial revolution started around 1870 and focused on all technologically oriented enablers such as the invention of the telegraph, the telephone, the railroads and electrical power (Van Zaanen, 2020). Long distance communication and travelling became possible and this resulted in globalization (Van Zaanen, 2020). The third industrial revolution

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took place around 1950, and it was referred to as the digital revolution (Van Zaanen, 2020). It resulted in the invention of the information communication technology (ICT) which became the hub of power of processing information (Van Zaneen, 2020). Building of computers were possible through the invention of transistors and integrated circuits (ICs) and the entire world become interconnected through the invention of the internet (Van Zaanen, 2020).

THE FOURTH INDUSTRIAL REVOLUTION (4IR)

Today, the entire globe is transforming in all systems of life owing to the Fourth Industrial Revolution (4IR). Based on the previous industrial revolutions, this time around the 4IR is dominated by artificial intelligence (AI) which changes the way we live and work (Marwala, 2017). The 4IR strongly recommends for an interdisciplinary approach (Marwala, 2017). Synergy between social sciences and humanities with other hard core sciences is the new norm in the new era. The 4IR encourages a paradigm shift commonly observed by the following: disruptive technology, internet of things, robotics and virtual reality (Ally & Wark, 2019).

The 4IR started around 2007 and it took the third industrial revolution as its base since it relies on the technologies and infrastructure of the third revolution. Davis (in Mhlana & Moloi 2020):2 states, 'the 4IR is the advent of cyber-physical systems involving entirely new capabilities for people and machines'. This argument is supported by Van Zaneen, (2020:1), who cites <https://www.weforum.org/focus/fourth-industrial-revolution>; 'the 4IR represents a fundamental change in the way we live, work and relate to one another. It is a new chapter in human development, enabled by extraordinary technology advances commensurate with those of the first, second and third industrial revolutions'. This view is buttressed by Xing & Marwala (2017:1) who wrote the following, 'The 4IR is powered by artificial intelligence and it will transform the workplace from tasks based characteristics to the human centered characteristics. Because of the convergence of man and machine, it will reduce the subject distance between humanities and social science and technology. This will necessarily require much more interdisciplinary teaching, research and innovation'. In his 2020 State of the Nation Address, state president, Mr. Ramaphosa touched on the significance of the 4IR basing it on a holistic development of the country and its citizens particularly on the impact that the 4IR has on the economy of the country. Based on the report of the 'Presidential Commission, the Fourth Industrial Revolution has made far-reaching recommendations that impact on nearly every aspect of the economy and in many areas of our lives. The Commission's report provides us with the tools to ensure that we extract the greatest benefit of these revolutionary technological changes' (2020:16)"

One other essential parameter of the 4IR is the emancipation of the previously oppressed. The scramble for Africa resulted in a total division of Africa into several colonies grouped as Anglophones and Saxophones. The issue of the language of the colonizer becomes more dominant at the expenses of the indigenous languages.

The 4IR propagates for decolonization of Africa as a continent with the intention of salvaging the African Indigenous Language (AIL) which are now an endangered species. Intellectual decolonization strictly puts the AIL higher on its agenda since it challenges some of the status quo brought about by Eurocentric thinking. If the 4IR is to be considered as a true reality, indigenous languages should be provided with space and supported with digitization and digital humanities resources. Currently, English and Afrikaans are fully supported through the use digital techniques. Using human language technology,

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