

# The fourth industrial revolution risks leaving women behind

August 6 2019, by Rachel Adams

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Credit: AI-generated image ([disclaimer](#))

The Fourth Industrial Revolution is, ostensibly, upon us. The [term was coined](#) in 2016 by Klaus Schwab, the founder and executive chairman of the World Economic Forum.

Broadly, it refers to the collapsing of boundaries between the physical,

digital and biological spheres. More specifically, it's about the digitalisation of all kinds of systems and processes. Artificial Intelligence (AI) is at the forefront of this reality. This involves systems that, as the [European Commission puts it](#), "display intelligent behaviour by analysing their environment and taking actions ... to achieve specific goals".

AI is used today in everything from face and speech recognition technologies to image analysis software. It's also a cornerstone of self-driving cars and advanced robotics.

Part of this "revolution's" promise is that AI and similar technologies [will be used](#) to drive economic growth, development and positive societal change. But critical inquiry is urgently needed to gauge what effects the fourth industrial revolution is having and will have on vulnerable, marginalised populations.

In South Africa, there has been some discussion around the [elitist discourse](#) in which conversations about the fourth industrial revolution are happening. Some have pointed out the need to ensure that policy linked to these changes address all stakeholders' needs. Others have explored its potential effects [on inequality in the country's job market](#). But there has been little discussion around how [women](#) specifically may be affected.

This is a worrying oversight. The world of the fourth industrial revolution looks set to be one dominated by forms of knowledge and industries—like science and technology—that have long been [dominated by men](#).

In addition, many of the opportunities the fourth industrial revolution is thought to offer are internet based. Yet, as a [recent study](#) has shown, women tend to have less access to internet based technologies than men do in Africa. This means that the impact on women's lives and work

opportunities becomes a critical concern.

## The future of women's work

The future of work has been one of the key discussion points in the context of new technologies and the fourth industrial revolution.

With the increase in automaton, those working in "[routine intensive occupations](#)" – such as secretarial or call centre work—are considered likely to be replaced in the workplace by computers, which are thought to be more efficient and less costly. Robots are being prepped to replace [care-worker jobs](#). These types of professions, along with others that are particularly vulnerable to being replaced by robotics or computers, are [generally occupied by women](#).

In South Africa, where the [labour market is already more favourable to men than women](#), this presents a serious concern.

There are other reasons to worry. The gender [digital gap](#) in South Africa, and on the African continent more broadly, is only widening, with women having lower digital literacy, less access to internet based technologies, and less relevant online content to men. This suggests that women may be left out of increasingly digital work opportunities too.

In addition, due to the burden of care and domestic duties women tend to carry on top of paid work, women [have significantly](#) less time than men to undertake further education and training. That means they won't easily be able to boost their digital skills.

These realities reveal some of the gaps in South Africa's existing policy objectives around the fourth industrial revolution. For instance, the country's [White Paper on Science, Technology and Innovation](#) is to provide information and communications technology training at all

levels. But given the problems I've outlined, women are less likely than men to benefit from this.

So what can the country do differently?

## Lessons and research

For starters, it could learn from other countries. In Ghana, an initiative called [STEMbees](#) not only promotes science, technology, engineering and maths training for women and girls; it also addresses social issues such as digital safety. There could be lessons here for South Africa.

The country should also consider how technology can be used to empower and help women rather than shutting them out. There are [many examples](#) of this globally.

Along with this learning, South Africa needs to thoroughly research and understand the effects of the [fourth industrial revolution](#) on women and the barriers—whether educational, social or technological—to accessing and utilising internet based resources.

Policy responses to promoting women in STEM need to holistically address both the lack of women in STEM fields as well as the structural factors that have led to this situation.

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