23 *Ubuntu leadership in a technological age*

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Overview

This chapter seeks to establish an ubuntu leadership theory in an African context in disruptive times such as the fourth industrial revolution (4IR). Instead of formulating leadership theories that are influenced by Western philosophies, this chapter investigates African indigenous knowledge. The 4IR is a paradox in Africa: it is technological progress, but it perpetuates inequality, poverty, and unemployment. Africa requires leadership that is not individualistic or focused on the growth of an institution, but rooted in the well-being and development of communities. The main argument here is for an ubuntu leadership model, for a technological age, in an African context, through the methodology of critical literature review. Two examples of ubuntu leadership in sustainable community development initiatives in rural communities are presented. These initiatives make use of technology to address socioeconomic challenges in Gwakwani in Limpopo and Mankosi in the Eastern Cape, South Africa.

Introduction

Leadership is a human characteristic, and different cultures or communities have their own way of defining leadership (Horner, 1997; Ndlovu, 2016). Leadership is essential to organisations, companies, churches, government, and various groups in society for groups of people to function well to attain certain goals or objectives. There are diverse types of leadership, serving different purposes in various contexts; hence there is no universal mode of leadership (Nanjundeswaraswamy & Swamy, 2014). There is no agreement in leadership scholarship on a comprehensive leadership model, but globalisation has influenced types of leadership across the world (Benmira & Agboola, 2021). This chapter argues that globalised leadership types tend to follow Western epistemologies (Jallow, 2014; Punnet, 2017) and adopts an African epistemology because it is contextualised for Africa in general and South Africa specifically.

The notion of leadership has changed throughout history, and different epochs require a rethinking of leadership for their time. The 4IR represents a fundamental change in the way we live, work, and relate to one another, driven by technology, and its fullest potential is yet to be known. There is thus uncertainty as humans are experiencing advanced technology that has never been witnessed before. This process requires rethinking of leadership for the 4IR (Marwala, 2021; Mdluli & Makhupe, 2017). In the context of South Africa, where

a large proportion of the population is poor, unemployed, and marginalised, one of the major questions is whether the disadvantaged will continue to be so during the 4IR (Moll, 2021). Jobs have already been lost as companies use digital solutions for their services, and there is fear of more job losses due to robotics and automation (Le Roux, 2018). There are, however, new jobs that will be created, but capacity is a challenge, as there are already skills shortages in the information, communications, and technology (ICT) sector in South Africa (Schofield & Dwolatzky, 2021). The cities are more likely to benefit from the 4IR because the infrastructure is better than in township and rural areas (Sutherland, 2020). Another major factor is that the three previous industrial revolutions did not benefit Africa much, but instead dehumanised, exploited, dispossessed, and marginalised Africans and Africa (Benyera, 2021; Moll, 2020). How will it benefit the poor to live in the 4IR if they are struggling to feed themselves, do not have basic services, and cannot afford internet access? Preparedness for the 4IR in South Africa is minimal, and the basic needs of many communities are ill met due to inequality gaps (Nkala, 2019; Zollner, 2019).

This chapter thus seeks to problematise global ideologies of leadership for their applicability in an African context, particularly in South Africa. The chapter argues that the philosophy of ubuntu can be of use in thinking about the 4IR and its potential impact. Ubuntu has a variety of definitions (Gade, 2012; Hailey, 2008) that need to be critically evaluated for it to be relevant as a leadership theory (Ncube, 2010; Ndlovu, 2016), especially in the technological age (Schwab, 2016). Although ubuntu developed in precolonial southern African cultures, it can be applied in new ways in the very changed times of the 21st century (Okoro, 2015). Technological developments have an impact in an already unequal society such as South Africa, and technological advances are thus a paradox: they represent progress on the one hand and perpetuate inequality on the other (Mahlatsi, 2020; Sutherland, 2020). This chapter argues that ubuntu-infused leadership has a role to play in focusing on the well-being of the community and bridging the gap for social justice in the technological age. Two examples of ubuntu leadership in sustainable community development initiatives that make use of technology to address socioeconomic challenges will be discussed.

Literature review

The research methodology employed for this chapter was a critical literature review. A wide-ranging search was conducted across Google Scholar, ScienceDirect, EBSCOHost, Sabinet, ProQuest, and African Journals Online, among others, for relevant literature on ubuntu leadership in a technological age. The following keywords were used: ubuntu, ubuntu leadership, ubuntu philosophy, ubuntu ethics, African leadership, ubuntu and technology, ubuntu and transformative leadership, 4IR and Africa/South Africa, ubuntu and the 4IR,

and 4IR implications in Africa/South Africa. A limitation of the 4IR as a search term is that it is a recent and ongoing phenomenon, and its implications are not yet fully known.

The determining factor for selecting literature for this study was based on the 'conceptual contribution of each…literature…[and] not on formal quality assessment' (Grant & Booth, 2009, p. 97). The limitation of the critical review approach may be the omission of certain literature that could be relevant because it is does not follow a systematic search approach, and interpretation may be subjective (Grant & Booth, 2009; Stratton, 2019).

The premise of this study is a decoloniality perspective (Ndlovu-Gatsheni, 2015). Rather than assimilating ubuntu leadership into transformative leadership, this study seeks to make ubuntu leadership its focus, and dialogue equally with transformative leadership. The primary reason for this is that African cultures have rich epistemologies with which to explore leadership for the African context. Transformative leadership is, however, useful for rethinking African epistemologies for a leadership framework.

Ubuntu as a philosophy is applied in many fields, but this chapter draws on definitions from African philosophy and African theology. Naude (2017) identifies three models in localising African leadership, namely the transfer model (a direct transfer of Western ethics to Africa), the translation model (different attempts to translate Western ethics into the context of Africa), and a substantive model (the development of a uniquely African position through ubuntu). The first two models follow on from Eurocentric ethical leadership models suggested in the context of South Africa or Africa in general, namely transactional leadership (Crews, Brouwers, & Visagie, 2019; Shokane, Stanz, & Slabbert, 2004), transformational leadership (Hamstra, Van Yerpen, Wisse, & Sassenberg, 2011; Harms & Credé, 2010; Sethibe & Steyn, 2017), and transformative leadership (Brown, Ekoue, & Goodban, 2019; Mafora, 2013; Magoqwana, 2019; Ncube, 2010).

This chapter uses the substantive model, which suggests an alternative model grounded in African epistemology – in this case, an African leadership model based on ubuntu. There are alternative approaches with a focus on African leadership drawing from African epistemologies (Bosu, Dare, Dachi, & Fertig, 2011; Chedondo, 2019; Mayanja, 2013), but they do not have a focus on technology or the 4IR. First, ubuntu will be defined in general and according to three main aspects, which are philosophy, spirituality, and ethics. Second, leadership in the 4IR will be discussed. Lastly, an ubuntu leadership model will be presented for the technological age in the African context with a discussion of two examples of ubuntu leadership.

Ubuntu: Looking back

In order to move forward, you need to look back. These words are inspired by the Sankofa bird, which is a mythical bird in Ghana among the Akan people. The symbol is of a bird that looks back while holding an egg, symbolising the future, in her beak (Kwarteng, 2016). In this section, ubuntu will be defined in general, and the three main aspects of ubuntu will be discussed: ubuntu as philosophy, ubuntu as spirituality, and ubuntu as ethics. This section will serve as background in theorising an ubuntu leadership for the future.

Defining ubuntu

Ubuntu became a term of interest in the transition to democracy in South Africa and Zimbabwe, even though there were prior usages of the term in the second half of the 1900s (Gade, 2011). Ubuntu has always been a part of African life as a worldview and way of life (Ramose, 1999). Ubuntu has been described using various terms such as kindness, human nature, goodness, humanity, and hospitality. According to Gade (2011), the earliest written record of ubuntu dates from 1846 in the isiXhosa Bible *I-Testamente Entsha* by H. H. Hare. Jordan Kush Ngubane wrote about ubuntu as a worldview in the African *Drum* magazine in the 1950s and defined it as African humanism inspired by postcolonial African political thinkers (Gade, 2011). Gade (2011) further argues that the use of African concepts in political thinking was rooted in the 1950s and 1960s, when some African countries gained independence from colonial rule. There was a need to regain African dignity through Africanisation and decolonisation.

In the transition to democracy in South Africa, ubuntu was used for national reconciliation and forgiveness by the Truth and Reconciliation Commission (TRC) to encourage social cohesion. However, the usage of ubuntu in the TRC can be seen to have lacked the justice aspect of ubuntu, considering the human rights violations and systemic violence of Apartheid against Black people. Mboti (2015) argues that although there are many variations of ubuntu, the definitions always lead to the aphorism *umuntu ngumuntu ngabantu* (in Nguni languages) or *motho ke motho ka batho* (in Sotho languages), which translates in English to 'a person is a person through other persons'. This definition suggests an interdependence among human beings and that they are human beings because of other human beings. Linguistically, the term 'ubuntu' emerges from the Bantu languages of southern Africa (Nguni, Sotho, and Shona, among others) as suggested in the suffixes *-ntu* (in *ubu-ntu* – Nguni), *-tho* (in *bo-tho* – Sotho) and *nhu* (in *hu-nhu* – Shona) (Mangena, 2016).

Ubuntu as a philosophy

The colonial history of Africa was about reducing Africans to being sub-human, and Africans were not thought of as rational beings. This was a justification used by the West for colonisation and slavery. Western historians wrote about Africa and Africans and defined them from their own perspectives. The legendary South African musician and pan-African and human rights activist Miriam Makeba once said, 'The conqueror writes history, they came, they conquered, and they wrote. You do not expect the people who came to invade us to tell the truth about us' (sahistoryonline1, 2014). African philosophy is thus a decolonial project. It is about drinking from the well of indigenous knowledge and reasoning from an African perspective. It is about acknowledging that Africans have a history before colonisation. It is Africans articulating their existence and experience of life. In southern Africa, ubuntu is a worldview that is philosophical.

According to Ramose (1999, p. 35), ubuntu is the root of African philosophy:

> The be-ing of an African in the universe is inseparably anchored upon ubuntu. Similarly, the African tree of knowledge stems from ubuntu with which it is connected indivisibly. Ubuntu then is the wellspring flowing with African ontology and epistemology…
> African philosophy has long been established in and through buntu [personhood].

Ramose (1999) explains that ubuntu as a philosophy becomes clear when the word ubuntu is hyphenated as *ubu-ntu*. That is to say that ubuntu is two words in one. *Ubu-* is a prefix that suggests be-ing, which signifies motion. *Ntu* is a stem that *ubu-* orients towards. Ontologically, there is no radical separation of *ubu-* and *ntu*, but they signify two aspects of be-ing as a one-ness and indivisible wholeness. Accordingly, *ubu-ntu* is the fundamental ontological and epistemological category in the African thought of the Bantu-speaking people (Ramose, 1999). Philosophically, *ubu-ntu* is an unfolding process of humanness, being and becoming. *Umuntu* more specifically indicates the human being. Therefore, there is no *ubu-ntu* without *umu-ntu*. The aphorism *umuntu ngumuntu ngabantu* (a person is a person through other persons) is thus essential in conveying that *umuntu* (a person) cannot embody ubuntu without another *umuntu* (person). A human being cannot exist in isolation. Desmond Tutu (2013, unnumbered) attested that

> the profound truth is that you cannot be human on your own, you are human through relationship…we would not be able to speak as human beings, we speak by imitating other human beings. We walk as human beings by imitating other human beings.

Dladla (2017) points out that in the aphorism *umuntu ngumuntu ngabantu*, *umuntu* precedes *ubuntu* ontologically. This implies that *umuntu* [a person] is a

potential doer of ubuntu. However, the phrase *umuntu ngumuntu ngabantu* does not translate into English with the same richness, depth, and meaning inherent in the original idiom (Dladla, 2017).

Ubuntu as spirituality

In African culture, spirituality is holistic. African spirituality implies the relationship between the supreme being (*uNkulunkulu*, *Modimo*), the living, and the living dead (ancestors, *badimo*, *amadlozi*). African theology contends that Africans knew and had a concept of God before Christianity was introduced by Western missionaries during colonialism. African spirituality is found in all aspects of the lives of Africans. It can be found in art and symbols, music and dance, proverbs and riddles, names of people and places, myths and legends, beliefs, and customs (Mbiti, 1991). Ramose (1999, p. 78) states that 'African spirituality is concrete expression; it is the lived experience of the reality of the feeling of immanence and transcendence in the life of an African people'. There are misconceptions when it comes to African spirituality, such as reducing it to ancestor worship, superstition, animism or paganism, and magic or fetishism (Mbiti, 1991). These misconceptions reflect a colonial history of invalidating African spirituality. Ubuntu spirituality is the interconnectedness of *umuntu*, God, and the living dead. It is thus spirituality that energises *umuntu* to embody ubuntu.

Ubuntu as ethics

Ubuntu ethics is communal rather than individualistic, because it includes God, the living, and the living dead (Mangena, 2016). Ubuntu ethics is consensual and spiritual because there has to be an agreement between the spirit world and the world of the living regarding the establishment and operationalisation of ubuntu in the world of the living (Mangena, 2016). Unlike Western ethics, that are only horizontal – that is, they have to do with relations between living beings – ubuntu ethics are both horizontal and vertical: that is, the relations go beyond human relations to include the human beings' relations with the spirit world (Mangena, 2016). Ubuntu ethics puts human dignity centre stage and is informed by life-giving ethics. It also includes the understanding that God is the source and origin of morality (Dolamo, 2013). Ubuntu ethics is about equality and justice. Within a community, ubuntu ethics espouses harmony and the eradication of oppression, inequality, marginalisation, discrimination, poverty, and injustice.

African philosophy and African theology are integral in ubuntu. Ubuntu is constituted by the community, which includes God, the living, and the living dead. Dolamo (2013) states that there is no ubuntu outside the community. Within a community an individual is nurtured into becoming a mature and responsible human being who embraces the values, norms, and principles of

ubuntu (Dolamo, 2013). The well-being of individuals in a community is the well-being of the community. Our humanness can only be enhanced in the context of a community with other humans and, by extension, with the whole of creation (Dolamo, 2013).

Ubuntu is a process of humanness; it is the goal that human beings are to strive for, even though it is not completely attainable. Times may change, but the essence of ubuntu as a philosophy, spirituality, and ethical system will and should remain the same.

Leadership in the 4IR

Sattar Bawany's book *Leadership in Disruptive Times* (2020) mentions that there are many disruptions in the world that have an effect on the way we live, learn, and work. Major recent disruptions include the Covid-19 pandemic and the 4IR. These disruptions impact businesses, governments, and aspects of our social lives. The Covid-19 pandemic, for instance, re-exposed the deep inequalities in the South African education system. The majority of poor students faced challenges with online learning due to a lack of technology and devices, and poor internet access caused by the scarcity of infrastructure in rural areas.

The rise of technology and its current rapid development are reshaping society, which struggles to keep up with it. Schwab (2016) points out that the word 'revolution' in the phrase 'fourth industrial revolution' means an abrupt and radical change. In the context of technology, this has an impact on social and economic structures. There have been four industrial revolutions, and each of these has fundamental features, although they may overlap with one another. Schwab (2016, pp. 11–12) explains:

> The first industrial revolution spanned from about 1760 to around 1840. Triggered by the construction of railroads and the invention of the steam engine, it ushered in mechanical production. The second industrial revolution, which started in the late 19th century and into the early 20th century, made mass production possible, fostered by the advent of electricity and the assembly line. The third industrial revolution began in the 1960s. It is usually called the computer or digital revolution because it was catalysed by the development of semiconductors, mainframe computing (1960s), personal computing (1970s and 80s) and the internet (1990s). [The 4IR] began at the turn of this century and builds on the digital revolution. It is characterized by a much more ubiquitous and mobile internet, by smaller and more powerful sensors that have become cheaper, and by artificial intelligence and machine learning.

Bawany (2020) expands the 4IR to include robotics, the Internet of Things, blockchain technology, and cloud computing, among others. One of the major questions has been whether South Africa is ready for the 4IR. This readiness depends on multiple factors. Sutherland (2020) argues that South Africa is not a country for the 4IR, as its economy is reliant on farming, mining, and the informal sector. The country is also facing major challenges of high rates of unemployment, a lack of digital skills, and even a lack of basic skills. On top of historic inequalities, mismanagement in the public sector and corruption hinder progress. Marwala (2021) acknowledges that South Africa grapples with a legacy of lagging behind in adapting or responding to industrial revolutions, yet emphasises that it cannot afford to be left behind in the 4IR. Marwala (2021) is also of the view that technology should be used creatively to tackle the problems in the public sector and society. There are, however, fears that the 4IR will lead to job losses and new skills requirements in an already underemployed population, and that it will not contribute to economic growth (Ayentimi & Burgess, 2019). Leadership therefore needs to rethink how to mitigate these effects for the well-being of the people.

In addition to the technical challenges of the 4IR, the nature and uniqueness of humanity is also on the line. Fourie (2020) argues that genetic engineering, robotics, artificial intelligence, and nanotechnologies have the power to alter human nature and society. Technological enhancement has the potential to alter our view of what it means to be human and our perceptions of human dignity, because emerging technologies may cause individuals to be more self-centred (Stahl, Timmermans, & Flick, 2017). Spiritually, humanity may have faith and trust in emerging technologies for their salvation and future (Fourie, 2020). When humanity has placed its full confidence in technology, the effects of technology may not be critically appraised, and spirituality could evaporate from the consciousness of humans. The 'digital divide' in society between those who have access to the internet and technology, and the ability to use it, and those who do not, has an impact on how we relate to one another as human beings. Those on the margins, the poor and disadvantaged, may be reduced to being seen as non-humans (dehumanisation) because of having no access to ICT resources. Thus, the already existing inequality gap could be widened and linked to one's humanity. Virtual augmented reality, which is popular in games and education, allows users to be in touch simultaneously with the virtual world and the physical world (Fourie, 2020) and can have an impact on the notion of reality (what is real or not).

The leadership required for the 4IR must consider many aspects of emerging technologies in relation to humanity and society. Although many companies, driven by profit-making, are restructuring for the 4IR, it is important to have a government leadership that envisions a society where human dignity is at the

centre of technological innovation. Marwala (2021) states that the 21st-century leader must have 4IR thinking, which, according to the World Economic Forum, entails skills such as complex problem solving, critical thinking, creativity, people management, coordinating with others, emotional intelligence, judgement, decision-making, service orientation, negotiation, and cognitive flexibility. These skills are necessary, but if they are not grounded in ubuntu, our sense of humanity could be lost.

Ubuntu leadership for the future

Ubuntu is essential in leadership where technology is concerned, as it keeps reminding a leader about human dignity. Technological innovation is necessary, but it should not be at the expense of humanity or ecology. It has been mentioned that ubuntu encompasses the supreme being (*Modimo, uNkulunkulu*), the living, and ancestors (*badimo, amadlozi*) in community. This implies that this interconnectedness shapes us (the living) to become more humane or to embody ubuntu. Ubuntu leadership is alluded to in the words of Steve Biko (1987, pp. 46–47):

> We reject the power-based society of the Westerner that seems to be ever concerned with perfecting their technological know-how while losing out on their spiritual dimension. We believe that in the long run the special contribution to the world by Africa will be in this field of human relationship. The great powers of the world may have done wonders in giving the world an industrial and military look, but the great gift still has to come from Africa – giving the world a more human face.

Humanity should not become so immersed in technology that we lose our sense of spirituality and humanity. Therefore, an ubuntu leader recognises that to move forward, we must also look back and not forget who we are, nor where we came from. When the majority are poor and unemployed in the technological age, ubuntu leadership regards that as failure, even if there is the most advanced technology in the country. Human life is more precious than technological advancements. Ubuntu leadership thus envisions bridging the inequality gap and working towards alleviating poverty and marginalisation in the technological age. There should be a commitment to basic needs being fully met in marginalised communities. Ubuntu leadership means to affirm one's humanity and that of others, which inevitably translates into an ethics that is centred on humanness. Ncube (2010) attests that when a leader embodies ubuntu and accepts our interconnectedness, they are more likely to empower others. Information is crucial in the technological age, and sharing information that would empower and give opportunities to others to better their lives can unlock doors that they would not have known were there. Ubuntu leadership

can be applied in government, business, churches, or communities, because it is people centred. It includes values and norms such as dignity, fairness, justice, harmony, moral integrity, transparency, care, respect, and humility, rather than individualism, self-centeredness, greed, and dehumanisation (Chedondo, 2019).

South Africa has many rural communities that lack development, infrastructure, and access to basic services. Rural communities are often marginalised and isolated from cities, and do not have much economic activity. The advancement of technology is more likely to disadvantage such communities, as it will expand in areas that already have infrastructure. Rural communities would thus be left out of the 4IR, as they have in most cases been left out of the second and third industrial revolutions. There is thus a need for ubuntu leadership that aims for inclusive technological advancements.

The University of the Western Cape (UWC) and the Mankosi rural community in the Eastern Cape developed Zenzeleni Networks, which is the first community-owned internet service provider in South Africa offering affordable rural internet access (Rey-Moreno & Pather, 2020). Community networks are defined as community-centred internet, developed for the people, by the people (Belli, 2017). Zenzeleni (which means 'do it yourself' in isiXhosa) Networks is owned and operated by community members to provide affordable internet connection through a solar-powered Wi-Fi for as little as R25 a month for unlimited high-speed internet access (Carelse, 2019). This initiative has allowed the community to be digitally connected, and UWC has also trained community members on how to maintain the network. Rey-Moreno and Pather (2020) argue that although Zenzeleni Networks was possible in the Mankosi community, there is still a lack of clear policy and regulations for community networks in South Africa. Community networks could be a game changer in addressing the digital divide affecting the poor. Their main advantage is that they do not require existing infrastructure, so can be installed even in the remotest areas of the country.

The University of Johannesburg (UJ) positions itself as an institutional leader in the 4IR, and the vice chancellor at the time of writing, Tshilidzi Marwala, is a leading 4IR scholar. The university has several initiatives for community development through technology education and development. One is a partnership with Schneider Electric Southern Africa to provide sustainable development solutions to the rural community of Gwakwani in the Limpopo province. Gwakwani did not have access to potable tap water, electricity, early childhood development programmes, or economic activity. The initiative provided solar-powered electricity, a water pump, a crèche, and a bakery. The crèche provides early childhood development education, and the bakery provides employment. Professor Suné von Solms, associate professor at the School of Electrical Engineering at UJ, states: 'I think what's interesting is that we're using basic 4IR in an area that has never had access to any form of technology before'

(*Beyond Imagining*, 2020, para. 6). The initiative makes use of Internet of Things infrastructure to monitor the technology remotely at UJ. Ubuntu leadership has thus found creative technological ways to alleviate socioeconomic challenges even in the remotest areas.

These are just some of the examples of institutions that provide sustainable community development initiatives using various technologies to address socioeconomic challenges. The possibilities of using latest technologies to make rural communities smart are there. What is also commendable about these initiatives is that they are community centred, and community members are involved in learning how these technologies work and how to maintain them. The focus of these initiatives is the well-being of communities and how to transform them for the digital age.

Conclusion

The 4IR is inevitable and its fullest potential is yet to be known. This chapter argues that globalised leadership types tend to follow Western epistemologies. The technological unfolding of the 4IR requires a rethinking of leadership from an African perspective in an African context. Ubuntu provides an African ontology and epistemology. The aphorism *umuntu ngumuntu ngabantu* (a person is a person through other persons) is essential in conveying that *umuntu* (a person) cannot embody ubuntu without another *umuntu* (person). In African culture, spirituality is holistic, and implies relations between the Supreme Being (*uNkulunkulu*, *Modimo*), the living, and the living dead (ancestors, *badimo*, *amadlozi*). Africans knew and had a concept of God before Christianity was introduced through colonialism. Unlike Western ethics, that are horizontal – that is, they have to do with relations between living beings – ubuntu ethics are both horizontal and vertical, as they have a spiritual component as well. Within a community, ubuntu ethics espouses harmony and the eradication of oppression, inequality, marginalisation, discrimination, poverty, and injustice. Ubuntu leadership is holistic and should be visible in the various sectors of society. Technology may advance, but humanity should be safeguarded. Our humanity should not be reshaped by technology to such an extent that we forget our sense of ubuntu or human dignity. Humanity should not be so immersed in technology that it loses its sense of humanness. Our faith and trust should not be reliant on technology that would make us self-centred and unable to critique it, but should remain steadfast in community with one another. Ubuntu leadership holds that technology should be used to solve complex socioeconomic challenges, rather than perpetuate poverty and marginalisation.

#HumanityBeforeProfit #UbuntuTech

Ubuntu, with its focus on dignity and shared humanity, has a lot to teach us as we face disruptive technological innovation.

Questions for discussion

1. This chapter makes strong statements regarding how the digital divide affects society – who has access to the internet and technology, and the ability to use it, versus those who do not – and the impact it will have on how we relate to one another as human beings. It states: 'Those on the margins, the poor and disadvantaged, may be reduced to being seen as non-humans'. To what extent do you agree with this statement? Is this currently happening in your context and, if so, how?

2. In the context of technological advances, how do we ensure, in the words of Steve Biko, that Africa gives 'the world a more human face'?

3. How do we ensure that human dignity, rather than profit or power, is at the centre of technological innovation?

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