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The ethics of artificial intelligence through the lens of Ubuntu

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Abstract

UNESCO recently published a report on the ethics of Artificial Intelligence (AI). Its member states have commissioned a recommendation to be written on the ethics of AI, to be adopted in November 2021 during the UNESCO General Conference. The consultations are ongoing, and were preceded by the report of the UNESCO World Commission on the ethics of scientific knowledge and technology (COMEST) on AI and ethics.

Africa has had little part so far in designing the new algorithms for AI or drawing up ethical guidelines for its application. The companies and researchers involved are mainly in the West or China and ethical guidelines have been issued mainly in North America, Canada, the EU, Council of Europe and OECD. We have already seen that AI can lead to biases, as machine learning is based on collecting examples of the past. It is often better suited for men than women and also may have biases against people of color and thus invisibly perpetuates discrimination. Recently there is more attention for these problems, amongst others within UNESCO. This issue however runs much deeper when seen from a post-colonial, counter hegemonic, perspective where decolonization of the mindset is still in its infancy when it comes to debates of development, sustainability and human rights.

The question is whether different value systems would also lead to different choices in programming and application of AI. Ubuntu (I am a person through other persons) is one such ethic in Africa, that starts from collective morals rather than individual ethics. What are the implications for AI when seen from a collective ontology? When confronted with issues of privacy, Ubuntu emphasizes transparency to group members, rather than individual privacy. When confronted with economic choices, Ubuntu favors sharing above competition. In democratic terms it promotes consensus decision making over representative democracy. What are the implications for designing a worldwide guideline on ethics of AI? And are African philosophers involved in this discussion, or simply (Western-trained) AI experts from Africa?

Certain applications of AI may be more controversial in Africa than in other parts of the world, for example in care for the elderly, that deserve the utmost respect and attention, but at the same time AI may be helpful, as care from the home and community is encouraged from an Ubuntu perspective.

Keywords

Africa, Ubuntu, Artificial Intelligence, ethics, community, relationality

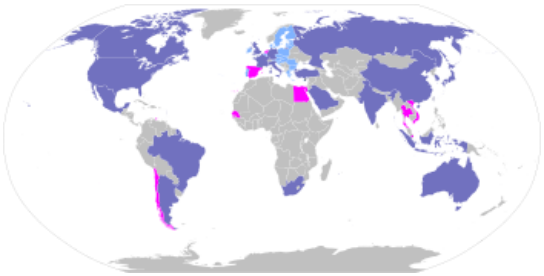
Introduction

In 2017 the UNESCO World Commission on the ethics of scientific knowledge (COMEST) published its first report on the Ethics of Robotics (2017). In 2019 followed the Preliminary Study on the Ethics of Artificial Intelligence. In 2019 UNESCO also decided to adopt an instrument for the Ethics of Artificial Intelligence, to be adopted in 2021, after extensive consultations with experts, member states and civil society.

So far ethics of artificial intelligence had been mainly discussed in EU, Council of Europe, and OECD frameworks: such as in the ***Re****solution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics* (the European parliament 2017); *Statement on AI, Robotics, and Autonomous Systems* (The European Group on Ethics in Science and New Technologies (EGE, 2018)*; Communication on AI for Europe* (European Commission, 2018); *Assessment List for Trustworthy Artificial Intelligence (ALTAI) for self-assessment* (European Commission 2020); *Recommendation on the human rights impacts of algorithmic systems* by the Committee of Experts of the Council of Europe for Human rights dimensions of automated data processing and different forms of artificial intelligence (Council of Europe 2020) and *Declaration by the Committee of Ministers on the manipulative capabilities of algorithmic processes*(Council of Europe 2019); *Human rights in the robot age* by the Rathenau institute (Van Est and Gerritsen 2017); and the *OECD principles on AI* in the OECD Council Recommendation on Artificial Intelligence (OECD, 2019) .[1] The new UNESCO guideline is to focus on "aspects that are generally neglected such as culture, education, science and communication" (UNESCO/COMEST 2019, 23).

In June 2019, the G20 adopted human-centred AI Principles (G20, 2019) that draw from the OECD AI Principles. When one looks at the map of the G20, it is clear that Africa is the least represented continent, with the exception of South Africa (Figure 1). Moreover most publications are originating in the West (Figure 2), of which one can extract eleven overarching ethical values and principles: "These are, by frequency of the number of sources in which they were featured: transparency, justice and fairness, non-maleficence, responsibility, privacy, beneficence, freedom and autonomy, trust, dignity, sustainability, and solidarity." (Jobin et al 2019).

Figure 1 G20 countries

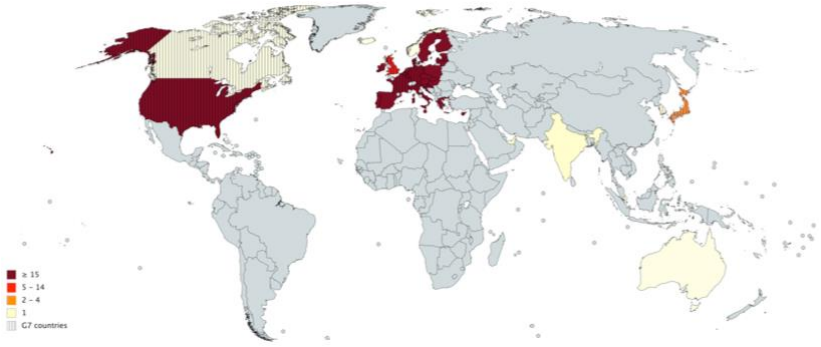


[1] See also Rathenau Institute; https://www.rathenau.nl/nl/digitale-samenleving/overzicht-van-ethische-codes-en-principes-voor-ai

Member countries in the G-20 Members of the European Union not individually represented 2019 guests

Source: https://en.wikipedia.org/wiki/G20

Figure 2: Geographic distribution of issuers of ethical AI guidelines by number of documents released.



Source: Jobin et al. 2019, https://arxiv.org/ftp/arxiv/papers/1906/1906.11668.pdf

Challenges of AI

The ethical problems that AI raises are numerous. Yet there is no legal framework to guide global research, while technical possibilities are advancing at a lightning speed. Questionable practices of AI include: facial recognition algorithms identifying supposed 'hostile' behaviour which may include racial prejudice, data collection impacting on privacy, autonomous lethal weapons such as through military drones (UNESCO Courier 2018). Other than access to data, selection and classification of data is also a socio-cultural issue (Crawford, 2017; COMEST 2019, 7).

COMEST calls for attention to the specific challenges for Africa, based on local cultures (UNESCO/COMEST 2018, 8 and 22): "AI should be integrated into national development policies and strategies by drawing on endogenous cultures, values and knowledge in order to develop African economies". Though the implications of digitization for **Africa** are being discussed, this is often not from an African philosophical vantage point. For example, the world science forum in 2019 reports: "the limited number of **African researchers** and the underrepresentation of African people and data, as well as the lack of full broadband coverage, are causing concern." Lucilla Spini Of the International Science Council pointed at "the fact that most private sector initiatives that transfer technology to Africa do not consider ethics (…) has led to **continent-wide cybersecurity problems**. Cultural aspects are also brought in with the import of technology, but **African cultural values** need to be taken into account when defining a framework for AI on the continent." (WSF 2019, 1). Jana el-Baba (Cairo Office of UNESCO) therefore highlighted "that **regional frameworks** are as important as global ones since countries with different normative backgrounds might identify themselves better with regional approaches", although "UNESCO addresses the issue of

ethical AI through an inclusive, global approach" (WSF 2019, 1). Development economist Dorothy Gordon warned "The most important concern for Africa is to avoid creating **new dependencies** as a result of technology. Technology is moving so fast that we might not have time to bring all stakeholders to the table. Although there are no global norms, the universal declaration of human rights should be the bedrock of any future document on the ethics of AI." (WSF 2019,1)

It is specifically this aspect that **human rights** will automatically cover African ethics that is problematic. The African interpretation of rights and duties is different from the Western one (Van Norren 2017; Van Norren 2019). It is also questionable whether regional approaches will be adequate in addressing issues of AI and ethics, since many of the AI technologies are produced outside Africa.

Making artificial intelligence *inclusive, responsible and transparent* is also stressed by the African Centre of Excellence for Information Ethics, who organized a meeting in August 2019 in Pretoria, South Africa on the Preliminary study (UNESCO 2019) emphasizing "the importance of Information Scientists and the larger academic, industry and civil society community" in. making this happen (UNESCO-IFAP-2019,1). However, it also states; "The human rights framework and the **Sustainable Development Goals** provide a consistent way to orient the development of Artificial Intelligence." (UNESCO-IFAP-2019,1). It is crucial to understand that although the SDGs were signed by UN member states, including Africa, a framework designed from an African perspective would have looked quite different, and the SDGs are still premised on Western modernist notions of economics (Van Norren 2020).

Not only is the African value dimension absent, AI often does not address **challenges faced by the Global South**: "I term all those technological advances that are in the realm of reality in the West "white people's problems" (…). In Africa, but also in many parts of Asia and South America, people have other problems to deal with on a daily basis, the solutions of which depend on technologies that are much less sophisticated, and yet are non-existent." Senegalese Moustapha Cissé states (UNESCO Courier 2018, 20).

This article takes the UNESCO COMEST report (2019) as a starting point to look at what philosophical, epistemological and ontological issues African ethics would raise for AI. It argues that the ethical consequences of AI are far greater than simply new dependencies or lacking (African) solutions for African problems; it may further hamper **decolonisation** of the mindset, that 60 years after African independence is still a major issue.

Ubuntu

Ubuntu can be described as the root of all African philosophy, as it consists of the ontological and epistemological basis of all Nguni-languages and thought of the Bantu people. It features in various variations in different African languages (Ramose 2005). It commonly signifies: A person is a person through other persons or "I am because we are." It can be called "human-ness" in motion or action. The philosophical depth of the hyphenated word Ubu-Ntu is much deeper however: 'ubu' signifying abstract being and 'ntu' life force being; the two forces meeting and creating the continuous enfoldment of the universe (Ramose 2005). Since Ntu, the connecting life force, underlies many words, Ubuntu represents a relational world view

where nothing can be viewed in isolation. Individuality exists in Ubuntu (Oyeshile 2006, Eze 2008, Kimmerle 2008) but not without the community, the ecosystems and the spiritual world, of which the individual is part.

Ubuntu thus represents a **collectivist ontology**. In its socio-economic dimension Ubuntu strives at cooperation (mutual aid) and respecting human relations. Economic and social wellbeing of the community is more important than (personal) accumulation of wealth (or growth). This means that property has to be equally distributed. The place of the economy in the entire African values system is much less significant than in the Western system. It is subservient to other higher goals of African brotherhood or familyhood or communality. Having a family and children is seen as a core duty. One develops personhood by fulfilling one's role in the community, looking after the wellbeing of others. It emulates the principle of transparency to group members in all spheres including the medical field. Education foremost strives at acquiring such moral personhood, which one does not automatically possess at birth but one can acquire during one's life. In the legal sphere restoring harmony and doing (intrinsic) justice is the leading principle. (Metz and Gaie 2010: 273–290).

The community consists of the ancestors and the future generations and as such Ubuntu is also connected to respect for the Earth and its natural resources (Ramose 2005: 106). Ancestors do not go to heaven, as in Christianity, they are connected to the land and Earth. We are connected to earth through the life force Ntu, underlying all things. Mistreating the land is therefore also referred to as violating Ubuntu. People have a moral and spiritual responsibility for all that is part of the web of life; to care for it as a parent (Behrens 2014, 1 and 5; Haenen 2012: 93 referring to "parental earth ethics" of Odera Oruka).

Feeling engagement with the other is a central tenet of the African view of life, as you only come into yourself through the other. This involves both listening with the analytical mind, as well as listening through intuition (balancing the brainy "warrior mind" with the pelvic "mother mind")[i] and ultimately balancing both in the heart. Ubuntu does not seek to replace Western philosophy on morality or 'personhood', but represents the African position on human-ness and interconnectedness rooted in a strong community centered view of life (staff members of the United Nations Economic Commission for Africa; Van Norren 2017, 475).

Ubuntu in practice

Ubuntu is mostly practiced at home and in the communities, townships and rural places. It is also implemented through official policies, such as the truth and reconciliation process in South Africa (after apartheid) and Rwanda (after the genocide). South Africa also has the People First policies to rectify apartheid government conduct (Batho Pele - Batho is a Sotho word for Ubuntu), encouraging accountable government. South African "Ubuntu diplomacy" (DIRCO 2011) is based on respecting human rights, democracy, justice, international peace, reconciliation, the eradication of poverty and underdevelopment, and Pan-Africanism, in sum "Building a better world". 'Ubuntu reflects the belief that it is in our national interest to also promote and support the positive development of others. South Africa is multifaceted, multicultural and multiracial, and embraces the concept of Ubuntu to define who we are and how we relate to others" (South African Embassy 2011, 5). South Africa's white paper on

foreign policy contains a one-page Ubuntu preamble that is, however, not consistently articulated throughout the document (DIRCO 2011). It relates mainly to 'our common humanity' and 'interconnectedness and interdependency'. The relationship between democracy and human rights and Ubuntu is treated as a given. The document does not explain the relationship between African integration and common African values. (South) Africa does not seem to be engaged in the search for a new development paradigm based on cultural values, but Agenda 2063[2] of the African Union does pay attention to common cultural values. (van Norren 2017, 182).

To what extent Ubuntu was presented by South Africa in the UNESCO discussions on AI is unknown. In other areas Ubuntu is not so explicit. Some policies can be said to be implicitly inspired by Ubuntu (Van Norren 2017). Criticism at Ubuntu, such as that it represents traditional ideas of a romantic past can be countered by various arguments (van Norren 2014) and deny Ubuntu to present an alternative epistemology.

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The ethics of artificial intelligence and Ubuntu

Metaphysical questions

UNESCO rightly points out that the question of AI is fundamentally a question of metaphysical or spiritual origins of life. Some believe that machines can replace humans (**transhumanism**) or can at least create genuine intelligence (strong AI) in future. COMEST points at this: "What is meant by 'intelligence' and how to distinguish 'natural' from 'artificial' intelligence? Is symbolic language necessary for thought processes? Is it possible to create 'strong AI' (*genuine* intelligence of the same kind and level of generality as human intelligence) as opposed to 'weak AI' (intelligence that only *mimics* human intelligence and is able to perform a limited number of narrowly defined tasks)? Although questions like these are theoretical or scientific, they involve a number of **metaphysical or spiritual concerns** (e.g. about human uniqueness or the freedom of will) which themselves have indirect, but nonetheless serious, ethical implications." (UNESCO-COMEST 2019, 5)

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On the question whether machines can replace humans, Ubuntu would definitely answer in the negative. The transhumanistic way of thinking is the ultimate Western ideology of "Cogito ergo sum" (I am because I think) of Rene Descartes taken to its extreme, separating 'intelligence' from bodily existence and locating intelligence in the mind. Needless to say, that Ubuntu (I am because we are) is fundamentally opposed to this stream of thought: "Already in the seventeenth century, the French philosopher René Descartes, for whom the body was a machine, had imagined the possibility of thought without a body. It is a human temptation to dream that, through science, we will free ourselves of our bodies and their limitations – something that transhumanists believe they will finally achieve." (Benasayag UNESCO Courier 2018, 17). Ubuntu posits the meaning of life from living through other

[2] "Aspiration 5) Africa with a Strong Cultural Identity Common Heritage, Values and Ethics; Goal 16) African Cultural Renaissance is pre- eminent; priority areas: Values and Ideals of Pan Africanism; Cultural Values and African Renaissance; Cultural Heritage, Creative Arts and Businesses", African Union, The Africa we want, https://au.int/en/agenda2063/overview :

people and **connectedness** and feeling engagement with others. A machine will not live through other machines or feel, it sympathizes with no-one, and it certainly does not create meaning. "The question of whether a machine can substitute humans is, in fact, absurd. It is living beings that create meaning, not computation", argues Argentinian philosopher Benasayag (UNESCO Courier 2018, 15). Furthermore, Ubuntu may not necessarily locate intelligence in the mind only, it locates intelligence in the mind (ratio), pelvic area (intuition) and mediating between those two: the heart (sympathizing with the other). 'The Negro-African sympathizes (sym-pathises: Feels with), abandons his personality to become identified with the Other" (Senghor 1964, 72-73).

Benasayag further observes: "Human intelligence is not conceivable separately from all other cerebral and corporeal processes." (UNESCO Courier 2018, 15). Ubuntu would take this argument one step further: individual human intelligence is also not separable from other human beings and life forms. According to Ubuntu we are all connected through 'seriti', an invisible force that constitutes the web of life. Black (2018, 37) points at the **individualist assumptions** of technology developers versus African communal thinking and observes "Such a shift [away from the primacy of individual agency towards community] has potentially profound implications for our understanding of consciousness, and our conception of intelligence, as no longer purely products of individualised biological aptitude, but rather as products of relational being." Forster (2006, ii) argues with Ray Kurzweil on the possibility of strong AI and the question of whether machines can emulate a person's conscious experience of being (being a person "based on memory, emotion, understanding and other subjective realities"). He puts it thus: There is "the need for an approach which is not only based on individual data (i.e., the objectivist – you are, or subjectivist – I am). Rather, it [a model integrating the objectivist and subjectivist approaches to consciousness] requires an **intersubjective knowing of self in relation to others."** (Forster 2006, ii, emphasis added). This is the Ubuntu ethic which Forster furthermore links to Christianity: "The Christian belief that true identity is both shaped by, and discovered in, relationship with others."

Benasayag already hints at the importance of the **collective understanding of life** and social personhood (Douglas and Ney, 1998): "Love and friendship exist beyond the individual, and even beyond the interaction between two people. When I speak, I am participating in something that we share in common, language. It is the same for love, friendship and thought– these are symbolic processes in which humans participate. Nobody thinks only for themselves. A brain uses its energy to participate in thinking." (UNESCO Courier 2018, 15).

Ideas such as that of David Bamps that AI will guide us in developing a new **moral compass**, or moral balance (Schoonen 2020, 14), from an Ubuntu vantage point totally negates the issues of human connectedness in order to experience empathy and set norms in which one respects the other, motivated by the 'meeting' of the other. His study does conclude that the more rules are set in a group of people, and the more they are monitored by AI on obeying those rules, the less people feel bound to follow them (sic). Nevertheless, he concludes that when men and machine have built together a new morale, ethics become empirical and that the distinction between good and evil can be made by data, not by convictions (though those convictions have to first be used to set up the life rules, that AI is supposed to manage and

monitor). He calls it the 'fyborgisation' of our moral compass (the moral unity of man and technology to make a functional cyborg). (Schoonen 2020, 15). The logic seems to be that moral decay does not result from disconnectedness and lack of social cohesion in society (or lack of ethical proximity (Ramose 2020)), but that it stems from the complexity of our society in which we are supposedly not able to oversee the consequences of our behavior and need to be reminded of it by AI monitoring (eg our climate change behavior).

For partial contrary views see Fayemi 2018 who contends that "some transhumanist elements are embedded in African normative and ontological conceptions of personhood, some others are not." Wareham (2020) argues that despite being prima facie inimical to personhood, his African account could admit AI as persons: "AI could be both subjects and objects of relationships of identity and solidarity" (Wareham 2020, 8); recognition is urgent as "machines may represent a large category of potential moral agents" (ibid, 7). This however discounts the metaphysical dimension of Ubuntu; AI lacks "Ntu", the life force. A machine can be intelligent and in relation with people and may alter the community, but the definition of a person includes more than thinking, namely feeling, intuition, animation (the soul dimension) and the capacity to morally grow.

Economics and Society

The principle of relatedness in Ubuntu and moral responsibility for the community of the individual, implies that Ubuntu demands that we develop AI for the benefit of the whole society (Black 2018, 27). This in a way complies with Article 27 of the Universal Declaration of Human Rights which stipulates that every human being is entitled to the benefits of scientific progress (though a collectivist view entails more than the sum of individuals and their access). Although I would not go as far as recognizing AI as a new Ntu (life-force) to which humanity is geared to and reach a "new altered embodiment" (Black 2018, 25), it is undoubtly so that AI has far-reaching consequences for society, which may amount to significant opportunities (such as increased productivity, taking over tasks from humans) but also poses significant risks (such as making labour redundant, leading to higher inequalities and more power concentration for those who own AI; apart from its military uses and issues of cyber security, privacy and ethical issues, new digital divides and the need for AI capacity building) (G20, 2019). If society is or remains organized by the capitalist logic of accumulation of wealth, AI risks going at the detriment of those at the bottom of society (Black 2018, 26). When confronted with economic choices, Ubuntu favors sharing above competition, emulated in the proverb that when once must choose between wealth or the preservation of the life of the other, the latter should be prioritised (Ramose 2005). Ubuntu therefore reminds us of our place as an individual as part of a greater whole, which is essential for both the functioning of the whole as well as of the individual.

Uleanya (2020, 33, emphasis added) warns that "technological gadgets, which are supposed to be enabling devices for enhancing human endeavours towards higher productivity, tend to serve as a double-edged sword; serving as enabling devices on one end, and aiding the weakening of **social ties and roots,** on the other end." She pleads for treasuring the culture of bonds and brotherhood within and between communities, tribes, nations and the (African) continent. This may however go further than the African continent and benefit humanity as

whole (Van Norren 2014; Black 2018, 21). Therefore, "African relational ontology suggests that any technological development, whether it be a 'soft' or a 'concrete' technological development, should be subject to the principles of true **humanness** and Kosmic harmony as expressed in *ubuntu.* (…). Thus no technology that is developed should exploit persons or the wider creation for individual enrichment or gain" (Forster 2006, 326).

Care and robotics

Ubuntu also means that we recognize that labour done by humans in care for other humans contains an aspect of relatedness and meaning that goes beyond the mere tasks at hand. This is to say that when older, disabled or demented people are cared for by care robots or infants by nanny robots, we deprive them of an essential meaningful aspect, namely of bonding and exchange of 'ntu' (life force). In the view of Ubuntu care is therefore much more than the simple practical tasks at hand, but is about recognizing **meaning in relatedness** and mutual aid. A lack of relationality leads to isolation and loneliness, which in the wealthy West, for example the UK, has become a top priority: "the condition being recognised as the UK's most dangerous health issue."[3]. Care is also from the Ubuntu vantage point an essential quality that can contribute to 'moral personhood', especially when related to the care of elders (Metz and Gaie 2010; Menkiti 1984). **Elders** have accumulated more experience and if they have acted rightly, gained **an elevated status of personhood**, from which the young can benefit, symbolized in the African proverb: What the elders see while sitting the young ones standing on their toes won't see. (Black 2018, 27). Therefore, the mutual care and sharing of time benefits both members of the community, the elderly and the younger, and benefits the whole of society, in the African system of thought. Likewise, Ubuntu reads meaning into illness or dementia (Ramose 2005, chapter 5 Medicine through Ubuntu), which means that care also takes on a different significance.

Even if the relationship of caring and robotics is a supplemental at first, the logic of the capitalist society may eventually lead to an increasing role of technology over human aid and (priceless) humane-ness in the relationship. Black therefore opposes the Ubuntu idea of 'humanity, community and flourishing' to the looming danger of 'inhumanity, isolation and floundering' (Black 2018, 23-29). COMEST (2019, 6) equally warns for "general dehumanization of human relationships and society at large". In other words, the ethics of AI have to be considered within the larger context of the dominant ethics of society as a whole.

The issue of language and meaning

AI may often be seen as a "black box", but the way AI learns is very dependent on the underlying conceptual framework and the programming language and method.

The meaning of Ubuntu is derived from its (Nguni language) grammar, 'ubu' the abstract life form, meeting 'ntu', the life force, in an endless cycle of creation and destruction. Therefore, the essence of Ubuntu philosophy is hidden in the structure of African languages (along with numerous proverbs). Yet programming of AI will most likely not be done in a Nguni-

[3] Smith, Joe. 2018. Loneliness on its way to becoming Britain's most lethal condition | The Independent | The Independent, 30 April 2018.

language. “It is very likely that machine translation, at least in the short term, will be primarily developed for the main world languages, especially English.” (UNESCO/COMEST 2019, 16). English is a noun-based, result-oriented language, whereas African languages are process-oriented verb-based languages and therefore very different.

The problem does not end here, as AI is likely to simplify the English language, while transforming it into computer (formal) language, skipping multiple meanings of sentences and words, let alone its ability to address metaphoric meanings or metaphysical understandings of life. “A central element of the complex relationship between AI and language is the intermediary role of ‘formal languages’ (languages with words derived from an alphabet). AI technologies often require that words and sentences expressed in any of the many natural languages used around the world have to be **translated into formal languages** that can be processed by computers. The translation of many natural languages into formal languages is not a neutral process, because every translation from natural language into formal language results in the ‘loss’ of meaning, given the fact that not all the specificities and idiosyncrasies of languages can be entirely formalized.”

A loss of meaning in translation of ‘other languages’ into English acerbates when languages are further removed from one another. The Dutch language may thus experience less loss of meaning than African languages, as they embody a very different, communal philosophy of life: As the COMEST report points out: “64. A second element is the **translation between natural languages**, which takes place via these formal languages. There are several intrinsic problems with machine translations: words can have different meanings in different languages, and there can be a lack of linguistic or conceptual correspondence between languages.” (UNESCO/COMEST 2019, 16).

The issue of bias

Since epistemic injustice (the systematic undervaluing of knowledge systems other than Western ones) has not been at the forefront of academic debates in general, discussions on the bias of AI are often limited to pointing at existing mechanisms of discrimination and gender bias, such as: “AI systems have significant implications for gender equality, since they may reflect existing **societal biases,** with the potential to exacerbate them. Most AI systems are built using datasets that reflect the real world – one which can be flawed, unfair, and discriminatory (Marda, 2018). Recently, a hiring tool used by Amazon was found to be sexist, as it prioritized male applicants for technical jobs (Reuters, 2018). Such systems can be dangerous, not only because they perpetuate gender **inequalities** in society, but also because they embed these inequalities in opaque ways, while at the same time being hailed as ‘objective’ and ‘accurate’ (O’Neil, 2018).” (UNESCO/COMEST, 21). Thus, AI poses the risk of veiling the colonization of our mindset, in one universal human rights paradigm and one ‘sustainable’ capitalist-economic paradigm, even further.

On Principles

COMEST does not take a stance on above metaphysical or epistemic questions but instead formulated a number of generic AI principles for its development, implementation and use, which are listed in Table 1.

Table 1 UNESCO/COMEST Generic principles for the development, implementation and use of AI.

COMEST Principles (2019)	**Definition**	**ALTAI principles (EC, 2020)**	**OECD principles (2019)**	**Ubuntu principles & bottom-up approaches**
a.**Human rights**:	AI should be developed and implemented in accordance with international human rights standards.	Human agency and oversight (empowerment and rights)	Human-centred values and fairness	Human Relations incl future and past generations
b. **Inclusiveness**:	AI should be inclusive, aiming to avoid bias and allowing for diversity and avoiding a new digital divide.	Diversity, non-discrimination and fairness	Human-centred values and fairness	I am because we are
c. **Flourishing**:	AI should be developed to enhance the quality of life.		Inclusive growth, sustainable development and well-being	Wellbeing of the community and human-ness
d. **Autonomy**:	AI should respect human autonomy by requiring human control at all times.		Human-centred values and fairness	Respecting autonomy of group and individidual
e.**Explainability**:	AI should be explainable, able to provide insight into its functioning.		Transparency and explainability	Explainability towards the group
f. **Transparency**:	The data used to train AI systems should be transparent.	Transparency		Transparancy towards the group
g.**Awareness and literacy**:	Algorithm awareness and a basic understanding of the workings of AI are needed to empower citizens.			Education for moral personhood benefitting the group
h.**Responsibility**:	Developers and companies should take into consideration ethics when developing autonomous intelligent system.	Technical robustness and safety	Robustness, security and safety	Duties towards society and AI

i.**Accountability**:	Arrangements should be developed that will make possible to attribute accountability for AI-driven decisions and the behaviour of AI systems.	Accountability	Accountability	Accountability towards society
j. **Democracy**:	AI should be developed, implemented and used in line with democratic principles.		Human-centred values and fairness	Participatory democracy and consensus building
k.**Good governance**	Governments should provide regular reports about their use of AI in policing, intelligence, and security.	Privacy and data governance		Contribute to restorative justice and nation building
l. **Sustainability**:	For all AI applications, the potential benefits need to be balanced against the environmental impact of the entire AI and IT production cycle. (UNESCO/COMEST 2019).	Environmental and societal well-being	Inclusive growth, sustainable development and well-being	Respect for and living in harmony with Nature and future and past generations.

The COMEST principles follow closely the earlier OECD guidelines, but add some important dimensions like flourishing, literacy, and application in public governance. In observing the principles formulated by COMEST, it stands out that terms like human rights, sustainability and good governance are Western oriented terms. In Africa one would rather speak of human relations, future generations and ancestors as part of this community of people ('Bantu') and keeping harmony in these relations (as well as restoring it when disturbed). (Van Norren 2017). Good governance is also a largely Western embraced term; as the SDG negotiations showed that SDG 16 (geared towards the rule of law) initially sparked controversy from the G77+China, and was reformed into 'peaceful, inclusive societies'; restorative justice and nation-building is the Ubuntu term (Van Norren 2017).

The notion of flourishing, responsibility and inclusivity on the other hand resonate well in Ubuntu's 'moral personhood', constituting of responsibility towards the community and always paying regard to the flourishing of the 'whole'. It is however not clear if with flourishing is meant enhancing the quality of life of the individual or of society as a whole. Likewise, inclusivity is a Western term as Ubuntu is inherently inclusive (there is no meaning to life or personhood without the other). Responsibility refers only to companies and

developers developing ethical AI systems; it does not refer to who benefits from AI or where the profits go.

The principle of autonomy once again emphasizes individuality (human control), as it does not refer to the autonomy of the group (for example determining the purpose of AI). Equally from the Ubuntu perspective transparency is required to the entire group. Likewise, the interpretation of democracy may vary; the West emphasizes representative democracy whereas in Africa participation and consensus-building receives priority.

Black points at the fact that Western philosophy operates from the premise of universality and lacks diversity; it also prioritizes individuality and rationality (2018,36-37). **Universal rules** may overlook the particular and different ontological realities. It therefore may benefit from counter-hegemonic thought (Graneβ, 2015: 78-88). The degree of which these rules may be adhered may also increase once they incorporated multiple worldviews. "Cultures incorporate their implicit agendas (…) if we allow for cultural diversity in the public sphere, we must acknowledge that there is bound to be systemic disagreement over fundamental principles. Whole social persons will not be able to resolve disagreement as easily as will the abstract, unsocial persons of the market model (…)" (Douglas and Ney 1998, 124).

Another objection against these kinds of rules-based approaches to AI, may be that rules-based systems may not be applied in practice (UNESCO guidelines are for example non-binding). "Rule-based approaches to intelligent systems have been variously criticized for lacking robustness in real world application" (Black 2018, 16). Therefore, one may want to apply **bottom-up approaches** by having machines learn ethical theories. However, "The biggest drawback of bottom-up approaches is the difficult task of training machines by having them learn from mistakes" (Black 2018, 16). To undercut this problem, one may apply a combination of top-down rules based and bottom-up deep learning based approaches. These deep learning algorithms could incorporate the ethics of Ubuntu, for example in the realm of care and the position of elders in society (Black 2018).

Conclusion

In conclusion we have seen that Artificial Intelligence guidelines mainly come from the West (Europe and North America). Applications in Africa are not contextualized, do not address the most pressing needs of the African continent, lead to cybersecurity issues, and also do not incorporate African ethics. What's more African ethics have a small role to play in global ethics and philosophy and therefore risk to be overlooked in the discussion on AI and ethics. This is why the consultation process of UNESCO on ethics of AI is of paramount importance, as it involves all UN member countries. Having said so, it does not automatically follow that African philosophers or sages will be consulted, as many are educated in Western(ized) education systems. The ethics of ubuntu offers unique vantage points in looking at the organization of society and economics today, which are also relevant for development of AI, especially in its tenet of relatedness rather than individuality (and practical use of AI for individuals), taking responsibility for society as a whole (such as analysing the benefit of AI for all strata of society), and embodying true inclusiveness. Whether looking at top-down

guidelines for the development and implementation of AI or the bottom-up ethical learning process of AI (deep learning), ethics of the Global South can and should have a role to play.

Future Areas of Research

Not only the African philosophy of Ubuntu gives room for different debates on AI and ethics, this may also count for other philosophies of the Global South, such as Buen Vivir (Harmony with Nature) in Latin America, Gross national happiness and Buddhism in Asia, Ikegai in Japan or other indigenous ways of life.

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