Time, Thought, Materiality: Africa and the Fourth Industrial Revolution

Monday 02 September 2019 - Wednesday 04 September 2019

School of Tourism and Hospitality

Book of Abstracts

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Data - The invisible hand: Technological impacts on society

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From a technological perspective, each of the previous industrial revolutions could be characterised according to some unique features. While the Fourth Industrial Revolution is characterised by a confluence of technologies, data is seemingly a distinct feature of 4IR's DNA. Data is considered by many to be the new gold and true invisible hand behind 4IR. With natural, human and capital resources' scarcity and constraints being felt now more than ever, data is potentially a critical feed-stock for economic development and driver for knowledge generation. This talk focuses on how data, together with technological development, have and will continue to bring about deep socio-logical and economic impacts. These impacts are analysed through a technological lens aimed at stimulating discourse around the role of data in society.

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Discussion

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Discussion based on the Speakers' inputs (Session III)

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The Digital Twin in Industry: Enhanced safety and performance in aerospace, mining and industry

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One of the hallmarks of the Fourth Industrial Revolution is the "ubuntu" of data: instead of focussing on individual sources of data, we rather understand each data source in the context of a broader, co-herent picture. The whole becomes more valuable than the sum of its parts. This is a key concept underlying digital replicas of real-world systems, called "digital twins". The digital twin concept is explored through three examples: an aeroplane, a nuclear reactor and a mine. Instead of interacting directly with the real-world system through individual sensor readings, the paradigm shifts to inter-acting with the digital twin itself. The benefits of this approach include greatly increased information richness and accuracy, fault tolerance, scenario planning and ability to optimise.

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Nexus of Energy, Water, Food, Waste : 4IR Contributions

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Given the reference, United Nations Sustainable Development Goals, Agenda 2030 : Transforming our World, the Department of Mechanical Engineering Science has interest in promoting solutions that will stimulate new economic development and new jobs in the age of Industrial Revolution 4.0. A focus is to explore the gains from the nexus of energy, water, food, waste and transport value chains when embedded in Industrial Revolution 4.0 technologies, business models and societal values. The aim is to maximise circular economics, minimize environmental impact and to deliver new business models of economic development and job creation. A sharp focus is to bring forward machine decision making in the delivery of sustainable and resilient solutions of integrity and value to customers and society.

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Achieving Water Security in the 4IR: Possibilities for South Africa

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The Forth Industrial Revolution (4IR) is dawning on South Africa. There are debates on whether it is going to bring about positive change or the opposite – an increase in social problems, social strife, poverty and inequality. South Africa is the 30th driest country globally. Against the backdrop of climate change and increased variability in rainfall patterns globally as a result of global warming, there has been a sharp decline in rainfall in Southern Africa. Water scarcity in South Africa been compounded human induced factors. This paper interrogates the technologies that come with the 4IR and how they can be employed to improve water management, access and provision in South Africa. I argue that if these 4IR technologies are embraced and employed, we stand a better chance at achieving water security.

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Kinship obligations, capital and forms of belonging among Africa's farming communities in the Fourth Industrial Revolution

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This study is an investigation of kinship influences on women smallholder farmers' practices in rural spaces. This study is an ongoing study conducted within a context were livelihoods are increasingly getting linked to the capitalist economy which has proved to be going through rapid transformations largely linked to the features of the Fourth Industrial Revolution (4th IR). A study that focuses on kinship influences on women farming practices is essential when one looks into the resilience of customary forms or organisation within the current neoliberal setting where the dictates of the 4th IR are looming large. Instead of such forms of organisation being pushed to the periphery they have come to be at the core of defining socio-economic relationships. In this regard, the study will seek to establish forms of relationships that kinship assists to shape as women engage in their farming activities. This is especially with respect to how the kinship obligations act as an enabling or constraining form of agency within the whims of Victor Turners concept of Liminality. Whilst methodologically, the broader study is set to draw from in-depth interviews and observations this paper is a result of the initial phase which draws from empirical literature.

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The relevancy of the Fourth Industrial Revolution in the South African National Defence Force: Adapt or be hacked

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The 4th Industrial Revolution (4IR) has advanced various aspects of human life is rapidly altering the way individuals communicate with each other in the work place. This study focused on the qualitative exploration on how the advancement of cybersecurity may influence the behaviour of military officers and the manner in which they interact with changing technology in the workplace. Exploring the views and perceptions of cybersecurity and how threats are scrutinised among military officers is considered to be vital when producing knowledge in an emerging research area. The securitization framework was used to indicate how participants securitize an issue within the military context, particularly when viewing the 4IR as an agent that advances technological innovation in the workplace and demands social acceptance. Exploring the views and perceptions of military officers from an organizational psychology perspective necessitated that the researcher explore this emerging topic from a qualitative method of inquiry and highlighting a site of knowledge which has often been left unengaged in mainstream psychology. This study employed non-probability purposive sampling and selected 20 participants enrolled in a senior officers' course at one South African Military Tertiary Institution. Findings point towards the notion that securitizing an issue such as cyber-attacks has an impact on threat perception and behaviour when interacting with others through cyberspace.

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With great access comes great responsibility:Proposing a Cybersecurity implementation framework for South Africa

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South Africa is one of the African nations with the highest rate of internet access to the internet. Despite this rapid spread of mobile phones and interactivity, the country's government has been slow

in implementing a definite cyber strategy. With more South Africans gaining access to the internet, the risks of citizens' exposure to cyber threats are rising. The Institute of Risk Management South Africa has that cyberattacks were amongst the ten highest ranked risks threatening the country. The large number of South African citizens growing up without regular or sustained exposure to technological devices and broadband internet access makes them vulnerable to online exploitation. This may in turn lead to the country itself being more exposed to security breaches and potential international cyberattacks. Within this paper the researchers argue for the importance of implementing a strong cyber awareness strategy in South Africa. The paper situates the country within its unique African context, by explaining strategies and frameworks that have been developed internationally, and how they could be applied to the country. They conclude by recommending that for South African and African citizens to protect themselves against online threats, they need adequate training in cybersecurity awareness.

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Making Afro-ethics Computational

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Arguably, research in computational ethics and particularly any attempt at composing an ethical scheme for machines or autonomous intelligent systems will require three steps. First, identifying and adopting an ethical system, which will be compatible with a top-down, bottom-up or hybrid approach to computation. Second, schematizing this ethic in analytic form and third, developing appropriate syntax and a utility function for the development of an ethical algorithm. In this talk, I consider the underexplored ethical system common to peoples of sub-Saharan Africa, which I have christened 'Afro-ethics'. I show in this talk that the nature of Afro-ethics, unlike deontological or consequential ethics, is unstructured and makes the problem of tractability more evident. For lack of space and time, I address the first two steps of creating an ethically computational framework for artificial intelligent systems. These are identifying the primary features of Afro-ethics and schematizing these in analytic form.

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The rise in the staging of sacred intercessions by Traditional Healers on digital spaces"

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Ukuhlola is an exercise of inquiring about one's well-being from the ancestors through consulting a traditional healer who then acts as an intermediary between the enquirer and his/her ancestors. Lately TV shows like Umoya and YFM with Lloyd Radebe radio programme have been broadcasting these consultation sessions. There has been also a significant number of Traditional healers interpreting dreams and offering consultation session through social media platforms and websites. This case study will explore how the practice of African traditional healing consultation has moved from being a very confidential sacred spiritual practice to something aired on a public platform. The paper will look at the motive of putting what is understood as sacred on public platforms for public consumption and entertainment. The paper will seek to explore possible reasons for this new trend from the perspective of both healers and clients. It will further interrogate the authenticity of this practice. The analysis will be from narrative interviews and participant observation. The study aims

to uncover the impact of this social innovation on spirituality's sustainability, on whether these healers have overstepped the boundaries that are regarded as spiritual moral values in trying to fit in and keep up with the fast-paced developing society.

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Virtual Persons: Rethinking Human Value

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The first of the 2018 EU guidelines for ethical AI states "AI should not trample on human autonomy. People should not be manipulated or coerced by AI systems, and humans should be able to intervene or oversee every decision that the software makes". The thinking behind this guideline is the Kantian notion that humans have intrinsic worth, and should therefore always be the best final arbiters in considering the impact of decisions on humans. Are such views justified in an age where humans are not necessarily the only rational beings anymore, and also do not have the best history of beneficial moral decision-making? In the age of 4IR, we need to rethink our reasons for framing guidelines such as the above, especially, I argue, if they are built on assumptions of notions of personal identity giving humans the upper hand. In order to commence this 'rethinking of humanity', I consider the arguments of writers such as Asaro, Moor, Allen and Wallach for identifying levels of artificial morality as a way in which to formulate a positive contemporary response to the well-known 1991 article by Cole in which he defends the potential mental abilities of algorithms with his notion of 'virtual persons'.

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On The Unique Personhoods Of Robots

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The existence of these humanoid robots forces us to think about or rethink the issues concerning rights, citizenship, and personhood. There is something quite different about robots in relation to persons. I am particularly interested to test the plausibility of considering the uniqueness of robots. My aim is to consider the radical distinction of robots. I will test the uniqueness of robots against my theory of procedural uniqueness. Given that my view of uniqueness is founded on persons, it is necessary for my discussion of the uniqueness of robots to be preceded by a discussion of personhood with the aim to reveal whether robots can have the status of personhood. The question regarding the possibility of robots attaining personhood status is one that assumes that robots can develop moral status and thus able to take accountability for moral actions. Understood in this way, it would imply that robots would have the capacity to grasp the concept of moral responsibility so much so that they would be able to understand moral regard for other robots, humans, and animals. While legal personhood can be granted to robots in the same way that it is granted to historical buildings and corporations, it is unclear that robots can be persons in the way that thinkers such as Kant and Menkiti and others conceive of it.

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A Boy Is Not A Person That You Would Have To Tend: Towards A Humane Anthropology Of Boyhoods

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In this paper, I build upon a nascent and developing field of Black boyhood studies. Studies by Dumas and Nelson (2016), Drake (2016), hooks and Powell (2015) and many others have done well to index the ways in which critical aspects of becoming human for Black boys have remained unimagined and unimaginable in social science, anthropology, and social imagination. These studies have shown Black boys are imagined only as adults, and when not adults, as problems in need of fixing. A key limitation with this work is it's centredness on the US experience of Black boyhood which does not have various cultural nuances observed in southern African Black boyhoods. Building on this corpus of work from Black boyhood studies, I argue for an Anthropology of Boyhoods that humanises boys, and Black boys more specifically. Using ethnographic data collected with young amaXhosa men in the Eastern Cape, I show social science and anthropological studies of amaXhosa men have mirrored many of the aspects noted in Black boyhood studies by imagining Xhosa boyhood only in relation to adulthood (i.e. initiation – ulwaluko) and post initiation lives through ukwakha umzi (building a homestead). Through uncovering the pre-initiation lives of Xhosa men (i.e. in boyhood), I show a more complex and nuanced depiction of amaXhosa boyhoods not currently reflected in anthropology or social science more broadly. In this way, I posit, to show more humanised representations of Black boyhood, and amaXhosa boyhoods more specifically, we have to "tend" to the boy – and not only in adulthood, but throughout their lifecourse. In doing so, ultimately I argue we can have more comprehensive understandings of the processes of becoming for Black boys as they come not only into their genders – but ultimately humanity. While exciting fields as the anthropology of Childhoods and Youth exist, ultimately, I argue for an Anthropology of Boyhoods that illuminates joys, complexities and nuances of being a boy.

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Reanimating Archives In The Now: Frankensteinian Logics, Inheritances And Fictive Commensurabilities

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Imaginaries of the human have shifted over time with, and made possible new epistemes, politics, methodologies and ethics. As each new 'turn' takes effect, the attempt to keep up with quests for recognition across inequalities, forms of life and worldings, can leave one feeling quite dizzy. The expansion of ontological imaginaries frequently animates the archive towards a politics for the present and / or future. The archive is frequently read towards a politics and new sets of relations: to insert new subjects (or worlds), recover them, dispute their rendering, or to delegitimise the scope of the archive. What remains, irrespective of the mode of human and the form of the political that is emergent, is a relation to the archive that appears to be paradigmatic. Given different imaginaries of the human across time and space, I want to present some questions about temporal (and ontological) equivalences and the ontological remainders that are carried across when we are mining the archive to animate our texts. In this paper, I will propose that Frankenstein as a metaphor is useful to explore the excisionary logics of knowledge production which sutures together ontological imaginaries and produces fictive historical contiguities.

Session II / 16

Anti- Anti- Anti-Humanism: A Critique Of Human Origins Research In South Africa

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In a time when liberal, universalist values are apparently in regression across the globe, should anthropology abandon its flirtation with post-humanism and anti-anthropocentrism? Should it instead be vigorously reasserting its historical role in defending the qualities that distinguish the human species from others, while arguing for the universality of those qualities across members of that species? I am sympathetic to the political reasoning underlying such a call in our current context. Yet here I want to urge caution against taking a naïvely sanguine view of some invocations of human unity and 'humanism' that have been constitutive of the discipline of anthropology, notably in relation to paleoanthropological research into 'human evolution' and 'human origins'. In the South African context, such research has had an unusually influential – and sometimes deeply pernicious - role in relation to debates concerned with race, inequality and human difference over the past century. My paper will suggest that the effort to rehabilitate the ethical reputation of paleoanthropology during the late Apartheid and post-Apartheid period, grounded as it is in the invocation of common human origins in Africa and specifically in the 'Cradle of Humankind,' can paradoxically serve to shore up both national chauvinism and white apologetics. While this need not derail a revival of the 'humanist' impulse of anthropology per se, it should give us sufficiently cause to be wary of the uses to which such a revival might be put.

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Space Applications: How The Use Of Satellite Technology Will Promote Access To Data And Information In The Fourth Industrial Revolution

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The 4th industrial revolution is going to be driven by three key ages, artificial intelligence, digitization and most notably the Space age. It is this last field especially that has formed the bulk of my research and how Space Applications can promote sustainable development on the African continent especially though the use of satellite technology. Given rapid technological advances many fields, including the law and humanities, are evolving to keep up with a world that is constantly looking for effective and more efficient ways to conduct business. Take for example the proliferation of satellite technology for internet coverage to increase access to information to individuals in remote areas such as Rwanda and most recently Ghana have done. This is all with the broader aim not only to establish Africa's technological footprint but also to encourage the younger generation to gain a better appreciation of how important it is to integrate into the global community and often the only way to do so is access to important data on the rapidly changing trends in modern sectors. Artificial intelligence and digitization are also pertinent to the extent that they could potentially eliminate the need for human intervention in the coming years, and the future generation in its teachings must be informed of the consequences and the preemptive steps to be taken to ensure that in a technologically driven world they will still find relevancy and an opportunity to contribute to different sectors and career fields. I hope to give insight on space law, a highly niche area of the law and how it interplay's with the other drivers of the 4th industrial revolution and how collectively each should be a fundamental part of educational curricula. Now that "robots" have and will replace many of the functions currently conducted by humans how do we stop the next generation of researchers, students, industry experts from becoming obsolete, lazy or simply failing to engage with what is a novel but extremely complex development in modern society.

Session IV / 18

Why In The Fourth Industrial Revolution Are Miracle Churches Attracting So Many People?

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In 2013 machine learning took off as deep learning – the ability of computers to teach themselves new concepts and ideas – became a reality. The Fourth Industrial Revolution is a revolution unlike any we have seen before because it ushers in a world in which machines can continually learn making it possible for them to make intelligent decisions based on the data they collect. Put differently not only can machines do the same manual work that people do ie plough a field of corn, they can also solve problems, diagnose diseases and often more accurately then people calculate outcomes. This reality makes many people uncomfortable and people are beginning to ask what does it mean to be human? In this paper I explore how the rise of grass eating, petrol drinking, doom-spraying pastors that have been dominating our headlines since the 2015 is not because South Africans are somehow unique or more superstitious than other nations but rather that this phenomena echoes the reactions we have seen at the advent of the previous three Industrial Revolutions in various parts of the world. This paper compares the religious phenomena we are currently seeing to the religious expressions we saw during the previous three Industrial Revolutions. It then unpacks why at this moment in South Africa's history we are witnessing the particular religious reaction to the Fourth Industrial Revolution that we currently see and what the socio-political implications of this might be for South Africa.

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Online Church: The Impact Of Technology And Religion In The Digital Age

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The concept of religion in anthropology, is understood to be a sort of cultural script- a strong framing narrative for daily life in many parts of the world. The digital technology has make it into the social settings and mirrors new sociocultural realities. Today, church sermons can be lived-streamed, downloaded online and congregants can actively participate from the comfortable of their homes. The power of the internet space has become a cultural game changer, infusing both religion and technology into one space. The study sets out to investigate the experiences of users who surf the cyberspace, the different religious outcome between television viewing and internet. The purpose is to describe the behavioural patterns and the socio-economic backgrounds of participates. The study argues that techno-religion as a social reality excludes the underprivileged thereby placing digital technology in question.

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Graduate Employability, Human Development And The Fourth Industrial Revolution: Tracing The Career Paths Of Sociology Alumnus At The University Of Johannesburg

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Graduate unemployment is rapidly becoming a rising concern in South Africa. Graduates tend to experience obstacles during the employment phase largely due to the lack of required labour market skills. While the envisaged fourth industrial revolution (4IR) is perceived to promote unemployment for soft-skilled professions, it is widely applauded by highly skilled technological careers. Given the broad career and employment possibilities of Sociology, the aim of this study is to provide an advanced understanding into the experiences of former Sociology graduates with an advanced qualification in the labour market. This article trace the career paths of 130 Sociology alumnus who completed an honour's degree in Sociology between 2013 and 2017 at the University of Johannesburg. Data was collected through qualitative emailed questionnaires. Research participants were either unemployed graduates or recently employed graduates. The findings reveal important insights into (a) their level of employment, (b) the value of an honours degree in Sociology to find employment and (c) preparedness for technological aspects required in their current employment. The findings have important implications for educational institutions and companies to consider possible solutions to resolve the causes of graduate unemployment. The findings also contribute to a better understanding of the skills needed to better prepare current honours students in Sociology for the fourth industrial revolution and how this may advance youth development. It provides a rich platform for further studies and replication in other sectors, especially within the African region.

Session V / 21

The Fractured Labour Process And Responses To It

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The rise of new forms of 'precarious' work in South Africa over the last few decades has necessitated a return to the study of the capitalist labour process. Labour broking, outsourcing, contract work and casual work are often described as 'atypical' forms of work but, as we will demonstrate, they have fast become the norm. In this paper we will detail how workplace restructuring has gone hand-in-hand with processes of labour casualiation and the implications for the decent work agenda. We demonstrate how trade unions have largely failed to keep pace with these developments and have neglected to organise precarious workers. Furthermore, we argue that, despite some recent positive reforms in the rights for precarious workers, the institutional framework that is intended to safeguard worker rights is in many cases denying workers their rights. Taken together this suggests the need for a radical rethink for the role of the state in promoting and safeguarding decent work for all.

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Politics On Steroids? Algorithms, Bots And Automated Propaganda In Africa

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Digital media platforms are credited for having transformed political engagement especially with regards to transmogrifying it into 'participatory' and 'democratic' processes. Besides its glorified potential, the advent of these gizmos has also opened the floodgates for the use of algorithms, bots and automated back-end applications, which are mostly used for digital listening, posting political content, engaging in discursive conversations with human beings and sentiment analysis. This presentation looks at the emerging role of bots, algorithms and automated propaganda in African electoral processes. Using recent elections as case studies, the presentation provides compelling evidence on how the quest to harvest big data (mostly the electorate's demographic information, including their physical addresses, mobile phone numbers and email addresses), to manufacture the "necessary illusions" (automated propaganda and misinformation) and to control the master narrative has complicated the political process. This has not only made the already uneven playing field more unequal, but it has also ushered in new actants into the political field. These actants have been blamed for normalising and institutionalising misinformation, polluting the public sphere, producing uniformed and misinformed citizens as well as influencing the (in)visibility of political content and advertisements on digital media platforms. In the case of social media algorithms, they play an instrumental role in terms of filtering (gatekeeping), ranking (hierarchisation), selecting and recommending political content. This presentation argues that algorithms, bots and automated propaganda are increasingly playing an important role in terms of political communication in fragile and established democracies.

Session VI / 23

Mapping Environmental Injustice With The Ejatlas: Tool Or Trap?

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Environmental justice (EJ) is sought by the poor, or working class, often of ethnic/marginal communities who have been disproportionately affected by the negative consequences of environmental degradation. Originating in American activism against 'environmental racism' in the 1970s and 1980s, academics (especially political ecologists, ecological economists, and environmental sociologists) have long focused analysis on the topic of EJ in the West. More recently, however, scholars have begun to document the evolution of a global environmental justice movement, comprised of both activists and researchers engaged in the work of linking protest with theory. Indeed in the South African (SA) context, evidence points to a burgeoning of EJ activism, as local communities engage in urgent, high stakes struggles to defend their access to non-market environmental resources and services upon which livelihoods depend, against contamination and/or encroachment by market and state forces. This paper examines a range of South African EJ struggles, drawing from a recently developed interactive map of environmental conflicts. It argues that online platforms such as the EJAtlas offer a valuable means by which environmental justice organisations (EJOs) can leverage "network effects", thereby increasing possibilities for achieving organisational goals."

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South Of South: Audio-Visual Technology And The San Of Zimbabwe

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The paper is an ethnographic account based on the author's experiences teaching the San of Sabase Village, Bulilima, Matabeleland South in Zimbabwe to make video-films. It explores how the San, as a marginalized community in Zimbabwe, have interacted with, negotiated with and appropriated filmmaking technology. The community at the centre of the study lies on the periphery of Zimbabwe's social and economic spectrum. Between 2018-19, they encountered (as users), some of them for the first time, video technology such as DSLR cameras, smartphones, drones and editing equipment, when they were trained by a team of Zimbabwean researchers. The study focuses on how the San, regarded as Africa's First People, appropriated this filmmaking technology to confront as well as articulate their 'everyday'. It contributes to the representation of African futures in film by analysing the spatial and temporal aspects of San life, focusing on the Sabase community's history, present circumstances and future aspirations as conveyed through a film that they produced, titled The San of Twai Twai. It not only focuses on the film's content but also on the circumstances of its production. The article, therefore contributes to the growing discourse of Afrofuturism, recently re-enthused by the universally acclaimed Black Panther film. From that perspective, the San's endeavours and the resultant film represent alternative realities to those that appear in mainstream films about the San and other First People made by 'dominant' outside groups. The research was designed as a participatory action research in which data was collected using the participant observation method as well as focus group discussions with members of the San community, including the filmmakers. It also incorporates an analysis of the documentary film created by the San.

Session VII / 25

Reimagining African Histories Through Digital Arts

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This paper discusses how the emergence of digital scholarship is allowing artist to restage, reperform, and re-investigate the histories of the African content through mediums that are informed by the development of new media technologies of the 4th Industrial Revolution. Using Achille Mbembe's claim that the "Internet is Afropolitan" (2015), the paper looks at several projects by African artists and on the continent winch find their expression in locative sound installations, online exhibitions, and interactive video performances. Through a critical reflection identifying these projects as part of digital humanities, it examines how their critical appreciation can give insight to the continent's navigation through the 4th Industrial Revolution.

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African Literature And Human Rights In The Fourth Industrial Revolution

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The humanities, in this case, African literature, are under threat – a situation that should spur those in the field into relevant action towards reinvention, increased relevance and survival in the Fourth Industrial Revolution (4IR). This paper proposes interdisciplinarity – in this case the interdiscipline of African literature and human rights – as one example of the ways in which the humanities can reinvent themselves to prove their worth and utility in struggles for human survival and flourishing. While there is so much hype about the 4IR and technological advancements, there is increasingly less critical focus on ideas of human coexistence. There seems to be a terrible assumption that

technological advancements will be accompanied by increased understanding among humans when instead, there are already strong signs, such as the rise of the far-right and xenophobia – proof that the 4IR needs an even stronger humanities presence and intervention than before. The centering of the human in African literature and human rights foregrounds notions of co-existence and reminds us that to be aware of one's and others' humanity requires continual reflection and practice – something that this paper, drawing on humanising pedagogy, will illustrate through examples from my teaching of African literature and human rights.

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Discussion

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Discussion based on the Speakers' inputs (Session III)

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Discussion

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Discussion based on the Speakers' inputs (Session III)

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Opening Remarks

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Opening Remarks

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Official Opening Ceremony

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Discussion based on the Speakers' inputs (Session II)

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Discussion

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iscussion based on the Speakers' inputs (Session IV)

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Discussion

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Discussion based on the Speakers' inputs (Session VII)

Session I / 39

Personhood, Animals And Robots In African Philosophy

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This essay considers the moral status of robots in the light of the idea of personhood salient in African philosophy. Specifically, I aim to consider whether robots can be objects of moral concern. To do so, I will first consider the place and status of animals in the light of personhood. I will consider moral reasons offered by the ethics of personhood to exclude animals from the moral community. I will proceed to consider whether robots can have moral status in light of personhood. I will conclude by observing that robots will be excluded from the moral community on more or less the same reasons that animals are excluded.

Session II / 40

Posthumanism And The New Politics Of Difference

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In this paper, I explore connections between humanism, posthumanism and neoliberal constructions of difference. I ask questions about the theoretical and applied efficacy of posthumanism as a legitimate way of thinking anthropologically, and argue that, ultimately, anthropology has always been, and should remain to be, a fundamentally humanistic endeavour. I root the paper in the context of increasing global inequalities, ethno-nationalisms, the destruction of ecosystems, the imposition of physical and metaphysical boundaries and other products of neoliberal dynamics. Of particular concern is the impact that neoliberalism has made in the Academy, specifically in anthropology as

an intellectual pursuit, giving rise to a plethora of twists and 'turns' through which practitioners seek to carve out spaces of particularity through increasing peculiarity. I argue that, in this current global context, posthumanist approaches have the potential to help generate meaningful understandings of contemporary lived experiences only if they remain firmly embedded in their humanist origins.

Session V / 41

The indispensable nature of 'illegal' and deportable migrants within the South African labour market: Migrant workers in South Africa in the age of the Fourth Industrial Revolution

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Debates on the 4IR are raging within the academy, as scholars endeavor to grapple with the pros and cons of this revolution. Within the labour market, fears have been expressed by scholars on how the 4IR might disrupt the traditional work environment as we have known it, as some of the semi-skilled and even skilled office workers might end up being made redundant by technology and robots. It is the contention of this paper that in the midst of all these fears of retrenchments within the labour market, as a consequence of 4IR, the 'illegal' and deportable migrants who work in the lower rungs of the labour market are more likely to remain unscathed and to be retained within South Africa's labour market, as compared to semi-skilled and skilled migrant workers who might be properly documented.

Session II / 42

The Non-Identical Human

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In this paper, I explore connections between humanism, posthumanism and neoliberal constructions of difference. I ask questions about the theoretical and applied efficacy of posthumanism as a legitimate way of thinking anthropologically, and argue that, ultimately, anthropology has always been, and should remain to be, a fundamentally humanistic endeavour. I root the paper in the context of increasing global inequalities, ethno-nationalisms, the destruction of ecosystems, the imposition of physical and metaphysical boundaries and other products of neoliberal dynamics. Of particular concern is the impact that neoliberalism has made in the Academy, specifically in anthropology as an intellectual pursuit, giving rise to a plethora of twists and 'turns' through which practitioners seek to carve out spaces of particularity through increasing peculiarity. I argue that, in this current global context, posthumanist approaches have the potential to help generate meaningful understandings of contemporary lived experiences only if they remain firmly embedded in their humanist origins.

Session IV / 43

Neuroscience, Psychology And Machine Learning: Decoding Both Human And Artificially Simulated Brains Within The Scope Of Humanities' Study

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As a Humanities' student in the age of artificial intelligence algorithms, software engineering and big data – concepts such as youth unemployment, human cognition and the future of academia are prominent in Industry 4.0. This paper highlights the role a Humanities' scholar plays in embracing technological trends and using critical thinking, human observation and psychoanalysis to enter the world of machines and computers. It is through grappling with the underlying psychological and sociological aspects, which a Humanities' degree provides, that innovative deep learning and its enigma can be uncovered. This is an account of the academic journey from Freud to Turing, from cognition to neural networks, and from the University of Johannesburg to the University of Cambridge – all in advocacy of the Fourth Industrial Revolution.

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To Reflect, Imagine And Co-Create In Africa And Its Diaspora: Humanities Demands From The Fourth Industrial Revolution

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This keynote presentation to the SAHUDA 2019 Conference is about the meaning and practice of Humanities Education in Africa and its diaspora, in the face of transformational innovations that are increasingly challenging the academy and society, globally. It interrogates Klaus Shwab's concept of the Fourth Industrial Revolution (4IR) and argues that 4IR in Africa and the global South should be more about educating and empowering people, about advancing indigenous productivity and preserving our shared humanity. It is within that context that we should consider the role of such emerging digital technologies as artificial intelligence, robotics and algorithms, as advanced by Schwab. The presentation advocates a critical and selective approach to 4IR and places it within the context of other historical 'periodisations' of humanity's interface with technology.

To better cope with emerging innovations in this era, a managed re-structuring of disciplinary boundaries in the academy is advocated, with a view to more inter-disciplinary and convergent approaches to research and curriculum reform. The goal is to enable researchers and students of the Humanities to combine their people-centred scholarship with an improved understanding of relevant applications in Science, Technology and Engineering, and vice versa. The presentation concludes that such reforms, needed at the regional, national and institutional levels, must include the space to reflect historically and culturally, the capacity to re-imagine our own futures and the time and competences to co-create indigenous material or virtual content, as equals with other academic disciplines, moving into the third decade of the 21st century.

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To Reflect, Imagine And Co-Create In Africa And Its Diaspora: Humanities Demands From The Fourth Industrial Revolution

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Discussant

Opening / 47

Plenary

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Session V / 49

Discussion

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Discussion based on the Speakers' inputs (Session V)

Session V / 50

Towards An Inclusive 4IR For South Africa Impact On Labour, Youth And Communities In SA

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The advent of the 4IR within elite WEF formations, is continuation of Castells' critical theorisation of 'informational capitalism and ' space of flows' as the highest forms of new imperialism (David Harvey, 2013). Even progressives within mainstream institutions, such as Professor Joseph Stiglitz (2009) have come to acknowledge the information power symmetries - and possibilities and applying 'Knowledge for Development ' discourse, albeit within reformist agenda of World Bank, suggesting that knowledge society discourse has varying perspectives, experiences and impacts. The paper seeks to bring out these robust discourses such as the capitalism and network society thesis (Castells, 1998), Surveillance capitalism (Zuboff, 2018), Future of Work (Brynjollefsen, 2013, ILO, 2018), Additive manufacturing and innovation (UNIDO, 2018) and global social justice campaigns regarding the social internet (CRIS, APC 2005).

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The Fractured Labour Process And Responses To It

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The rise of new forms of 'precarious' work in South Africa over the last few decades has necessitated a return to the study of the capitalist labour process. Labour broking, outsourcing, contract work and casual work are often described as 'atypical' forms of work but, as we will demonstrate, they have fast become the norm. In this paper we will detail how workplace restructuring has gone hand-in-hand with processes of labour casualiation and the implications for the decent work agenda. We demonstrate how trade unions have largely failed to keep pace with these developments and have neglected to organise precarious workers. Furthermore, we argue that, despite some recent positive reforms in the rights for precarious workers, the institutional framework that is intended to safeguard worker rights is in many cases denying workers their rights. Taken together this suggests the need for a radical rethink for the role of the state in promoting and safeguarding decent work for all.

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Graduate Employability, Human Development And The Fourth Industrial Revolution: Tracing The Career Paths Of Sociology Alumnus At The University Of Johannesburg

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Graduate unemployment is rapidly becoming a rising concern in South Africa. Graduates tend to experience obstacles during the employment phase largely due to the lack of required labour market skills. While the envisaged fourth industrial revolution (4IR) is perceived to promote unemployment for soft-skilled professions, it is widely applauded by highly skilled technological careers. Given the broad career and employment possibilities of Sociology, the aim of this study is to provide an advanced understanding into the experiences of former Sociology graduates with an advanced qualification in the labour market. This article trace the career paths of 130 Sociology alumnus who completed an honour's degree in Sociology between 2013 and 2017 at the University of Johannesburg. Data was collected through qualitative emailed questionnaires. Research participants were either unemployed graduates or recently employed graduates. The findings reveal important insights into (a) their level of employment, (b) the value of an honours degree in Sociology to find employment and (c) preparedness for technological aspects required in their current employment. The findings have important implications for educational institutions and companies to consider possible solutions to resolve the causes of graduate unemployment. The findings also contribute to a better understanding of the skills needed to better prepare current honours students in Sociology for the fourth industrial revolution and how this may advance youth development. It provides a rich platform for further studies and replication in other sectors, especially within the African region.