



FUTURES & BEYOND

WHERE CREATIVITY & AI MEET

Alex Halligey (Editor)



Futures and Beyond

Creativity and 4IR Conference 2022

Alex Halligey (Ed)



UJ Press

Futures and Beyond: Creativity and 4IR Conference 2022

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Introduction

Conference Overview and Publication of Proceedings

The Futures and Beyond: Creativity and 4IR virtual conference was hosted online by UJ Arts & Culture on 30 and 31 August 2022. The University of Johannesburg has positioned the Fourth Industrial Revolution (4IR) as its visionary focus in research and higher education, and UJ Arts & Culture, as a division of the Faculty of Art, Design and Architecture, has been facilitating an ongoing discussion on how thinking around the notion of the 4IR connects to the creative industries, specifically within the South African context and African continental context more broadly. The Futures and Beyond conference was an entirely new initiative coming out of this ongoing discussion. The thematic approach to the conference was divided into two streams, with one being ethics, intellectual property, and technology, and the other being creative industries, innovation, and development.

A call for abstracts was published on the UJ Arts & Culture website and distributed to the division's mailing list and networks in October 2021. Thirty abstracts were submitted for consideration to an online portal managed through UJ Arts & Culture's website, ensuring author anonymity for the abstract peer review process. Each abstract went through a double-blind peer review. The peer review committee was comprised of eight members from seven institutions, including the University of Johannesburg. All members are experts in their fields, covering the full range of disciplines the conference themes touched on and all with extensive experience and knowledge of African and South African contexts. Twelve abstracts were approved through the peer review process for presentation at the conference. One curated panel discussion concluded the conference.

Six full papers were submitted towards the conference proceedings. One was excluded before the peer review process because it had been submitted in an MA thesis format, required substantial editing to be of a chapter draft standard, and the author had not been able to present at the conference itself. The remaining five papers were put through a second double-blind peer review process, managed by the University of Johannesburg Press.

Speaker for Opening Address

Emmanuel Agbeko Gamor is a consummate professional with over a decade of experience in youth engagement, digital and managerial innovation, entrepreneurship, and leadership education. As a Global Manager on Accelerator Programs for Facebook in five regions, he explores the intersections of connectivity and community. He is a faculty member with the University of Stellenbosch - Executive Education on Digital Reputation Management and runs a podcast “Unpacking Africa” that interviews and explores multi-stakeholders in multiple industries across the continent. He is the convener of the Podcasters Unite Africa network and curator of the KukuZa Podcasters Festival. As a World Economic Forum member, ex-Gogler, and former YouTube country manager, he continues to explore global digital innovation and best practices. In Accra, he is the erstwhile Director for Digital and Design Innovation at Impact Hub Accra. He has also worked on the Ministry of Tourism Arts and Culture “Beyond The Return” global campaign with the Ghana Tourism Authority. He is a philanthropist, runs a social enterprise, Eliu Gift Hub via Urithi Labs, and volunteers with the Rotary Club of Johannesburg as a Paul Harris Fellow.

Foreword

The Futures and Beyond conference used the structure of two streams in its call for and review of papers. Stream one was ethics, intellectual property, and technology, and stream two was creative industries, innovation, and development. These combined streams offered a robust and considered dialogue about how the creative industries might connect to the 4IR, covering a range of disciplinary fields (industrial design, virtual reality, visual communication, visual art, theatre, computer programming, public health, and corporate customer management) and theoretical perspectives (feminist, speculative, and critical race theory). All the work had a strong grounding in African and, in many cases, more specifically South African experiences and innovations, meeting the conference's and the University of Johannesburg's Faculty of Art, Design and Architecture's desire to speak meaningfully into international 4IR discourse from an African continental perspective.

The five papers published in these proceedings reflect all the conference qualities I identify above. Although each paper is clearly identifiable as belonging to one or the other of the conference streams, every author offers insights and case studies applicable across both streams. The publication starts with an ethical problematisation of algorithmic processes in migration, using Achille Mbembe's notion of necropolitics as a theoretical lens and contemporary Swedish immigration practices and social responses to immigration as a case study. Essentially a paper concerned with ethics and technology and privacy of information and how Africa is affected by global Northern practices in this regard, the paper speaks also to the hopes and fears in technological innovation and development. The second paper describes the MakersLab project, a pedagogical initiative within Johannesburg-based private design college, Greenside Design Centre. The MakersLab facilitates a space for students to drive their own learning and innovation using design learning processes

and technologies. The author unpacks how the MakersLab functions as a model for dehierarchalised knowledge and design generation in support of the decolonial project in South Africa, offering a creative industries innovation in responding to ethical concerns. In the third paper, a curator and scholar considers virtual interfaces for viewing art during the COVID pandemic lockdown in South Africa, using a personally curated exhibition as a case study to argue for integrating the polarised perspectives of virtual reality innovation as either utopian or dystopian. The author takes as a conceptual interlocutor the work of Francois Knoetze and the Lo-Def Film Factory, which draws together 'real-world' fleshiness with the digital and virtual in video art pieces like *Core Dump* (2018/2019). Again, in this paper creative industry innovation is used to explore the ethical and philosophical implications of the 4IR, particularly within a South African and African context. The fourth paper focuses on illustration as feminist activism, considering the role of technology in fourth wave feminism and how contemporary South African feminist activist illustrators are using new media forms to further feminist agendas. The final paper looks to applied theatre's playback theatre form, using a Zoom room playback session with women from a Cape Town women's shelter during the COVID-19 pandemic to unpack the hopes and frustrations of using a digital interface for a conventionally 'in real life' (IRL), embodied practice. The paper looks at how a creative industry practice is enabled by technology, but considers the fine-grained ethical implications of the hybridity, specifically within a South African context.

The papers in this publication offer detailed arguments towards the complexity of the 4IR and how it intersects with the creative industries, using African-continental, case-specific explorations to offer new insights and necessary challenges to global discourse on the 4IR and its ongoing evolution.

Foreword

Thanks to all who were involved in crafting the conference and the publishing of its papers.

Alex Halligey

Conference Committee Members


Title	First name	Surname	Degree	Specialisation	Institution
Dr	Refiloe	Lepere	PhD	Participatory art, postcolonial and feminist theories in performance studies, and artistic activism	Tshwane University of Technology
Prof	Christopher	Odhiambo	PhD	Literature and applied drama/theatre	Moi University, Kenya
Dr	Cornelius	Ssemakalu	PhD	Bio-tissue regeneration, immunology, cancer drug development	Vaal University of Technology
Ms	Molemo	Moilola	MA	Creative practice and community organising	Andani.Africa
Prof.	Desiree	Smal	PhD	Fashion design and teaching and learning in design fields	University of Johannesburg
Dr	Anthony	Ambala	PhD	Participatory, interactive, and immersive media	University of Johannesburg
Mr	Hamish	Neill	MA	Applied theatre and creative research	University of Witwatersrand
Prof.	Jen	Snowball	PhD	Cultural economics and environmental economics	Rhodes University

Steering Committee Members

Title	First name	Surname	Designation	Institutional affiliation
Mr	Pieter	Jacobs	Conference Chair and Head of Division	UJ Arts & Culture Faculty of Art, Design and Architecture
Ms	Karabo	Mtshali	Operations Manager	UJ Arts & Culture Faculty of Art, Design and Architecture
Ms	Jeanine	Paulsen	Finance and Administrations Manager	UJ Arts & Culture Faculty of Art, Design and Architecture
Ms	Leonie	Ogle-Brooks	Conference Coordinator	UJ Arts & Culture Faculty of Art, Design and Architecture
Ms	Sneziwe	Dube	Marketing Coordinator	UJ Arts & Culture Faculty of Art, Design and Architecture
Mr	Thato	Maroga	Production Manager	UJ Arts & Culture Faculty of Art, Design and Architecture



Algorithmic Necropolitics

Heidi Sincuba 

Introduction

The High Commissioner for Human Rights notes that, concerning the human right to the highest standard of physical and mental health, systematic racism is not limited to the assertion of individual hatred¹, but manifests itself in governmental systems and public policy institutions which fortify barriers to equality (OHCHR 2021).

This text intends to highlight the impact of algorithmic processes on human rights, particularly in the space of migration and mobility. Using Achille Mbembe's notion of necropolitics, the text argues that the way algorithms are employed in migration practices infringes on the human right to freedom and dignity. Suhail Malik and Armen Ananasseri use terms like pre-emptive strike and pre-emptive personality to illustrate their theory that in the contemporary moment of complex societies, the future happens before the present. They introduce the speculative time complex as a response to the pre-emptive nature of algorithms, surveillance, and governance (2016:10-22). Indian anthropologist Payal Arora examines the politics of big data from the perspective of the third world. She makes a direct link between the use of biometric identification systems and the restriction of migrants in the global south. Her arguments about global tech narratives demonstrate how the so-called third world is expected to merely follow the West's lead in their implementation of digital technologies (2019:38-44).

1 Office of the United Nations High Commissioner for Human Rights (OHCHR 2021), "Seminal United Nations report offers an agenda to dismantle systemic racism", 29 June 2021.



The broad suggestion is that the way algorithms are designed is highly political. More specifically, border politics, economic rhetoric, data management, and surveillance are used to restrict the movement of African people, simultaneously affording Western nationals every freedom under a façade of benevolence. This reveals the political nature of the relationship between human populations and technological objects. This text examines algorithmic projects such as big data and biometric identity systems as part of a broader political history in the postcolonial era. In efforts to control non-Western mobile populations, biometric borders extend their influence on the identity and autonomy of vulnerable human beings.

Algorithms are Political

Algorithms are sets of instructions. Essentially, they are lists that rank information, and their complexity comes from peak finding. The purpose of the mathematical, computational processes of algorithms is to find efficient solutions for problems with large inputs. However, the common assertion that algorithms have no editorial viewpoint is not only false, but dangerous. Every list has an objective and thus a set of priorities. Even when it ranks people alphabetically, there is no surety that an algorithm will have an equal impact on people with varying backgrounds and identities. There is, strictly speaking, no such thing as a neutral algorithm. As their job is to make value judgements about the order and hierarchy of things, algorithms are biased by definition. Whatever their basis for deciding that some things are more valuable or more noteworthy than others, it is founded on the discretionary aspects of human politics. After all, it is human beings who instruct these algorithms.

According to the American author Eli Pariser who coined the term “filter bubbles”, algorithms present challenges to democracy. Filter bubbles are personal clusters of information generated by algorithms, based on predictions of what people are interested in (2018). In the era of algorithmically selected media, the aspect of decision-making is no longer in the

user's control. Reality is predetermined based on algorithmic processes. As the filter bubble landscape is seemingly automatic, users have no way of knowing how these decisions are made, nor do they have much hope of exploring the information that is out of view.

In this moment that Achille Mbembe describes as “accelerated times”, algorithms are more impactful than ever (2018)². The rate of change and the size of data sets is increasing. Computers are continuously improving their capacity to deal with large inputs, yet the larger the input, the more concerned we ought to be with how efficiently they deal with these information sets. Because of the vast impact of algorithmic decisions, we have the prerogative to be critical of their supposed unbiased nature. Mathematics may be their structure, but algorithms are a human system. Their success is predicated on the general public endorsing their use. The algorithm is the platform upon which human tendencies are expressed. Communal engagement enforces them, making algorithms more political than mathematical (Breitman 2017).

Necropolitics

I began writing this text while travelling through Sweden and becoming reacquainted with the reality of being treated like a lower-class citizen. Even as a somewhat privileged academic accustomed to travelling the world, my recent experience in Sweden was chilling and soul-destroying. This experience inspired me to reflect on what Johannesburg-based Cameroonian philosopher Achille Mbembe refers to as “deathworlds”. In Mbembe's conception, deathworlds are spaces where global superpowers and institutions justify the reduction of people to the status of bare life. Mbembe's reflections were based on Michel Foucault's introduction of the notion of biopower in his 1976 book, *The History of Sexuality*. In it, Foucault described biopower as a tool of power used by modern nation-states to control large populations.

2 See also: <https://www.uni-augsburg.de/de/forschung/einrichtungen/institute/jfz/>

This mechanism that can be deployed against people cannot be exerted by individuals. Rather, it requires a social system with a long and homogenous history (Agamben 1997:37–55, 75–100, 125–48, 213–44).

To illustrate his concept, Foucault describes a historical moment when royalty held control over the state. This instrument of power, which he called the sovereign, held the right of the sword and the ability to condemn people to death. They determined who lived and who died. This was the time of executions in the town square and sending armies to kill large groups of people. For centuries, this was the standard practice of governance. According to Foucault, biopower emerged around the 17th and 18th centuries, transforming the logic of control and power. Foucault identified this new form of social and political control as exerted on populations by modern forms of government. The power shift was redistributed between what he called sovereign power, disciplinary power, and biopower.

Instead of a right to execute, biopower exhibits the unique power of modern governments. The right of the sword was concealed and the new regime was not about the power to put people to death, but about how the system could control life. Biopower led to decreases in mortality rates, increases in life expectancy, and improvements in the general standard of life, allowing this new form of power to operate in a way that it appeared benevolent, assuming perfect control over populations. This form of power takes control of reproductive rights, determining laws and logics related to race and racism, dominating institutions such as schools and hospitals, and purporting to administer life through medicine, information, and bureaucracy. The appearance of benevolence is key to biopower though Foucault exposes this as a façade. He dismisses the assertion that these institutions are marvels of scientific rigour and development. In Foucault's view, biopower operates by splitting populations into those who must live and those who must die. It seems preoccupied with the distribution of the human species into groups, revealing

the inherent racism of biopower. Foucault proposes the term “racism” to refer to this technique of categorisation.

In his 2003 essay titled *Necropolitics*, Mbembe expands on Foucault’s ideas. Mbembe suggests that biopower is only part of the picture. His essay was an attempt to respond to and explore what Foucault’s biopolitics left out (2003:12). Even in a nation of democracy, under new forms of social existence, weapons and technologies are deployed to maximally destroy individuals and populations. Mbembe traces this violence back to the legacies of slavery and colonialism that bolstered Western societies. The African philosopher proposed a way to account for the many examples of where the right to kill is being exercised today. For this proposal, he introduces the term necropolitics or necropower. Necropower exerts itself differently than sovereign power as Foucault described it, in that it entails the subjugation of life to the power of death. Mbembe traces the exertion of this kind of power to the roots of modernity.

By beginning his essay with deliberations on the nature of sovereignty, Mbembe asserts that

the necropolitical is based on the sovereign’s right to kill. He cites “the right of the sword” as its origin. In modern times, the right to kill need not necessarily manifest itself in the form of a sword, gas chamber, or drone. Technological advancements have ushered in a new form of seemingly invisible power. Mbembe turns to Agamben’s concept of the state of exception, a temporary circumvention of human rights and a suspension of laws that allow the powers that be to enact stringent judgments and exert excessive control over people. According to Agamben, this exertion of control reduced bodies to what he called “bare life”. Populations who are reduced to bare life are robbed of dignity and purpose, and made expendable (1997:23–80).

In this sense, necropower doesn’t require physical death, but a state of living death. By stripping people of their dignity, and reducing them to flesh and bone, particularly black

and indigenous people are used as tools for the benefit of those in power. Modern incarnations of sovereignty create deathworlds, in which vast populations are subjected to conditions that reduce them to the status of the living dead. While the sovereign's power is in the right to kill, it can only control that which is living. Therefore, death had to be regarded as the ultimate punishment. Modern biopolitical governments had to subjugate populations to the fear of death, which Mbembe cites as "the power of death". (Mbembe 2013:7)

If death were not feared but embraced or endorsed as it had been in many precolonial cultures, the justifications for control would be ineffective. Contemporary forms of government require populations to despise death as it is beyond the reach of power. Even in war where government wields the right of the sword, death intentionally remains taboo. Warfare is waged in the guise of the preservation of life. Bombs, guns, and drones are deployed with a level of apathy, supposedly for the safety and freedom of citizens. For Mbembe, necropolitics exerts itself with statistical perfection. It deploys tactics and strategies that destroy certain populations with minimal resistance. Through mechanisation, the destruction of individuals and populations could be turned into a purely technical procedure. Supported by class-based racism, the implementation of power became remote, impersonal, and anonymous (2003:18).

Sweden and the Power of Benevolence

One would be forgiven for assuming that while these concepts are insightful, they have no place in the apparent utopia that is Sweden. Indeed, during my three-month stay, I observed that the Swedes themselves are convinced of their perceived benevolence. While they own up to being a cold people, they will not stand to be held accountable for any involvement in the violent and racist legacies of other Western nations, often asserting that they had no involvement in colonialism, slavery, or the World Wars.

Indeed, the dominant narrative is that the Nordic region in Europe, which consists of Denmark, Norway, Finland, Iceland, and Sweden, is progressive and ideal. Sweden is seen as a place where quality and freedom are valued. The welfare state has low unemployment and liberal asylum systems. Swedes consider themselves a country of technological pioneers. The Nordic nation boasts being the world's first cashless society with an economy driven by digital innovation and Stockholm being a European technological epicentre. Thousands of Swedes have already adapted their bodies through the insertion of microchips under their skin. The quick, simple procedures where electronic chips are implanted into people's hands are often done at microchipping parties held across the country. The chips use near-field technology much like contactless cards and can be read using a device such as a smartphone. These chips can store information such as contact details, business cards, and health data like blood groups. They can also be used as house keys, train tickets, or bank cards³. National rail companies have embraced microchips with thousands of customers using their chips instead of tickets. Companies have encouraged thousands of workers to use microchips as a means of gaining access to their workplaces. For Swedes, this is a matter of convenience and practicality.

Generally, Swedish people exhibit no concerns about blurring the line between human and machine. On the contrary, bio-hacking entrepreneurs such as Hannes Sjoblad are dedicated to improving human bodies through technology. For Sjoblad, microchips are just the tip of the iceberg. According to Swedes, those who have not yet embraced this new technology are simply behind the times but will one day be chipped just like them⁴. The main concern for critics has been the issue of data protection. As microchips become more common, the access, amount, and kind of information stored on them will become more complex, increasing security risks. This becomes an ethical issue, conjuring questions

3 See *Why human microchipping is so popular in Sweden*, 2019.

4 See *Why human microchipping is so popular in Sweden*, 2019.

of consent: questions about who has access to the data stored in microchips and how they could use it. Who's to say whether all the information on microchips may be captured or stored involuntarily? Or whether there will be efficient mechanisms in place to prevent state and corporate entities from having access to people's behaviour and whereabouts?

While it may be a leader in the implementation of such technologies, in this regard Sweden has been exposed for failing to ensure that they are respectful of human rights. Swedish intelligence and legislators were condemned by the European Court of Human Rights for their largely illegal surveillance laws. Five judges out of the twelve-member chamber criticised the lack of regulation and observed violations of the European Convention on Human Rights in Sweden's surveillance practices. They recommended that mechanisms be implemented to control abuse and that the technology of regulators be adapted to efficiently respond to new technologies⁵. This judgment is at odds with Sweden's self-proclaimed status as a utopia of sorts. Its blatant disregard for the ethical dangers of its role as a technological pioneer points to an essential aspect of how Sweden uses technology. There is a clear difference between the public perception of what the technologies are for – convenience and practicality; and what they end up being used for – surveillance and the contravention of human rights.

This is especially concerning from the perspective of migrants. There has been a high influx of immigrants from war-torn countries like the former Yugoslavia, Somalia, Syria, Iraq, and Afghanistan into Nordic countries over the past two decades. Sweden, a country of only 10 million people, has seen the highest number of refugees per capita in Europe (Ahlander 2015). A report by Nodregio, a research entity of Eurostat, the statistical office of the European Union, states that from 1990 to 2016, the population of Nordic countries grew by 15%. Immigration accounts for roughly two-thirds of this increase

5 See *Surveillance laws_ ECHR condemns Sweden and Great Britain*, 2021.

(Heleniak 2016). As a result, an increasing number of Swedes have become outspoken about their rejection of the country's supposed generosity, prompting many migrants to be asked to leave. In 2016, Sweden joined other European countries in reaching agreements for voluntary and forced repatriations of thousands of asylum seekers (Crouch 2016). In announcing that up to 80 000 immigrants would be deported back to dangerous, war-torn countries, the Swedish government made a declaration of its right to kill.

More recently, in April 2022, Swedish cities such as Stockholm, Malmö, Örebro, Norrköping, and Linköping witnessed violent uprisings after anti-Muslim demonstrations were planned by far-right politician Rasmus Paludan who holds Swedish citizenship (Ringstrom 2022). According to reports, Paludan and his far-right political group Stram Kurs posted a video in which they burned the Quran and threatened to repeat the action at the scheduled anti-Muslim parade. Counter-protestors disrupted the anti-Muslim rallies, but the Swedish police came to Paludan's defence in the name of freedom of speech. This led to violent clashes between the police and the counter-protestors. Police officers were stoned, busses and other vehicles were set alight, and dozens were arrested (Westfall 2022). This vision of Sweden may be disturbing to some, but it is nothing new. Sweden has witnessed a general rise in violent unrest and particularly violence related to immigration policies several times in recent years. In 2013, Sweden's capital Stockholm witnessed five-day riots during which schools, a library, a bank, and a police station were attacked (Evans 2013). Paludan's abominable actions may have been provocative, but they are a mere symptom of Sweden's larger societal imbalances. Instead of being considered anomalies, these events should inspire national debate about immigration and social inequality in Sweden.

Borders as Deathspaces

Deathspaces refer to physical locations and zones where the sovereign power exercises control over life and death, often

manifesting through the subjugation and exploitation of certain groups of people. Mbembe's analysis of deathspaces is particularly relevant in understanding the dynamics of contemporary global politics, where borders, detention centres, and zones of conflict become spaces of death where certain lives are rendered expendable (Mbembe 2003).

Governments and border authorities increasingly rely on advanced surveillance systems, biometric identification methods, and big data analytics to monitor and control movement across borders (Kumar, 2019). Such technologies have enabled states to collect vast amounts of information about migrants, which influence decision-making processes regarding entry, residency, and deportation. Moreover, the rise of digital technologies has also resulted in the creation of virtual borders. While physical borders remain significant, the digital realm plays an equally crucial role in regulating migration flows. Online platforms, social media, and digital communication have become spaces where migration decisions are made, information is exchanged, and networks are formed (Madianou & Miller, 2012). Additionally, the use of digital technologies has given rise to new forms of border control and securitisation. For instance, the development of e-borders and virtual checkpoints has allowed states to extend their surveillance and enforcement capabilities beyond traditional border points (Amoore, 2006).

As a self-proclaimed technological pioneer, with ambitions to rid itself of its unwanted populations, Sweden is the ideal example of how necropower is being exerted through technology in the contemporary context. Today, technology has taken over the space of borders. Migrants find themselves perpetually at the mercy of digital technologies which influence migration policies and the very nature of borders. The ecosystem in which these technologies are deployed is imbued with increasingly anti-migrant policies. The criminalisation of migration is rooted in systemic racism which makes border regimes inherently violent. This violence is evidenced by the countless gravesites scattered along border sites. While many are more prepared to accept the notion of

the violence of border sites in places such as Israel, few are willing to accept that even border sites in Europe are violent (Molnar 2022).

Border sites are largely unregulated. These deathspaces are often zones for technological experimentation, which proliferates without governance or oversight. Invasive surveillance technologies such as cameras, thermal detection, and drones are openly employed throughout border sites under the façade of smart border technology. Digital technologies are a core component of migration management, often used to track irregular migrants. Biometric identification and algorithmic systems used in various areas of the migration process are justified by the argument of efficiency and convenience. Once again, the downsides are rooted in the absence of regulation and governance. As these technologies are applied to existing migration laws, simply in terms of technical policy, there are countless, heedless infringements on the privacy and rights of migrants. This lack of technological regulation makes this a geopolitical issue.

The European Union plans on introducing a new EU ID wallet-based system in 2023. The infrastructure behind this new system is based on data minimisation principles, which would improve cross-border mobility for European citizens. Once again, the question is how European countries' employment of these digital ID systems will affect migrants, third-country nationals, and asylum seekers. Based on the current state of things, at best these digital ID systems will increase surveillance. Governments who use biometric identification, drones, and mobile device hacking, can and do use these to harass immigrants, activists, and journalists working on this subject matter (Bither 2022).

Through the unregulated technological experimentation of border spaces, populations are subjugated to the state of bare life. These systems do not acknowledge their targets as real people, but simply as inputs and outputs. Computational tools founded on European political ideology and structure produce abstractions of the lives of migrants, refugees,

and third-country nationals on which they exercise their sovereign power.

Reclaiming Tech Narratives

Achille Mbembe focussed his 2018 professorship at The University of Augsburg on these ideas. His presentation “Borders in the Age of Networks” examined issues of mobility, access, and the basis on which people are excluded from certain spaces. Mbembe dubbed this a “time of planetary entanglement, and technological escalation”, noting how various elements of social life had become increasingly dominated by digital technologies whose ultimate aim seems to be enclosure.⁶

Mbembe referred here to Heidegger’s concepts of the “double essence” of technology. On the one hand, Heidegger conceived of technology as instrumental. In this anthropological sense, technology is a means to an end, which distinguished humans from other species. On the other hand, Heidegger saw technology as “a way of thinking”, or a mode through which “un-concealment takes place”. According to Mbembe, in invoking terms such as “the essence of technology”, Heidegger

allows us to question how we inhabit it. What Mbembe finds particularly interesting is Heidegger’s assimilation of freedom with what he calls “the open”, which is a space where we are neither restricted by nor pitted against technology.⁷

In terms of the dynamic between humans and technical artifacts, Heidegger’s approach to technology is embedded in a long tradition in the West from which he seeks no departure. From the outset, Western metaphysics makes the assumption that there is a division between the technological world of

6 Mbembe presented this seminar hosted by the Institute for Critical Social Inquiry & The New School for Social Research at the Tishman Auditorium New York, NY.

7 All quotes in this paragraph are drawn from the seminar referenced in the footnote above.

humans and the natural world, ignoring the fact that the use of tools among animals is clear and common. Therefore, Western conceptions of technology are predicated on the myth that the technosphere is exclusive to a particular kind of human with sizeable cognitive capabilities. These misconceptions suggest that the development of culture and language separates this kind of human from a purely instinctive connection to the realm of nature. Mbembe cites Lévy-Bruhl's notion of the primitive mind as this tradition's approach to original humans who supposedly lived under the command of animism⁸.

Western thought implies that technological artifacts and devices serve either to replace human function or to fulfil human need, but it clearly harbours complex anxieties around the relationship between things and people. While it strives to assert people's command of objects, it stresses that humans are not objects. This emphasis points to an underlying concern that someday technological objects may come to usurp their inventors, thus inverting the dynamic and rewriting the tech narrative. In spite of this anxiety, nations across the globe operate under the Western-sanctioned imperative that progress should be the ultimate goal. The necessitation of constant progress promotes a tunnel vision focus on the positive impact of technological advances. These contradictory concepts can be traced back to the Enlightenment. This was an era of scientific discovery and the democratisation of knowledge. From then on, society experienced technological progress at ever increasing speeds (Hoffmann 1966).

This culture of perpetual progress was also rooted in colonial exploits of the time and resulted in new economic realities and new forms of government which subjugated black and indigenous people. The core issue of building these technologies around the ideology of constant progress is that it is driven by the Western economic system. Because of its

8 Lévy-Bruhl's primary field of interest was primitive mentality. According to him, instead of distinguishing between the supernatural and reality, the primitive mind uses "mystical participation" to influence the world (Lévy-Bruhl 1924).

roots in slavery and colonialism, it is difficult to define ethical forms of progress in this context (Piketty 2022).

Even when contemporary internet users point out its problematic aspects, they often use indigenous people as their anti-tech justification. This is problematic because it reveals, once again, the belief that there is an inherent divide between blackness and technology. Though the perpetrators of this argument declare themselves as defenders of the purity of indigenous cultures, the result is a fetishist alienation of these cultures from tech narratives (Rice 2016). In this postcolonial moment, there can be little argument against the concept that all people have the right to access basic services like running water, medical care, and freedom of movement. These rights must, however, include the right to efficient access to modern technologies.

Conclusion

While this text has taken a critical view of the contemporary uses of algorithmic processes, it is by no means an assertion that technology is inherently wicked. Technological advances have enabled people to live longer, healthier lives. They have connected communities, internationalised social movements, and facilitated more ethical labour practices. Instead, this text calls for more considered approaches to the implementation of these technologies, bearing in mind their historical and political context.

Mobile bodies are subjected to the constant threat of death through surveillance, blacklisting, or exclusion for the purpose of restricting the majority of non-Western populations to the bounds and rules determined by Western society. However, the persistent rates of poverty, brutality, incarceration, war, and death demonstrate that obedience and conformity do not equate to inclusion within the Western system. Instead, subservience leads to further exertions of necropower. Even when they are employed by entities who mean well, the unintended consequences of digital technologies can be dire. Among many things, the dangers of

biometric and personal data collection include the threat of data breaches. For instance, in January 2022, the Red Cross was hacked, resulting in the theft of the private information of roughly 515 000 vulnerable beneficiaries⁹.

Because they are designed by state and corporate entities, predictive algorithms approach bodies with a particular vision of what the future ought to be. These algorithmically generated futures are devoid of the political and ethical complexities that might and do exist in reality. The linear data collected and surveyed by algorithms on which decisions about the fates of populations are based is not representative of the wholeness of being.

The power to dictate life has been outsourced to algorithms and other forms of artificial intelligence. Sovereignty has increasingly been privatised and made available to those who can afford it. Territorial borders are encompassed in modern techniques for the regulation of belonging, denial, or access to space. Therefore, the defence of human rights has come to be rooted in the space of digital technologies.

The newness of emerging technologies does not negate past narratives of Latin American, Asian, or African societies needing to “catch up” to the developed West. Instead, approaching algorithms as politicised infrastructures invites us to explore their built and constructed nature, encouraging subjugated peoples to develop new trajectories for digital media aimed at benefitting non-Western societies (Sandvig 2013:13-17).

In the framework of Western logic, the movement of African subjects is restricted and the very fabric of African subjecthood is denied. The Western conception of technological narratives restricts the freedom and dignity of African subjects within the technological realm. Global digital cultures are structured by uneven power relations and big data has a substantial impact on citizenship in the Global South.

9 See Cyber-attack on ICRC: What we know, 2022.

Therefore, existing algorithmic frameworks cannot be applied ethically in the context of non-Western communities.

As philosophers such as Achille Mbembe have taught us, though these systems appear immovable, discourses around data technology are not merely about technological objects, but about power. Mbembe implores us to consider which entities can decide what is innovated on, why, and by whom. As power consistently makes it clear that it will not cede itself, it is up to those who are subjugated to make new inroads. As the digital divide closes and more people begin to learn coding through software programs such as Python, tweaking algorithmic processes has become more plausible.

A key aspect in which technology is superior to biology is through the process of ageing. Though technology tends to accumulate error over time, where biology eliminates error through death and extinction, software offers more opportunity for improvement¹⁰. If certain software has a bug or a glitch, it is not discarded, but fixed. Classic data structures and algorithmic systems were invented decades ago, and currently require improvement based on ethical inclusion.

In these accelerated times, it is the imperative of non-Western coders to design for the messy, contradictory, and complex conditions the future will surely present. As opposed to the mirage of perfect technology, which is designed to be consumed by flawless consumers presented by Western tech narratives, non-Western programmers have the advantage of designing from the margins. From this vantage point, programmers can grapple with problematic technical policies, likely futures in which technology remains inaccessible, faulty, or destructive. This methodology offers opportunities for inclusion and debate, not only about what the future could be but about what it should be.

Engineers, scientists, artists, and policymakers should be tirelessly engaged in the ethics around the creation of the

10 Aging of Biology and Technology from Complex Time: A SFI/JSMF Research Theme; See also: <https://santafe.edu>.

future. They can seize the opportunity to use data to create meaning rather than profit. African coders, in particular, will be supremely cognisant of the immense impact they will make on people's lives when developing and designing these tools. When coding for Africa, new objectives and directions that may not have been otherwise considered will arise. Coders on the margins will be better equipped to consider the human element. Through an awareness of their political nature, they will resist seeing algorithms purely as technological objects, and instead, approach them as enablers of social structure. Only then can algorithmic potential be harnessed to its fullest degree.

In conclusion, this paper has asserted that algorithms are a human rights issue. The way data is harnessed is an essential aspect of treating people with respect and dignity, particularly in the context of continued systemic violence. Big data should be used in a humanist manner, otherwise it results in the production of violence, harm, and distress. It rests on subjugated populations to develop technologies that benefit people equally and ethically; to deliver safe programming on their own behalf.

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Modes and Methods of Making

Pushing Design Creativity by Using a MakersLab as a Form of an Incubator to Foster Future 4IR Developments

Steffen Fischer 

Introduction

The MakersLab (standing for maker's laboratory) bridges the various socio-economic and gender development gaps by playing with experimental methods grounded in the Afrikan¹ continent. This fosters better access to all students, decolonising the design world through critical thinking and making in using meaningful collaborative engagement. The MakersLab is situated in the Greenside Design Center (GDC), a private higher education institution which was established initially as an Interior Design College in 1987. The GDC has since grown to include graphic design and multimedia degree courses and is located in Greenside, a suburb in Johannesburg, South Africa, which has grown with businesses and restaurants over the years. The Makerslab was designed in 2021 in order to bridge the 4IR knowledge gap within the school. The school's approach bridges gaps in a multi-disciplinary learning pedagogy concerned with human-centred design. For the past

1 I make use of the letter 'K' within Afrika as part of the ongoing academic discourse on the subject and misspelling of the word from colonial times that used the Germanic 'C' instead of the vernacular 'K'. Matebeni and Pereira (2014:7) emphasise, "the need to *reclaim* our existence and being in this continent."

30 years, the GDC has prided itself on being at the forefront of design creativity, pushing theoretical, technical, and creative boundaries. One of the core values in the pedagogical approach is teaching students how to empathise and understand user needs. This approach embraces a human-centred methodology which means “believing that all problems, even the seemingly intractable ones like poverty, gender [in]equality, and clean water, are solvable” (IDEO 2015:9). This research attempts to contribute to the body of shared knowledge and practices in the fields of Design Thinking, Interior Design and the emerging Fourth Industrial Revolution (4IR) in higher education. This paper aims to discuss the MakersLab as a metaphorical space for incubation whilst fostering change within curricula across the GDC. Here, academic staff develop the intersections between design thinking and making in a dynamic non-linear approach in order to produce new modes of critical thinking and awareness that respond to cultural and social identities in post-Apartheid South Africa. As Jordan and Lande mention, “The act of making is to make real ideas, but often with the aid of rapid prototyping tools or other technology. It matters less what the creation actually is but more so the act of creating and building an artifact” (2016:1439). The act of making and doing is beneficial to engage directly with public and private partnerships to promote collaborative and inter-school learning, allowing learning to occur outside the borders of the school.

The objectives for the MakersLab are to re-centre and foster change within the existing curriculum whilst disrupting traditional learning, to further develop design thinking in parallel to 4IR processes and to interrogate what it means to be a visionary site for learning and innovation. Here these processes include but are not limited to digital fabrication, digital literacy, and artificial intelligence (AI). Schwab mentions that 4IR “is not only about smart and connected machines and systems. Its scope is much wider. It is the fusion of these technologies and their interaction across the physical, digital, and biological domains that make the Fourth Industrial Revolution fundamentally different from

previous revolutions” (2016:19). The importance of making the necessary shifts and changes comes with revising the syllabus in relation to the school’s curriculum to produce more research from within the MakersLab. This is to cultivate new ways of thinking (paradigm shifts), skills, and developing a material culture to create a holistic design production with the aid of design thinking from within the school and across courses. It goes without saying that developing the necessary skills is of importance for the trajectory of the school. Marwala (2019) further points out that in order for 4IR to be successful in its application and functioning, it “requires an understanding of interdisciplinarity, an ability to work across silos through ecosystemic thinking, and an ability to embrace risk.” The school is no stranger to risk-taking and has taken this by funding its own MakersLab. Here this space facilitates placing innovation and making at the forefront as a prime objective, together with determining where gaps in institutional thinking and research are (Xing & Marwala 2018:14) dialectical and exciting opportunity which can potentially transform society for the better. The fourth industrial revolution is powered by artificial intelligence and it will transform the workplace from tasks based characteristics to the human centred characteristics. Because of the convergence of man and machine, it will reduce the subject distance between humanities and social science as well as science and technology. This will necessarily require much more interdisciplinary teaching, research and innovation. This paper explores the impact of HE 4.0 on the mission of a university which is teaching, research and includes innovation.

Methodology

This paper uses a qualitative research approach, where a “form of inquiry supports a way of looking at research that honours an inductive style, a focus on individual meaning, and the importance of reporting the complexity of a situation” (Creswell & Creswell 2018:41). This research employs a semi-structured questionnaire (see Appendix A) which collects data using an online capturing form and was sent out to nine staff

and 29 second- and third-year interior design (ID) students. Here the responses were captured and the data analysed in order for it to be coded and themed. “The researcher keep[s] a focus on learning the meaning that the participants hold about the problem or issue, not the meaning that the researchers bring to the research or that writers express in the literature” (Creswell & Creswell 2018:258). To analyse the data, it is collected using a combination of narrative and phenomenological design approaches. Here narrative research studies the lives of the participants and intersects this data with a phenomenological research inquiry which captures the essence of their lived experiences (Creswell: 50). This questionnaire sought to understand current demographics amongst staff and students and to understand how the MakersLab is cultivating engagement and usage within the space. This data is important to ensure that the school’s visionary focus democratizes learning and interrogates the underrepresentation of existing gender and social gaps in the country. The school, in this regard, is a private higher education environment where the author teaches across multiple years and courses.

In keeping with Creswell and Creswell’s transformative paradigm, the respondents to my survey included students and staff who were gender, racial and ethnic minorities; indigenous and postcolonial peoples; and members of the lesbian, gay, bisexual, transsexual, and queer communities (2018:46-47). The GDC is an educational institution that accommodates a diverse group of social identities that align with this transformative paradigm methodology. Being a genderqueer person, an academic, and a designer focused on spatial thinking practices has contributed to my capacity for engaging in a transformative paradigm methodology. I can understand and participate in the lived experience of individuals who come from marginalized and minority backgrounds with identities at the intersection of race, gender, and social backgrounds. I am attuned as to how to navigate spatial boundaries with a sensitivity to identity. It is through my personal, embodied, non-binary,

ontological, and epistemological approach that “I”, the researcher, engage and participate with a level of self-reflexive observation. This self-reflexivity is essential to encourage advocacy in the MakersLab environment, which is an incubator for change and promotes participation.

Transformations and Revolutions

Design thinking is used as a pedagogical methodology within the school. It uses an iterative and non-linear process for problem-solving, meaning that “there is no single, right, absolute answer; there are multiple solutions, some perhaps more optimal than others” (Pressman 2019:7). This process has been used by many creatives in literature, science, and art. Within the school, design thinking has been modelled within four key stages, which seek to investigate, interpret, ideate, and iterate. The design thinking process “begins with an immersion in the unique circumstances of the problem” (Pressman 2019:13), where students empathise with the problem at hand. The design thinking process, as seen in Figure 2.1, is non-linear and allows ideas to circumnavigate through the various stages, to advance thinking, problem-solving and perhaps returning to an initial concept before advancing with gathered insights and information to advance the design. It is through this process that innovation is conceptualised.

The school’s own transformation and revolution have created other creative spaces and introduced new programmes and courses which promote critical thinking and engagement across all courses. The introduction of game design and virtual reality pushes these design boundaries as they respond to the modes of digital fabrication and the built environment. Academic and author Brené Brown mentions, “unlike evolutionary change, which is incremental, revolutionary change fundamentally transforms our thoughts and beliefs” (2015:41). Whilst the alignment of the courses with the 4IR movement is relatively new to the school, it is pushing these boundaries in this research in order to connect and collaborate in creative industries. The term revolution is often associated with politics, however, within the purpose of this research,

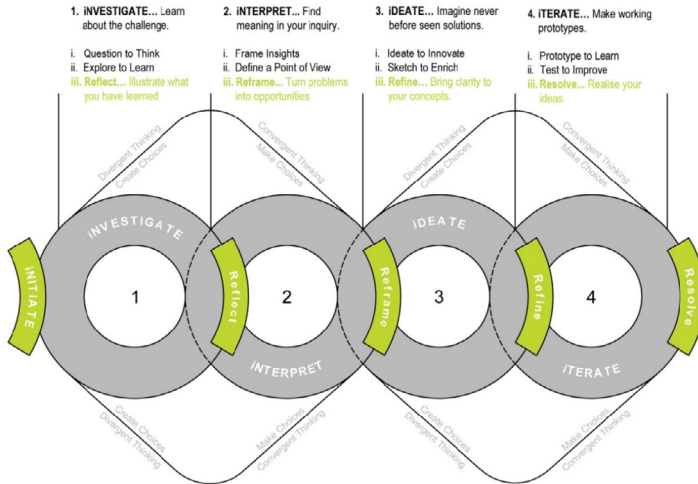


Figure 2.1: Design thinking process (Templer n.d.).

a revolution is more reflective, such as the celestial term suggests, “the act of moving in a circular course” (Harper n.d.). The GDC’s revolution aligns itself particularly to the same design thinking process shown in Figure 2.1 and that of iteration. It is a process of moving, thinking, making, and reflecting on the problem before advancing the conceptual idea. A revolution in the school requires staff to be reflective and to understand what challenges exist and how the necessary changes can be made to align itself to that of the act of making, something that is productive and results in “innovation and competition” (Xing & Marwala 2018:12) dialectical and exciting opportunity which can potentially transform society for the better. The fourth industrial revolution is powered by artificial intelligence and it will transform the workplace from tasks based characteristics to the human centred characteristics. Because of the convergence of man and machine, it will reduce the subject distance between humanities and social science as well as science and technology. This will necessarily require much more interdisciplinary teaching, research and innovation. This paper explores the impact of HE 4.0

on the mission of a university which is teaching, research and includes innovation which echoes that of the 4IR. The MakersLab fosters this innovation using the metaphor of an incubator space that promotes much-needed design visibility and creativity.

The MakersLab

The MakersLab is a compact, 61m² space that aims to act as an incubator to foster an interdisciplinary design environment. Here innovation, creativity, and exploration are beginning to be stimulated to promote learning and collaboration by the act of making, using design thinking as a driver. The act of making powerfully intersects with design thinking, “making encompasses tinkering with technology” (Jordan & Lande 2016:1438), where design emerges “wholly out of [students’] imaginations” (Jordan & Lande 2016:1439). The MakersLab revolution in the country has been steadily growing since the inception of House 4 Hack in 2011. This drive has fostered other maker spaces to be conceptualised together with educational institutions across South Africa and funding from internal resources or from government (Armstrong & De Beer 2021; Armstrong et al. 2018). These maker spaces grew in popularity up until 2016 and plateaued until 2019, with the advancement in the 4IR discourses. Here the MakersLab at the GDC is aligning itself to the maker space movement however, setting the trend for this type of space in private institutions.

It must be acknowledged that there continues to be work ahead for the MakersLab in order to fully arrive and gain knowledge for the successful operation of this space and how it collaborates and engages as an incubation site for learning and innovation. The MakersLab has the potential to bridge gaps and logical overlaps with other resources, such as working together with the library and printing facilities. This scalar approach, linking with existing resources internally whilst also looking outward to facilitate community collaboration, will be beneficial and perhaps accelerate the learning production (Armstrong & De Beer 2021). Using the metaphor of an incubator, similar to that of business incubators, this

must be seen as a tool to aid and develop critical and creative thinking as a resource for developing problem-solving in areas of design education. This process therefore fosters growth and opportunities for interdisciplinary exchanges to disrupt current practices. This process promotes the democratisation of learning which is critical in creating change and rethinking how knowledge is traditionally taught.

Through the aid of rapid prototyping models in projects, the iterative process of design thinking allows for artefacts to be created and seen as part of the design process. A second-year interior design (ID2) student mentions the successes of the MakersLab that additional “learning [occurs] from what you design. The MakersLab shows exactly what you designed and not just the idea of something ... this helps to fix future mistakes and teaches us what our limits are.” This process is valuable for students to acknowledge the shortcomings and failures in their designs. This is important as this is where the real learning happens, which is the stepping stone for innovation. The MakersLab has two 3D printers, a laser cutting machine, an electrical drill, a router, and band saws. Here students are exposed to various machines and technologies ranging from: 3D software, physical making, Virtual Reality and photography. This exposure to multiple machines facilitates and democratises learning. Understanding that digital fabrication technologies “generally fit into four main categories: cutting, subtraction, addition, and formation” (Dunn 2012:88) allows students to think spatially and interpret their designs in a thoughtful and provocative manner. These technologies are to upskill students and provide them with the digital literacy required to operate and produce designs and “therefore provide dynamic, critical and analytical modes of inquiry” (Dunn 2012:120). As Iwamoto mentions, “digital fabrication, in particular, has spurred a design revolution” (2009:4) which the lab already sees with the production of various 3D printed designs by ID2 students, as seen below in Figure 2.2.

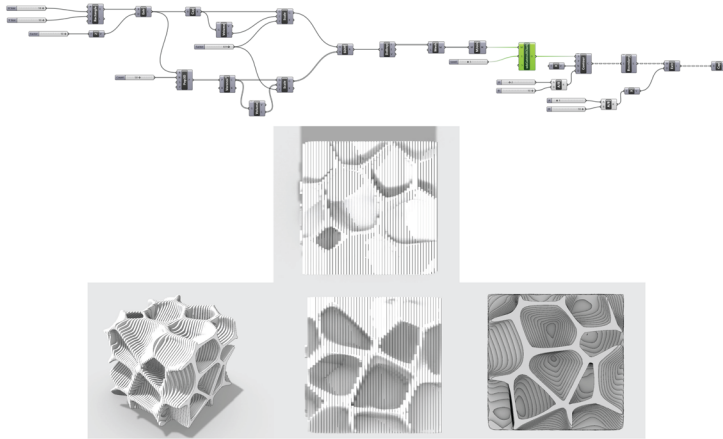


Figure 2.2: 3D-modelled design using Rhino and Grasshopper software programmes by ID2 participant.

Dunn mentions that the “translation of computer-generated data to physical artefact is not a one-way street; processes may be reversed with equipment such as a three-dimensional scanner, or digitiser, which is used to trace contours of physical objects directly into the computer” (2012:6). This speaks clearly to the iterative processes of design thinking and the methodological importance in having digital literacy to facilitate this. It is valuable to note that the ID2 student’s work in Fig 2 taught himself the software to create his design. This learning occurred outside the boundaries of the classroom, however this process facilitated additional learning to other students within the class, incubating and accelerating peer-to-peer teaching and learning. These methods are critical to allow for a holistic approach to digital fabrication, which grows from within the incubator or MakersLab.

The importance of the MakersLab is to ensure that a positive and nurturing learning environment is established, to foster a bottom-up approach to learning about technology, and pushing the boundaries of 4IR is seen as learning together within the school. This is seen with the 2ID student mentioned above. Students are exposed to the complete cycle of design

thinking and push the boundaries with their work with staff. The importance of reflective and iterative or revolutionary processes, as I have mentioned previously, allows for better engagement between staff and students, where “the aim is to involve students in the production of knowledge and research, and discourage passive accumulation of knowledge” (Balkanska 2021:401). This learning format echoes the notion of the MakersLab acting as an incubator, where learning and the production of ideas are developed in parallel or hand-in-hand between staff and students and are “seen as beneficial” (Balkanska 2021:402). This is important because digital fabrication technology and software are as new to staff as to students. This acknowledgement of learning also feeds more broadly into the design thinking ethos of the school, where digital literacy orbits together between student and staff, maximising skills transfer and producing critical thinkers. Here the MakersLab incubator ideology asserts and connects machines, makers and the production of inventors in its process. Students are actively involved within the function and operation of machines in the MakersLab, which bridges and disrupts traditional instructive methods of learning, where students are seen as “active participants” (Marie 2018:30).

The research acknowledges “the underrepresentation of women in design” (Mosley & Bediako 2021:117) and the gender gap within the country as well as on the Afrikan continent. It is essential to note the varying identities which make use of the lab, as seen in Figures 2.3 & 2.4. The MakersLab must be seen as a safe and accommodating space for all to use, irrespective of one’s background. This data is valuable because there is little or no information which shows the accommodation of different groups or communities, such as the LGBTQIA+ community. To acknowledge the minority communities, the school must ensure they are not left behind with the advancement of the 4IR, which must be equitable for all in contributing to reducing social and cultural inequalities within a post-Apartheid South Africa. The space must be democratic and allow for healthy knowledge production and exchanges, echoing Secretary-General of the United Nations, António

Guterres's statement, "we must deliver on our commitments to support the world's vulnerable people, communities, and nations" (Jensen 2022:2).

The data in Figures 2.3 & 2.4 is particularly valuable and positions the GDC at the forefront of redressing gender inequality and prioritising the development of women in design, with female students outnumbering their male counterparts on the ID courses. Access to the MakersLab is granted to all within the school, however, appointments must be made before accessing the space. The 3D printers and the filament used to print designs are free of charge for their prototypes relating to project briefs. The laser cutting machine is also free of charge to laser cut on, where materials (either cardboard or timbers) are nominally charged for at cost price. This access ensures that students from all backgrounds can make use of the MakersLab without any economic burdens and promotes the use of the machines. Some participants were apprehensive at first because of their unfamiliarity with the digital fabrication process: "I was nervous to use any of the machines because I thought something might break or something bad would happen to [me]" (ID2 participant). However, the introduction of mini-briefs into the syllabus and the implementation of training has changed and facilitated more diverse engagement with the MakersLab (see Figures 2.5 & 2.6). As Andani mentions, "by its very nature, 4IR involves the convergence and intersection of technologies, and it thus requires the ability to bring together capacities, skills, and fields that are not historically connected, and the ability to facilitate failure and innovation" (UJAC-Andani 2021:20).

The school's 10Percent initiative offers staff and students the opportunity to explore the potential of sustainable "designerly" engagements with community needs in a domain that rarely benefits from the work of professional designers. The 10Percent initiative sees ten per cent of the GDC's annual notional teaching and learning time devoted to community-based design intervention projects. This translates into the college "donating" four weeks of formal curricula to community development projects. During this time, class

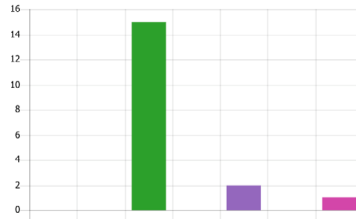
2. What is your gender?

● Woman	15
● Man	3
● Non-binary	0
● Prefer not to say	0
● Other	0



3. What is your sexual orientation?

● Lesbian	0
● Homosexual	0
● Heterosexual	15
● Trans	0
● Bi-sexual	2
● Queer	0
● Other	1



4. Race

● Black	9
● Coloured	0
● Asian	2
● White	6
● Other	1



structures are disbanded and replaced by inter-level and interdisciplinary design teams representing a mix of expertise, experience, cultural and linguistic backgrounds. The 10Percent initiative speaks to the imperative of South African higher education institutions to include community engagement as a core responsibility (10 Percent n.d.). The global COVID-19 pandemic has reinforced the value of the 10Percent projects over the past two years that have aligned and focussed their attention on the United Nations Sustainable Development Goals (SDGs). In consideration of SDG number 4: Quality Education, it was reported that COVID-19 had deepened a global learning crisis (Jensen, 2022:34). This was seen as a

Modes and Methods of Making

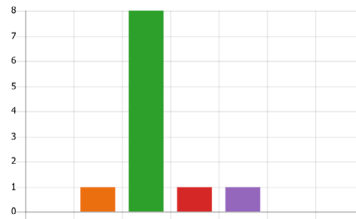
2. What is your gender?

Woman	8
Man	3
Non-binary	0
Prefer not to say	0
Other	0



3. What is your sexual orientation?

Lesbian	0
Homosexual	1
Heterosexual	8
Trans	1
Bi-sexual	1
Queer	0
Other	0



4. Race

Black	2
Coloured	1
Asian	0
White	8
Other	0

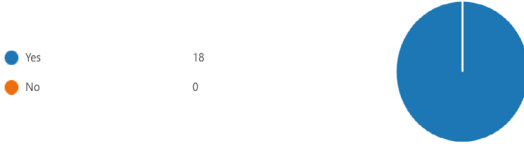


Figures 2.3 & 2.4: Data from the ID2 (left) and ID3 (right) participants.

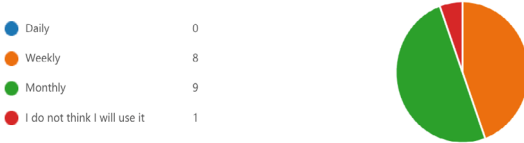
critical and important departure point for problem-solving issues within a post-Apartheid South Africa, whilst also re-centring the Afrikan continent as the point of importance. Projects responded to a vast array of problems, tackling current issues such as vaccines, gender and LGBTQIA+ rights, sustainable water solutions, online education solutions, and ethics of care. These projects have seen various intersecting design approaches tackling heartfelt concerns with communities whilst navigating online learning issues. Projects were encouraged to make use of the MakersLab and digital fabrication processes.

Futures and Beyond: Creativity and 4IR Conference 2022

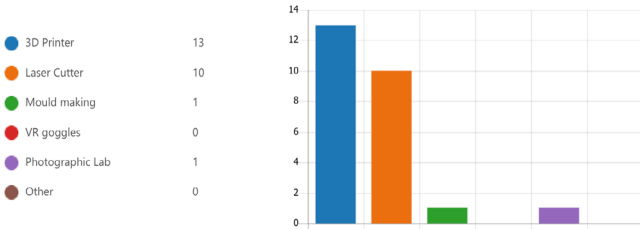
6. Have you used the makers lab?



7. How often do you use the MakersLab?



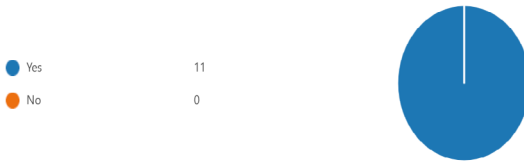
8. What equipment/materials have you used in the MakersLab / GDC? (more than one option may be selected).



Whilst the 10Percent project occurs in one term and engages all departments within the school, I argue that this methodology could be used in a broader setting throughout the year where interdisciplinary learning is fostered and encouraged amongst staff and students. One project in particular, “Missing History: Typography Drives Culture”, realised by design lecturers Juliet Kavishe, Caitlin Paige, and Carla Saunders, serves as a good example, under the premise of SDG number 4: Quality Education. A project such as this

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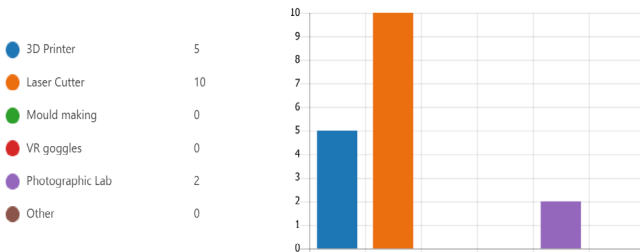
6. Have you used the makers lab?



7. How often do you use the MakersLab?

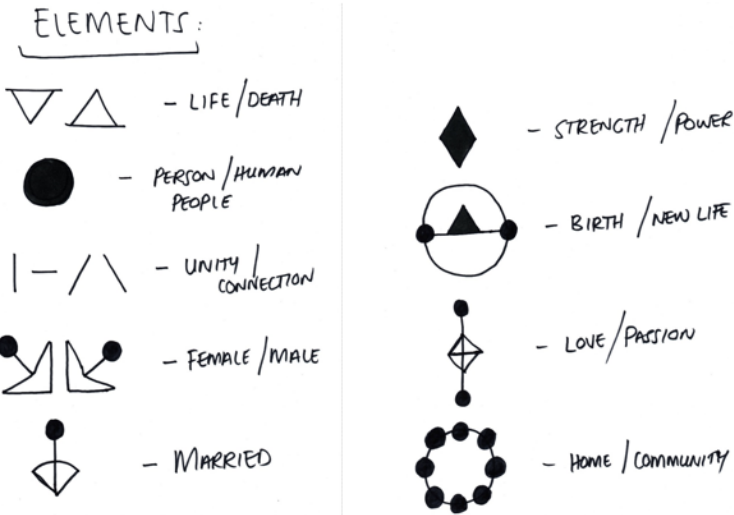


8. What equipment/materials have you used in the MakersLab / GDC? (more than one option may be selected).



Figures 2.5 & 2.6: Data from the ID2 (left) and ID3 (right) participants.

forms a great armature for the school that bridges spatial and “designerly” modes with other courses that further promote interdisciplinary practices. Projects such as “Missing History: Typography Drives Culture” ground both student and staff with real-life issues that further strengthen awareness that align with the SDGs. This project uses language as a tool for knowledge transfer whilst focusing on the writing systems that are being erased on the Afrikan continent. The project sought to create and develop a writing system for several languages in



Southern Afrika: *IsiXhosa, Ndebele, Siswati, Tshivenda, Xitsonga, IsiZulu, and Ubunye*, whilst paying homage to their individual, cultural, and traditional knowledge systems. This inquiry was reminiscent of Afrikan traditional values in history, “looking to the past, to inform the present to hopefully develop a better future” (Kavishe, 2022). The project investigated how written scripts might have been done in the past, whilst considering ideas and concepts on representation, architecture, ritual, beliefs, identity, and culture and how these can be used to inform a new writing system which is symbolic to each language. This project is about the discovery and innovation seeking to uncover the loss of cultural identity in our spoken languages, not only in South Africa but on the continent as a whole. Students were careful not to misrepresent the cultures. They used various modes of making, from drawing and painting, as seen in Figures 2.7 & 2.8, that were translated into the digital fabrication processes to create a type font which



Figures 2.7 & 2.8: Hand sketches (left) and painting glyphs (right) from the 10Percent participants.

was laser cut (Figure 2.9) and could be used as a letter set for printing and reproduction on the school's printing press.

This design thinking process pushed creative and critical thinking, where these conceptual writing systems went through various forms of user testing to showcase an understanding of how these writing systems were constructed. The writing systems are spatialised in the production process, from paper to a physically built artefact, reinforcing the means and ways we engage in understanding the importance of indigenous knowledge systems which have been slowly erased with the implementation of colonial Latin written script. The final individual symbols, as seen in Figure 2.9, were constructed into a sentence read directionally from right to left, "Together we create memories in an environment honouring our state of being."



Figures 2.9 & 2.10: Laser-cut type set of the final design.

Challenges

Whilst the school was pushed online during the COVID-19 pandemic, together with the rest of the world, there is still a need for a tangible material object to see, touch, and experience, as staff participant 1 mentions: “showcasing materials through a camera, especially paper, is not easy. The lighting needs to be perfect, and the resolution needs to be high in order for the students to see what we are discussing.” The pandemic has exposed staff and students to various technical issues, pushing design thinking far beyond imagination. Courses at the GDC rely heavily on the act of making to show the prototyping of ideas through models. However, this did not happen as smoothly in online circumstances. When the school went online, in the beginning students were apprehensive to make models, where making traditionally happened in studio environments under the supervision of academic staff. Staff participant 2 says, “while online environments offer massive potential in its connectedness, I feel we just don’t have the technology yet, required to converse or produce in the way that we are physically used to,” which halts the design thinking process of students and their ability to take ownership of their work. Navigating the insecurities and anxieties of new online spaces limited students’ capabilities and hampered innovation as students worked in digital silos.

The introduction of the MakersLab and its revolution has created a transformation where staff and students are beginning to push technological boundaries. With initiating the use of any new facilities, there will always be unforeseen challenges. However, this has not stopped the act of making or digital fabrication from occurring. Some of the immediate challenges are outlined below:

1. Students do not know what 4IR means.
2. 4IR is not yet fully integrated into the curriculum.
3. The use of the machines is “seasonal”.
4. Dedicated MakersLab technicians are required to facilitate the stream of students needing to make use of the space and machines.

5. There must be access to the MakersLab during all hours of the day.
6. Digital literacy amongst students varies and therefore limits learning outcomes.
7. Online learning environments were rapidly introduced during and post the pandemic.
8. Projects happen in silos mainly because the MakersLab is new.

There are immediate solutions to the challenges above, which are currently being implemented. When referring to point three, where machines are seasonal, this is due to the occurrence of nationwide load shedding. Here, the use of machines – particularly 3D printers – becomes difficult. The 3D printing depends on the model's size and can take anything from one hour to 24 hours to print. The various stages of load shedding dampen the students' designs as models must be shrunk to a smaller size to be printed within the hours where there is no load shedding, as it is difficult to resume printing on the 3D printing machines once the power has gone off. Seasonal refers to the fact that there is more load shedding during the colder months (May-August) as the power demand is greater, as the nation tries to stay warm with electrical heaters. This is an easy fix by installing UPS (uninterrupted power supply) units. However, these are costly, depending on the size of the battery. Concerning points four and five above: as the MakersLab is new, there is no employed full-time laboratory technician, and access is limited and booked through staff members. This creates strain on existing staff members whilst staff perform other academic duties and does not foster mentorship or an open access policy which an incubator is envisioned as. Point six on digital literacy prompts that the necessary training and software can already be introduced from the first-year level of study, although as staff participant 3 mentions, "students and lecturers are always learning". This may have been one of the risks the school has had to undertake, a positive one as it has pushed the innovation and ingenuity of both students and staff.

Conclusion

This paper's aim saw the use of the MakersLab as a space for incubation and fostering change within curricula and to develop intersections between design thinking and making. The MakersLab spatial metaphor of the incubator has allowed for its own revolution to occur where the production of ideas and processes related to curricula needs and functioning of the lab, has stimulated positive and healthy collaboration between staff and students. The MakersLab signifies a noteworthy shift in how we approach design and digital fabrication internally and externally. These approaches are non-linear and require a revolution or iterative process to produce innovative ideas and a material culture embedded with our current society. Dr Zoe Laughlin mentions that "material and process are inextricably linked... Making, in all its gloriously broad variants, is ultimately the relationship between materials and processes" (cited in Burry et al. 2020:4). The act of making, and the accidents and failures that occur, are equally crucial to understanding new ways of thinking and engaging with a design that begins to echo interdisciplinary connections. This can be seen in the success of the "Missing History: Typography Drives Culture" project. The development and growth of the 10Percent project can further build future sustainable communities, where centring the lab in the school as an incubation space grows, develops, and furthers research aligning to the 4IR discourse and how it begins to engage and connect with creative industries. Here, speculative designs can be pushed with the backdrop of sustainable, innovative modes of making that promote further risk-taking and connect to global research.

Immediate challenges are relatively easy to resolve, but do require attention and care by staff at the school. The importance of establishing digital literacy right from the first year to provide the necessary skills and training to students will enable a smoother design thinking approach to digital fabrication in the long run. Facilitating and establishing relationships with public and private sectors outside the school is "to ensure their research programs are aligned to real-world

needs” (Marwala 2019). Maintaining a healthy engagement between staff and student learning, where students are more involved in research and development, is key to the upskilling of both staff and students, an important concern in a world where “career paths are changing fundamentally” (2019).

In the World Economic Forum’s report on the “Future of Jobs”, it placed among the top 10 skills analytical thinking and innovation, complex problem-solving, critical thinking, creativity, technology use, and design and programming (*The Future of Jobs Report 2020:25*). These skills are necessary for the 4IR digital transformation and are critical to teaching and upskilling students already at a higher education level to better equip them with a skill set that will allow them to be a diverse and creative addition to the workforce. The MakersLab is at the forefront of this skills transformation. The school’s own design thinking and iterative process must allow a self-critical and reflective approach to interrogating traditional modes of practice to update syllabi and curricula. The MakersLab is well on its way to fostering future possibilities, and as staff participant 4 says, “I think 4IR and the technology that surrounds it is going to force us [designers] to re-evaluate the practice of design... 4IR technology will let all designers do what we do best – which is to design uninhibitedly – to think and to make...”

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Appendix A: Staff Questionnaire

The survey will take approximately 6 minutes to complete. By participating in this research, you consent to having the data used for the purpose of research. Participation is anonymous.

1. What is your gender?
 - a. Woman
 - b. Man
 - c. Non-binary
 - d. Prefer not to say
 - e. Other
2. What is your sexual orientation?
 - a. Lesbian
 - b. Homosexual
 - c. Heterosexual
 - d. Trans
 - e. Bi-sexual
 - f. Queer
 - g. Other
3. Race.
 - a. Black
 - b. Coloured
 - c. Asian
 - d. White
4. What was your experience teaching online during the pandemic?
5. How has teaching online aided courses?
6. What are the limitations of online learning in terms of making?
7. What does 4IR mean to you?
8. Have you used the MakersLab?
 - a. Yes
 - b. No
9. Have you promoted the use of the MakersLab? Please elaborate.
10. What equipment/materials have you used in the MakersLab/GDC? (More than one option may be selected)
 - a. 3D printer
 - b. Laser cutter

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- c. Mould making
 - d. VR goggles
 - e. Photographic lab
11. What is your favourite mode of technology/method of making to use and why?
 12. Which has been the most beneficial and why?
 13. Have you been hesitant in using the MakersLab? If so, why?
 14. What are the immediate challenges in using the MakersLab?
 15. What have been the successes? Please elaborate.
 16. Do you think using the MakersLab aids student design thinking skills and why?
 17. How are you integrating 4IR within the curriculum?
 18. What does 4IR mean to you and the approach in which you teach?
 19. How is 4IR bridging social and economic gaps within education? Please elaborate.
 20. Do you think learning 4IR technology will better equip students in finding a job in industry when they graduate? Why?
 21. Is there any other information which you would like to include?
 22. Can the researcher make use of photographs taken of yourself during 10Percent project for the purpose of their research only?
 - a. Yes
 - b. No

Appendix B: Second- and third-year interior design student questionnaire

The survey will take approximately 6 minutes to complete. By participating in this research, you consent to having the data used for the purpose of research. Participation is anonymous.

1. What is your gender?
 - a. Woman
 - b. Man
 - c. Non-binary
 - d. Prefer not to say
 - e. Other
2. What is your sexual orientation?
 - a. Lesbian
 - b. Homosexual
 - c. Heterosexual
 - d. Trans
 - e. Bi-sexual
 - f. Queer
 - g. Other
3. Race.
 - a. Black
 - b. Coloured
 - c. Asian
 - d. White
4. What was your experience learning online during the pandemic?
5. Have you used the MakersLab?
 - a. Yes
 - b. No
6. How often do you use the MakersLab?
 - a. Daily
 - b. Weekly
 - c. Monthly
 - d. I do not think I will use it
7. What equipment/materials have you used in the MakersLab/GDC? (more than one option may be selected)
 - a. 3D printer
 - b. Laser cutter

Modes and Methods of Making

- c. Mould making
 - d. VR goggles
 - e. Photographic lab
8. What is your favourite mode of technology/method of making to use and why?
 9. Which has been the most beneficial and why?
 10. Have you been hesitant in using the MakersLab? If so, why?
 11. What are the immediate challenges in using the MakersLab?
 12. What have been the successes? Please elaborate.
 13. Do you think using the MakersLab aids your design thinking skills and why?
 14. Do you think learning 4IR technology will better equip you in finding a job in industry when you graduate? Please elaborate.
 15. Can the researcher make use of photographs taken of yourself during training/work within the MakersLab for the purpose of their research only?
 - a. Yes
 - b. No



Rogue Processes

Speculative Techno-Visions on the Post-Pandemic South African Art Scene

Miné Kleynhans

Introduction

After a National State of Disaster was declared on 15 March 2020, the South African art sector took up 4IR technologies and participated in a large-scale virtual migration that affected almost all sectors of South African society. Virtual viewing rooms and online exhibitions became commonplace as artists continued to grapple with their disrupted lived experience and the need to “up-skill” their digital know-how to remain relevant. In some sense we have arrived at a critical juncture, long envisioned as the moment when most relations to the outside world will be facilitated through online means. Coupled with the purported catalytic potential ascribed to the pandemic, we could find ourselves at the advent of what some herald as a new utopian world. For others, however, the moment could signal a complete retreat into simulation, where we stand to lose all connection with the real world.

To gain insight into how this current moment holds up to either enchanted or disenchanting scenarios of our digital futures, I probe, as curator, shifts in spectatorship, creative processes, and the consumption of or participation with artworks during this liminal period. My case study is the *Interface* exhibition I curated with Teboho Mokhothu for the University of the Free State Art Gallery in 2022, which specifically interrogates the digital showcasing of art. What



changes can be observed regarding the dispositions and engagement of spectators? Will virtual technologies be taken up readily by audiences as a tool to engage the self-reflective and critical functions of art, and in which ways? How do these findings compare to what has been envisioned for societies in relation to the digital by past thinkers and technologists, and what does this indicate for the 4IR's future development in South Africa?

It is important to point out that much of what has been speculated about the digital impact on society – whether it be idealistic or cynical – is founded on the premise that the virtual is separate from the physical or material world. When Margaret Wertheim wrote *The Pearly Gates of Cyberspace* in 1999, she argued that the enchantment that the virtual held for society at the time was predominantly spatial in nature and underpinned by the age-old dualism that separated body and soul. Deeply entrenched within the medieval Christian worldview was the notion that there is a spiritual and physical realm. Scientific advancement and its disenchantments reduced this to a mono-dimensional understanding of space: that physical, or scientific, space is the only “real” one. Through this we can easily understand why the virtual realm, as a response to this reductionism, incited quasi-religious responses. As a new “real” environment, completely separate from the physical, it could bring a “new world” into being, in which we could mystically transcend our physical states and become virtually omnipotent (Wertheim 1999:30-39). The internet would address inequalities by granting access to unlimited information, regardless of social standing, gender, race, or disability. Wertheim cites early crusaders for the internet like robotics experts Hans Moravec and Kevin Kelly. The latter was editor of *Wired* magazine, who fervently believed that without the need for bodily presence, one was also freed from the inequalities and oppressions that are part and parcel of one's physical state (Wertheim 1999:286).

It is, however, exactly this separation between the physical and the virtual realms that alarmed other thinkers on the subject. In *Carnal Thoughts: Embodiment and Moving Image*

Culture, Vivian Sobchack (2005) articulates the concern that postmodern culture, mediated through a myriad of screens and interfaces, will be characterised by a free-floating, existential presence that is phonemically diffused, spatially decentered, weakly temporalized, and disembodied. She sketches a digital domain that constitutes a system of simulation that leads to a free-floating levelling of values that foregoes explicit interest and grounded investment in the human body and enworlded action (Sobchack 2016:117). To Sobchack, that electronic media is plural above all constitutes a mode of perception that is disengaged from any true sense of moral gravity.

The work of Francois Knoetze and the Lo-Def Film Factory collective, particularly in the four-part film series *Core Dump* (–2018–2019) (Figure 3.1), directly engages with this kind of Western techno-idealism, and more specifically the exploitation of African countries that ensues from it. It also articulates how many of the fearful speculations described by techno-theoreticians like Sobchack have come to be realised, to the detriment of society. The series explores the relationship between digital technology, cybernetics, colonialism, and the re-enchanted notion of a “Non-Aligned Humanist Utopia” (Knoetze, n.d.). In *Core Dump – Dakar* (2018), we encounter a self-augmented cyborg – a bodily amalgamation of flesh and electronic waste – that strides, and dances, through present-day Dakar. The film is made up of assemblages of found footage, performance documentation, and recorded interviews that form narrative portraits of the “uncertainty in the nervous system of the digital earth” (Knoetze n.d.:1). The conceptual framework draws from audio-visual archives, and responds to the pan-African, Marxist utopias of early African cinema (specifically Ousmane Sembene’s films), and a range of writers and thinkers – from Donna Haraway, Sylvia Wynter and Louis Chude-Sokei to Gayatri Spivak, Franz Fanon, and Aimé Césaire.



Figure 3.1: *Core Dump – Dakar* (2018), Francois Knoetze, video 12 min 8 sec.

I refer to the work throughout this essay to serve as a measuring stick to gauge the currently changed dispositions of participants and spectators who seem to blend the physical and virtual more seamlessly than before – the *fleshiness* of the cyborg's digital integration being a main focal point. Furthermore, the film's makeshift aesthetic serves to contrast

sharply with pristine gallery environments and as such introduces a “rogue” creative and artistic engagement that I believe characterises a younger generation’s relationship to virtual technologies.

In 2020, the UFS Art Gallery, like so many others, sought alternative, online means through which it could continue to bring art to the public and serve its communities. Each new exhibition was installed and recorded as a 360-degree virtual tour that was uploaded online. The link was then distributed through the gallery mailing list for people to access. The distribution of the link to the virtual tour was accompanied by a more considered and informative social media campaign on Instagram, Facebook, and Twitter. These platforms, when accessed, would again read as “curated” fragments of each exhibition.



Figure 3.2: *Interface* exhibition, Johannes Stegmann Art Gallery, UFS, Bloemfontein. 8 June–29 July 2022.

The *Interface* exhibition evolved from a fascination with such exercises in curating exhibitions for digital audiences, since *showcasing* and encountering art through a set of diverse interfaces leave us with so much to disentangle.

Participating artists were initially invited to consider and respond to the following prompts:

- Is there a culture to online art-viewing and the online dissemination of art?
- Has materiality become outdated?
- How do interfaces dictate content?
- Does digitally disseminated art challenge power hierarchies?

- Are there other power structures at play and how, why, and for how long are we paying attention?

As such the *Interface* exhibition offered a meeting point among artists, users, technologies, and audiences, and each selected work represented a specific point of departure when considering the “interface” and its implications. The exhibition was initially showcased as an online site in October 2021 that comprised a digital gallery and a page for each artist. The on-site iteration of the exhibition then took place subsequently in June–July 2022.

The “fleshing out” process of translating digital and digitised artworks into an on-site space once again stimulated a prolific exchange between virtual and “real” realms, and among artists, curators, and artworks, especially considering that the on-site exhibition would again be recorded digitally and distributed as a virtual tour. The process of thinking through and linking digital artworks that are installed in an on-site space, to a virtual tour and gallery page in a curatorially considered manner, proved to be surprisingly challenging. The process of producing and curating the exhibition yielded a continuous layering of the “real” place and its digital simulations. It is this process of considering the experience of both gallery attendees and virtual spectators for each individual artwork that yielded particularly valuable insights for discussion here.

My first observation that is substantiated by the selected artworks is that, although the virtual experience might engender “a free-floating existential presence” (Sobchack 2016:117), there is a taxation at play when we spend our time online.

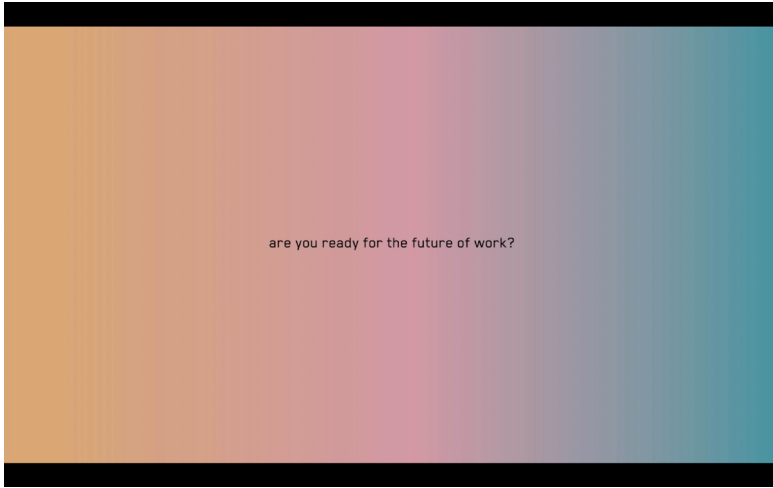


Figure 3.3: Still from *The Future of Work* (2020) from *Sorry for the Delayed Response*, Naadira Patel Video 5 min 58 sec (<http://interface-exhibition.com/naadira-patel/>).

Naadira Patel's video series *Sorry for the Delayed Response* was selected for the exhibition since it interrogates new, interfacing socialities, digital dependency, and workday conditions. The videos feature a rolling cascade of everyday online communications that are interspersed with quiet contemplations such as "Hallo is this working?", "I hope this finds you well", "Sorry I was muted", "Participating in virtual activism", "What is work time?", "What is free time?", "Have you been productive today?", "I just couldn't bring myself to reply", "Please let me know if this is manageable?", "Free delivery", and "Contagious conspiracies" that seem to characterise our new modes of being as "always on and always online" (*The Future of Work* 2020).

Patel's strategy is simple. Imitating what could have been 5 minutes of idle online scrolling in anyone's workday, it resonates deeply with experiences that became particularly pronounced during lockdown. The accompanying music is sombre and hypnotic and facilitates a slow, palpable crescendo of anxiety. The speaker in the video is bodiless, yet the droning dissonance and discomfort is felt viscerally, as a physical

sensation – something close to an electronic hum – a buzzing just behind one’s eyes. This has become familiar to us since the pandemic and terms like “languishing” or “online fatigue” have become common parlance, when we describe the specific type of exhaustion that characterised being always on, always online, and with little physical relation to others.

To Vivian Sobchack (2016:89), each new visual technology – the photographic, the cinematic, and the electronic – is subjectively incorporated into society as new modes of perception that facilitate distinct ways of being embodied and existentially present. Electronic media above all constitute a way of being in the world that is defused and, in comparison with the photographic and cinematic, belonging to no-one. To Sobchack, “electronic space cannot be inhabited by anybody that is not also an electronic body” and the disembodiment that is referenced in Patel’s work would be the result of a dispersion, an “insubstantial transmission across a flimsy network of nodal points” (2016:116). Although the “image of the body” is continually emphasised, online engagement of this nature has the effect of free-floating subjectivity, and marginalises the *carnal* experience of the physical body. To Sobchack (2016:117), the dislocation from embodied experience poses a real moral or existential threat, as defused embodiment would relieve those conditioned by these perceptual technologies from truly “feeling” for and investing in the state of the world. This concern is validated in *Sorry for the Delayed Response* through an awareness of a despondent, grinding sense of futility.

I wonder, however, what Sobchack would make of this very specific exhaustion, thematised in Patel’s engagement with our online existence? The bodily sensations resulting from online modes of being are very *carnal* reactions to the diffusion Sobchack speaks of. The dispersion of embodiment and subjectivity that electronic media affords us is not that “free”. It is taxing in many ways, and if there is a cost, the notion of investment and value cannot be completely negligible.

Core Dump continuously returns to this theme, that through technological advancement, the body *has* become electronic and that this fusion is mainly exploitative. Perhaps we could entertain the notion that the strange buzzing sensation behind our eyes when we have been working online is an electronic hum resulting from our cognition being extended into that of the machine's for too long. Currently, people are growing more suspicious of algorithms and screens that arrest and condition our attention to the ends of the companies (for example Facebook and Instagram), that have explicit marketing value in keeping us online. Knoetze shows how this is a mirroring of the material exploitation (the extraction of resources to create electronic equipment, and landfills piling up with electronic waste) and the exploitation of labourers in tech factories that affects African countries particularly, and is a continuation of established patterns of imperialism.

Core Dump makes viewers pertinently aware that the virtual domain did not realise a more just, equal, utopian world. The resources to fuel this space and the system that upholds it, whether it be of attention, labour, or material, are extracted exploitatively and detrimentally to especially citizens of African countries like Senegal that are vulnerable to new colonising capitalist ventures due to economic challenges. The film additionally hints at the emergence of a carnal or bodily/digital fusion that would indicate that the dualism that fuels techno-utopianism is receding. Perhaps, though, it would then also push back against disengagement or disinvestment purported by theoreticians like Sobchack.

Spectator engagement at the UFS Art Gallery hints at a noticeable retraction from virtual envelopment and for other related and important reasons: expressed in *Sorry for the Delayed Response* is a complete collapse in experiential differentiation between work, play, recreation, shopping, and socialisation – which were all engaged with on screen. It has been theorised that the “hyperreal implosion of the real and its simulacra” (Sobchack, 2016:115) made possible by electronic media, will result in a very uniform set of experiences in our

daily lives. With art being viewed exclusively online, and thus adding another simulated digital layer to replace gallery spaces, this implosion was complete.

When considering the simulation of a gallery space, we should also take a moment for the curatorial consideration of comparing online and on-site gallery visitors' "movements" in these spaces. When curating an on-site gallery, one naturally considers which artworks would arrest visitors' attention, which ones are in dialogue with one another, and place them in proximity, but rarely in any strict "order" to interpret. Visitors are free to move sporadically between artworks and still feel a sense of cohesiveness. This is not the case for virtual tours where "ease" and the need to avoid navigational confusion is paramount. Online viewers are guided through the space in a preconfigured manner by "hubs" and navigation buttons, and all information on artworks is presented instantaneously. In the simulation of the gallery space, one is subject to (not so many) "prefigured options" (Van de Vall, 2008:12) and the chance for surprise or the unexpected is suppressed. This once again imitates online engagement where interaction is prefigured, but also in the "lessons" from online marketing applied here – that one "loses" one's audience the moment that they feel confused or frustrated when navigating a site.

It is a valuable realisation then that the virtual gallery space, as a substitute for the on-site one, was not necessarily embraced. Even though the UFS Art Gallery's virtual tours were more "accessible", they only saw a very small fraction of the visitation compared to on-site exhibitions at first. Since there was so little to differentiate the experience of viewing art online from any other online activity, audiences were saturated with these experiences. I believe that many other online art initiatives can report similar findings.

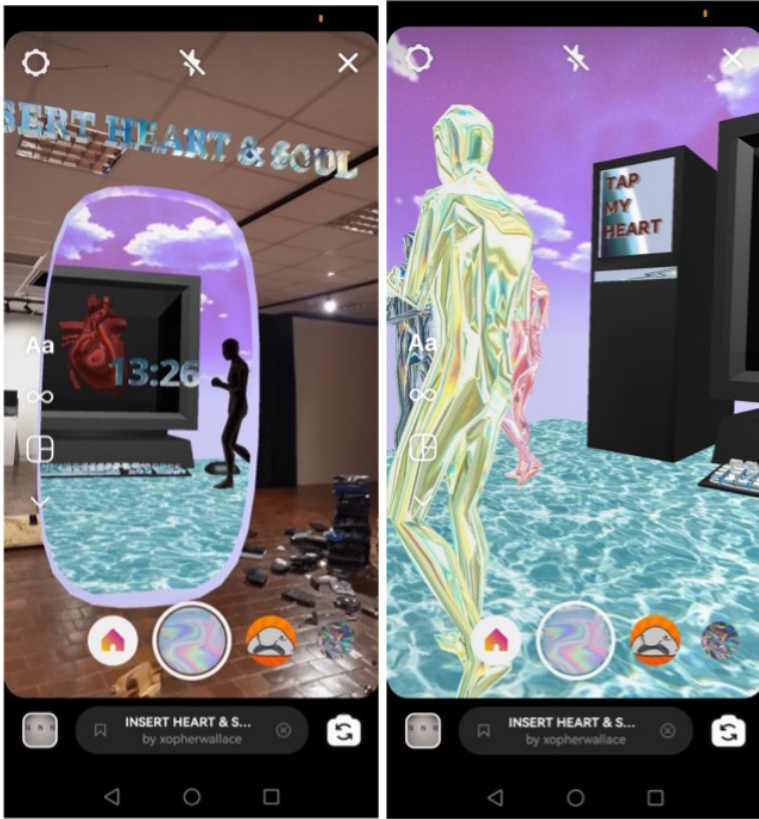
This is an important insight: that in this current cultural moment, *because* of the experiences people had during the pandemic, there might not be any real *desire* to supplant bodily, temporal experiences with exclusively virtual ones – at least not when it comes to the experience of art. Perhaps this is

heartening: that audiences or viewers still require something more from engaging with artworks than the endless stream of information and stimulation that the virtual domain can provide.

Should we take the above as an indication that virtual showcasing of art will not retain any real relevance, that it would only provide superficial, disengaged means for the viewing of artworks? Further investigation into spectator engagement and interaction with artworks during the exhibition would suggest otherwise. As Verbreek (2005:111) notes: “a specific technology may invite certain uses and inhibit others, but neither the invitation nor the inhibition is absolute”.

It is necessary, though, to look at the full range of technologies that audiences use to access virtual extensions of exhibition spaces and artworks. For this I turn to the work of Xopher Wallace, which is deeply imbedded in online social networking platforms. For the *Interface* exhibition, it took the form of Augmented Reality (AR) Instagram filters. Wallace’s work was selected because it so clearly speaks to the social vocabulary and lived experiences of audiences, especially students, whose lives are enmeshed with online technologies. Additionally, as the work would be “invincible” or inaccessible in the on-site space without the use of a smartphone, it foregrounds the inseverable connection we have adopted towards our phones.

Viewers gained access to the work in the gallery space through their phones by scanning printed out QR codes which opened the filter on Xopher’s Instagram profile. The filters were then supplanted on the surroundings, now the gallery space, that was recorded by the viewer’s phone’s camera.



Augmented Reality, Instagram

Curating the work for an online audience, however, presented an interesting discontinuity. Since Instagram filters cannot be accessed through laptops or desktops, it became clear that a secondary handheld device would have to be used by online visitors to scan the codes on the webpage. Through an odd duplication of screens, the work became somehow severed from its original usual online existence. It functioned more clearly when accessible in the gallery space – despite not being truly present – in conjunction with visitors'

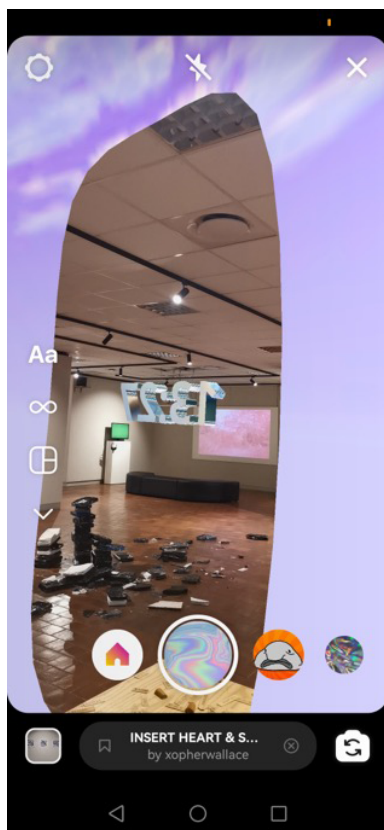


Figure 3.4: *Insert Heart and Soul* (2021), Xopher Wallace, Scannable QR code.

smartphones. These artworks aren't "located" merely online, but in proximity to the ever-present smartphone in the hands of users.

When Sobchack wrote on how electronic media "phenomenologically diffuses the fleshly presence of the human body" (2016:118), she might not have anticipated to what extent the smartphone would come to function as a complete and prevailing extension of the body.



Figure 3.5: *Mind Blowing Selfie Sword (you won't believe number three!)* (2019). Allen Laing. Genuine yellow wood, Merbau, Kiaat, Karee and cellphone.

This is exemplified in Allen Laing's work *Selfie Sword* included in the *Interface* exhibition. Importantly, however, Allen's work does not speak to any kind of idealism regarding bodily and technological co-evolution. He shows us, rather, that the "fusion" between bodies and digital devices is unavoidable, and resistance is comically futile. Moreover, he shows that, through our devices, we are compromised within a system that feeds off our (defused) attention and that our relationship with the digital domain remains ambiguous.

Similarly, the cyborg in *Core Dump* becomes a kind of martyr for the digital age, choosing to incorporate painful digital augmentations that would make him "one with all

things”, and thus powerful enough to resist those “who control the machines”. The white plastic mask that the cyborg incorporates indicates that we have extended our capacity for expression, communication, and cognition into external but attached devices as flickering projections on lit screens. The smartphone engenders *fused, hybrid* experiences, where one’s attention seemingly seamlessly extends into the virtual and functions as extensions of our bodies.

Returning to spectators’ engagement at the UFS Art Gallery, there is again a marked shift that underscores a more integrated, hybrid bodily and digital experience for gallery visitors – not only regarding the use of smartphones, but the attendance of virtual tours as well. As bodily experience in the gallery became more available to viewers, there was a notable, gradual warming towards virtual experience. As restrictions were lifted progressing through 2020 and 2021, virtual tours were accessed and remarked upon more frequently. During the *Interface* exhibition, gallery visitors reported that they would visit the gallery and then go home and scroll through the online site again to supplement their experience. Viewers remarked that the tours felt like “a game”, where initially tours were met with frustration since the software and mode of display was unfamiliar to them. Although many factors are at play, it does indicate that viewers, over time and through exposure, acquired the skills and disposition to approach virtual gallery spaces with an enhanced capacity for enquiry and in-depth reflective engagement.

And then, of course, it should be noted that the viewers who scan, click, record, and play – who fully engage with the virtual component of artworks – are generally of a younger generation. They are far less hesitant to “touch the artworks” (the devices installed in the gallery that facilitate engagement with online artworks) and we cannot fail to mention the obligatory selfie that solidifies their experience.

Returning to *Core Dump*, I would like to emphasise the film’s aesthetics and production processes. The “makeshift” aesthetic embraced by Knoetze and the Lo-Def Film Factory

Crew emphasises the transmission of ideas and experience above high production value (Knoetze n.d.:1). While watching the films, one is continually struck by how “easy” it would be to replicate. Anyone with access to a camera phone, some props, and basic film editing software would in theory be able to create something similar. The Lo-Def Film Factory’s work is purposefully demonstrative and they attempt to incentivise their audiences and various collaborators to tell their own stories and make art outside of institutional structures.

In *Core Dump*, Knoetze’s cyborg inhabits the streets of a desolate and, in many instances, underdeveloped Dakar. It is of note that Knoetze foregrounds this version of Dakar, which is otherwise known for its influential and affluent art scene. In the introductory essay of the exhibition, *Post African Futures* by Tegan Bristow (2017:6), she mentions that digital and communications technology are used in the most interesting ways in heterotopic spaces such as informal settlements. The reason is that these are some of the most culturally diverse locations in each city, housing not only regional migrants but also immigrants and refugees from across the continent. Since “culture” is negotiated in these spaces, more boundaries are being crossed between language and habits, and it is a location where survival and innovation are being tested daily. Bristow (2017:6) mentions that the most defined criticism of the globalised information economy evolves from these spaces, but does not expand on exactly how in the essay, leaving it to the included artwork to do so.

In Knoetze’s work we see something of this navigation in “underdeveloped” spaces between survival, innovation, and play that technologies are an intricate part of. Knoetze’s engagement with the human and environmental challenges in the face of technological advancement “suggests that the crucial technologies involved in moving towards a more just and equitable world are less physical than they are social” (Knoetze n.d.:1). *Core Dump* emerges from the dystopian landfills of consumer culture as an imaginary space for a new, inclusive humanism that underscores relationality and interhuman narratives (Knoetze n.d.:1).

There is something to take away from this for the South African art scene. If it wants to engage new technologies as reflective tools and not just as a superficial addition of yet more digital images, it might do well to consider which technologies are already used as a bodily extension to innovate and survive and in which ways. To consider how these technologies are deeply social, how virtual spaces can become more “populated” and less prescriptive, it should perhaps consider how it could allow for a roguishness that puts more opportunity for participation in the hands of users so that something new and unexpected could evolve from interaction with artworks on these platforms.

In *At the Edge of Vision*, Van de Vall (2008:166) concludes that the same technologies that tend to diffuse our sense of time, space, and embodiment may be employed in practices that reflect on that diffusion and exemplify new ways of configuring a sense of physical and moral gravity. To Van de Vall (2008: 166), it is clear that it is precisely because we are so enmeshed in the virtual domain that defies our accustomed beacons for interpretation and judgement that we might need new kinds of tools – aesthetic “forms” rather than concepts – to guide us in the absence of signposts or maps.

The case study of the *Interface* exhibition suggests that present-day spectators, audiences, and users have taken up a “hybrid” approach to virtual technologies and cultivated the necessary disposition towards these technologies to access them as reflective tools. The professed dualism that separates the virtual from the physical, that fuels fantasies of a new utopian world as well as fears of a disconnection from “the real” alike, seem to be receding. Rather, there seem to be imaginative relations to technologies that function as seemingly natural extensions of the body. There is desire for experiences where the virtual imaginatively elongates what is accessible, or “sharable”, in any given moment, but is still very much located and contextualised firmly in the material world. Virtual technologies understood as an imaginative “extension” of experience, cognition, and awareness also means that we are extending the vast socio-political and

environmental challenges of our age into the virtual realm and not leaving it or our bodies behind.

Virtual platforms for showcasing art, like the online *Interface* exhibition, could similarly be understood as a “digital extension” that could enhance and extend spectators’ capacity to engage with the virtual world in a self-reflective and critically engaged manner. In this addition of experiential layers, the smartphone represents a highly accessible, affordable technology that places engagement, dissemination, and participation in the *hands* of users.

To conclude: in *Core Dump*, we encounter an augmented figure that straddles the physical and virtual, and an engagement that doesn’t recede from the real world into utopian idealism. Importantly, and despite being critical of technological advancement, *Core Dump* (2018) revels in the act of storytelling and the digital domain’s capacity to proliferate without restriction or credentials. The production techniques we encounter are subversive, since they undermine standards of presentability that are set by gatekeepers in the service of art galleries. Knoetze purposefully makes use of “low” technologies to produce work *because* it would be so easy to imitate and easy to teach oneself. The South African art scene would do well to note and respond to the rogue inclinations of a younger generation of 4IR users that has the technological means *in their hands* to insert and create for themselves, and so set the terms of their own engagement.

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Illustrator as Feminist Activist

The Role of Visual Communication

Christi-Lee du Plessis

Introduction

This paper is a qualitative study placed within the context of fourth-wave feminism and illustration. Jennifer Baumgardner (2011) identifies fourth-wave feminism as “tech-savvy and gender-sophisticated”. Kira Cochrane (2013) similarly identifies that the fourth wave is “defined by technology: tools that are allowing women to build a strong, popular, reactive movement online”. Feminism has a rich academic history from which to draw. However, despite inspiring and facilitating tremendous change in terms of inequality of genders, feminism has not yet reached its goal of complete gender equality. Lynne Segal (1999:232) argues that feminism’s absolute goal has not been reached, both on a personal level and as a collective movement aimed to change the world. She identifies this goal as being “a world which is a better place, not just for some women, but for all women”. South Africa has one of the largest percentages of womxn in parliament¹ globally, but still features one of the highest levels of rape and violence against womxn (VAW) internationally (Frenkel, 2008:1). Ronit Frenkel (2008:1-2) adds that the fact that womxn’s issues were subordinated out of necessity to the nationalist agenda during the struggle, alongside the patriarchal² nature of Apartheid, resulted in the ambiguous

- 1 Womxn currently account for 44.5% of the members of parliament, in both the National Assembly and the National Council of Provinces (People’s Assembly, 2020).
- 2 The patriarchy is an archaic social form in which the social, political, and economic power lies with men and they



gender positions and the polarity of statistics regarding representation and VAW. Frenkel (2008:2) states that womxn are clearly “both empowered and victimised, seen and unseen, included and excluded in different ways” in South Africa. Nonhlanhla Sibanda-Moyo, Eleanor Khonje, and Maame Kyerewaa Brobbey (2017:13) identify male-dominated power dynamics in South Africa as contributing to gender inequality, asserting that “non-progressive attitudes and beliefs among the people of South Africa, including women, remain a major challenge in fighting crime against women”.

Conservative attitudes and beliefs surrounding womxn’s position and issues in society are obscured by a lens of “culture” over womxn’s own rights to their bodies and actions (Du Plessis 2019:52, Frenkel 2008:4). Gisela Geisler (2004:204) identifies the inherent patriarchal nature of political institutions as a major political limitation in regard to making a difference in terms of womxn’s subordination. Issues such as “patriarchal power disparity, cultural norms, and gendered economic inequalities” are noted in an investigation by the Commission for Gender Equality as reasons for the persisting and high levels of VAW in South Africa (Du Plessis

control and dominate womxn by establishing a hierarchical family structure where womxn are subordinate to men (Cremer 2021:25 & Nash 2009:102). Womxn in a patriarchal structure “owe their social and class position to their fathers, brothers, husbands, and sons” (Cremer 2021:26). Patriarchal beliefs dominate both public and private spaces, thus allowing men to dominate domestic and public life (Nash 2009:102). This has led men, especially mature white men, to maintain control over economic and political resources (Cremer 2021:25). Douglas J. Cremer (2021:25) writes that the patriarchy does not just rely on the power men gain when becoming fathers, but also the power that “dominant elite men” have over others, which include “women and men, enslaved and free, gender conforming or not, all included in a system of hegemonic values and rules crafted to perpetuate this patriarchal power.” The patriarchy enforces ideologies, values, expectations, and institutions through sexism, misogyny, and paternalism, thus feminism aims to counter any patriarchal structure to achieve equality (Cremer 2021:25).

2019:53). Geisler (2004:205) states that this finding suggests that womxn cannot rely solely on government institutions to improve their lives, implying that changes to their social status must also come from within South African society. South African social scientist Sheila Meintjies (quoted by Geisler 2004:35) maintains that the main issue that binds South African womxn is the fact that “in comparison to men, they are politically powerless”.

The understanding of the “triple oppression” of womxn, which refers to the intersecting oppression of race, class, and gender, helps navigate the complexities of womxn’s oppression in South Africa (Geisler 2004:73). South Africa’s achievement of gender equality is impeded by issues such as its complex relationship with cultural practices, patriarchal ideologies, and the prevalent issue of high crime. Additionally, contemporary South African womxn face a variety of other issues in addition to VAW, including overall crime, HIV/AIDS, poverty, workplace discrimination, and poor government delivery (History of Women’s Struggle in South Africa, 2021). Thus, to navigate these issues and continue the fight for equality, gender equality activists need to understand all the aspects that hinder complete equality for womxn. Chamberlain (2017:3) argues that there has not been a sudden increase in intersectional thought, but rather that feminism “is becoming more intersectional as time passes”. When looking at South Africa and its diversity in identities and the “triple oppression” womxn face, the inclusion of intersectionality within the feminist discourse is of vital importance to the movement’s future in South Africa.

Fourth-Wave Feminism and Intersectionality

Although the wave metaphor when referring to feminist generations/iterations has been heavily critiqued within and outside feminist spaces (Chamberlain 2017; Rivers 2017), I believe that using this metaphor is helpful in positioning oneself within feminist discourse. As Prudence Chamberlain (2017:1) states:

[T]he wave can be a means by which to approach feminist temporality, considering how the past and future inform the affective immediacy of the present moment.

Fourth-wave feminism is more complex than the previous waves and has undergone some changes, however the fight for equality remains. Finn Mackay (2015:122) writes “[p]erhaps the only thing that women share beyond doubt or question is the lived experience of being treated as women in a society where that means second class”. Segal (1999:229) states that “feminism remains a powerful cultural presence” which is now as relevant as ever and its goals remain the same: to transform society (Segal, 1999: 20). Catherine Redfern and Kristin Aune (2013:xxix) state that feminists still unite and advocate passionately and are continuing to change their tactics in order to address issues dealing with inequality. They also identify the methods employed by activist groups such as Pussy Riot³, namely: performance, wearing balaclavas and the use of social media, as young, new forms of feminist activism.

Rivers (2017:16) adds that feminist academics have been interested in popular culture and media representations of womxn, as well as how current feminist discussions take place both inside and outside academic spaces, resulting in the inclusion of more diverse voices. Additionally, the fourth wave takes into consideration everything the previous waves have contributed, but adds the contemporary, online, diverse, and globalising society into the mix. Issues such as “rape culture, online feminism, humour, and intersectionality and inclusion” are at the centre of the fourth wave (Chamberlain 2017:2). Andi Schwartz (2021:21) states that the fourth wave includes exploring and expressing broader spectrums of sexuality and gender, breaking out of the binary systems patriarchy

3 Pussy Riot is a Russian feminist underground art group inspired by the “Riot grrr!” guerrilla activist movement formed in 2011 (Rutland 2014:575). Pussy Riot produces guerrilla activist campaigns, performance art, and punk rock music as ways to critique patriarchy and Russian politics. They are famous for their colourful balaclavas they wear to hide members’ identities (Rutland 2014).

enforces. Gender is central to our society and fourth-wave feminists are fighting and working towards getting rid of the gender binary and, by doing so, allowing more potential for more inclusive theories and politics (Schwartz 2021:23).

Cochrane (2013) identifies that many feminists within the fourth wave state that they are intersectional feminists, highlighting the fourth wave's emphasis on intersectionality. Kimberlé Crenshaw coined the term intersectionality in 1989 as a means to discuss the levels of oppression Black womxn face in America (Gomez 2019:5 & Cooper 2016:385). It critiques "the erasure of multiple axes of identity that goes against the 'add and stir' narrative" and argues that systematic oppression overlaps with social identities such as race, gender, and sexual orientation (Gomez 2019:5). Stephanie Anne Shelton, Jill Erwing Flynn, and Tanetha Jamay Grosland (2018:5) define intersectionality as referring to "the interconnectedness of social and identity categories". Similarly, Redfern and Aune (2013:xxx) explain that intersectionality means that "oppressions and inequalities intersect", adding that gender cannot be understood without the context of the relationship between other identity markers, such as age, sexuality, class, religion, race, disability, or location. In other words, intersectionality brings to light the various aspects that comprise a person's identity and unique life experiences that influence their experience of oppression and discrimination.

Regarding South Africa and the fourth wave, Rosebell Kagumire (2021) notes that there has been an increase in access to and use of internet technologies and smartphones across the African continent. Many African womxn have found "a common voice for community building, organizing, and mobilization". Kagumire (2021) states that access to information has always been vital to any social movement and "consciousness awakening." Rivers (2017:152) states that feminism is back and occupying more space in pop culture and has inspired mass political action and activism. Rivers (2017:8) highlights the renewed interest in feminism and how the emergence of a new wave has "(re)exposed fractures, inconsistencies, and deep inequalities within these debates".

The new wave of feminism highlights how far the fight against inequality has progressed and how far it still needs to go, and utilises the available tools to do so.

Contemporary Activism

Leah Lievrouw (2011:6) identifies new media as the newest tool for contemporary activism and defines this phenomenon as a “cultural placeholder” for media that remixes various features and abilities from different types of media and technology. New media also blurs the line between consumers and creators/producers, as well as interweaving innovation with familiar media (Lievrouw, 2011: 6). Furthermore, Lievrouw (2011:8) states that new media evolved over time to become a hybrid between old media and new technologies, developing with continuously changing systems, for example, mixing traditional drawing and painting techniques on computer software creating digital art. The utilisation of the networking benefits, communication systems and interactive abilities that new technologies offer (such as the internet and related processes) makes new media inexpensive, yet powerful tools to counter the accepted narratives in society (Lievrouw 2011:8).

Lievrouw (2011:1) highlights that the activist space has changed thanks to the growth of the internet and related digital technologies, and, consequently, has brought traditionally underground, alternative, and independent mediums into the mainstream. Media culture in a contemporary world is more aligned with the digital age and is more “sceptical, ironic, perishable, idiosyncratic, collaborative, and almost inconceivably diversified” (Lievrouw, 2011:214). Desiree Lewis, Tigist Shewarega Hussen, and Monique van Vuuren (2013:51) write that these new media activist tools, unlike traditional media, can be driven by young people and marginalised groups themselves, offering more authentic ways of representation. Lievrouw (2011:2) adds that the changing landscape of activism has created more opportunities for expression and interaction from activists, artists, and other supporters of feminism who find value in these contemporary digital activist

tools. New media expanded traditional political actions by offering innovative ways of engagement with social issues through new media tools such as forums, social media, and online petitions, thus making political participation between social groups easier (Tugtekin 2019:15).

Lewis *et al.* (2013:51-53) write that young South African womxn are drawn to online anonymous confessions pages and social media platforms to share their stories and express their issues of identity. These online spaces offer platforms to debate and respond to identity issues and make connections with similar issues both locally and internationally (Lewis *et al.* 2013:53). Tugtekin (2019:15) finds that new media tools such as social media have been “shown to support political and civic engagement by increasing socialization and information sharing among individuals”. Lewis *et al.* (2013:53) adds that young South Africa womxn are actively engaging with online spaces where the complexities of social identities are discussed, and often visual images discussing dominant power relations are the entry points for them into these spaces. Lewis *et al.* (2013:53) state that social networking:

becomes more than a space allowing those who already share certain goals to consolidate their politics and pursue common goals. Rather, social networking – often despite unequal access and resources – is a virtual world in which young South African women can explore and redefine racial, gendered, and sexualised possibilities of “selfhood” and, through these virtual worlds, begin to formulate utopian ideas about the self and possible freedoms.

This highlights the impact that visual media has online for womxn in South Africa. Lewis *et al.* (2013:55-56) argue that the creativity offered to young womxn to imagine future possibilities and expand the scope of imagining themselves, is offered to them by these platforms and tools which create political conversations and alliances. Paula Serafini, Alberto Cossu, and Jessica Holtaway (2019:1) argue that society today is at the “crest of a global wave of artists and creative workers increasingly engaged in the social and political space”.

Narratives

Chimamanda Ngozi Adichie (2009) speaks of the dangers of a single story, highlighting that single stories perpetuate stereotypes and reduce people to being “just one thing”. Adichie (2009) argues, however, that the telling of many diverse stories can empower, humanise, and offer dignity to people and not just enforce negative and problematic stereotypes. Roland Barthes (2018:259) writes that to understand narrative is to “not merely...follow the unfolding of the story, it is also to recognise its construction in ‘stories’”. Narratives in society can act as the construction of representation, reality, and the concept of the self (Bennet, Grossberg & Morris 2005:231). Often narratives in media perpetuate problematic ideals and stereotypes, and reduce people to single stories. Alan Young (2019:468) says that these narratives portrayed in the media do not necessarily contain truth but rather serve to naturalise social constructs and beliefs.

Furthermore, telling a feminist story is in itself vital for correcting and re-presenting problematic narratives. Mary P. Sheridan-Rabideau (2008) identifies that a rise in the “girl power”⁴ movement in pop culture coincided with the rise in “girl-run”⁵ projects that became the catalyst of the third wave of feminism in the late 1990s to 2000s. These girl-run projects redesigned their narratives through workshops, zines, radio shows, and “girl-power” events, resulting in a surge of diverse feminist voices. Similarly, Sylvia Bawaa and Grace Adeniyi Ogunyankin (2018:455) credit the web series *An African City* as a means to counter narratives that “stoke hegemonic cultural and nationalist narratives of identities”. Bawa and Ogunyankin (2018:449) identify *An African City* as offering a means to

4 Sheridan-Rabideau (2008:45) defines “girl-power” as seen in popular culture as typically meaning “girl solidarity and the idea that girls can be powerful actors in their own worlds”.

5 “Girl-run” refers to projects that were started, run, and attended by mostly younger womxn and girls (Sheridan-Rabideau 2008).

examine complexities about identity, cognitive dissonance, and other issues that are associated with African womxn's identity. Bawa and Ogunyankin (2018:455) argue that through these more complex and postcolonial stories and art forms we can see how problematic narratives surrounding Africa are created and re-created, and thus can be deconstructed. Both the "girl-run" projects and *An African City* offer new ways of re-presenting narratives in ways that facilitate the notion that womxn are complex and diverse.

Visual Communication and Illustration

Illustration is hard to define because its functionality, use, application, and popularity has fluctuated throughout history. Broadly speaking, illustration is a form of visual image making that contextualises a narrative problem (Male 2019:1). Alan Male (2019:1-2) identifies the narrative problem as the brief for an illustration project and how the research, conceptualisation, and critical thought necessary for the production of the solution through illustration, makes this practice different from fine art, even though the same methods and media are used in the production of these two art forms. Male (2019:2) adds that illustration is a visual communication medium that is "conceived and produced for specific audiences". Stuart Medley (2019:21) further states that illustration is "different to art in its intentionality" and is generally complemented with written textual information as a means to add more context to the message. Rachel Gannon and Mireille Fauchon (2021:19) add that illustrators possess a "heightened sensitivity to context", and that illustration is a visual communication medium that is applied and mediated, thus, context is the means through which it communicates meaning. Lawrence Zeegen (2009:6) states that illustration is one of the most direct modes of visual communication which helps people record stories, understand the world, and communicate the complexities of life.

Robyn Phillips-Pendleton (2019:70) argues that illustration offers a unique voice through its visual communication, noting that illustration has challenged

perspectives and understandings of identity markers, such as race and culture, around the world throughout history and continues to do so. Phillips-Pendleton (2019:570) states that:

Each illustrator maintains their stylistic integrity and infuses their visual forms with their point of view, complete with their own biases and perspectives of life as they see it.

Illustrators have impacted society via the images they create, which are influenced by their perceptions, point of view, and their constructed understanding of people, places, and the world (Phillips-Pendleton 2019:571). Gannon and Fauchon (2021:19) add that illustration is “fundamentally engaged in the social world because it is produced to perform within it”, hence audiences’ interaction with illustration is not limited to traditional art spaces but happens within real-world contexts. Furthermore, illustration does not function in isolation but is created within specific cultural, social, and economic conditions that influence the context of the narratives that illustration portrays (Gannon & Fauchon 2021:139). Illustrators have the ability to share ideas, start discussions, and spread awareness about social issues, but can also do the opposite and enforce negative views (Phillips-Pendleton 2019:596). Gannon and Fauchon (2021:143) similarly argue that illustration can be used to advocate for identity politics because it can “create new representations of cultures, social groups, and people that allow for alternative narratives and viewpoints to be understood”. Illustration offers new visualisations that “challenge dominant portrayals, confront stereotypes, or reveal insights into seemingly exclusive or enigmatic communities” (Gannon & Fauchon 2021:143). Likewise, Deborah Brandt (2006) postulates that creative visual practices, such as illustration, are vehicles for knowledge- and meaning-making in society and, thus, can offer new points of view and be a means of activism. Illustration can thus be seen as a very important activist tool to re-represent and re-design narratives for fourth-wave feminist goals.

Liz McQuiston (1997) states that womxn have been using their “graphic voice” to express their concerns and beliefs from the inception of feminism and continue to do so.



Figure 4.1: Howard Miller J, ‘We Can Do It!’, 1942 (McQuiston 1997:71).

McQuiston (1997) highlights that visual media have long been a useful and impactful way to campaign for womxn’s rights and liberation, and refers to several examples of how visual communication was used in different contexts and periods, such as the “We Can Do It” poster (Figure 4.1). The now iconic symbol of “Rosie the Riveter”, is an illustration of Naomi Parker Fraley as the focal point of a very successful campaign to persuade womxn to join the industrial labour industry during the Second World War (WWII), when most men had enlisted as soldiers (Fox 2018). To this day, this image of Rosie is still seen as a feminist icon, representing the empowered working-class womxn.



Figure 4.2: Watts C, *The Bugler Girl*, 1908 (McQuiston 1997:8).



Figure 4.3: Savage K, *Boobs Bite Back*, 1993 (McQuiston, 1997: 16).

More examples of feminist visual communication can be seen in Figures 4.2 and 4.3. Figure 4.2 features an early example of feminist propaganda posters, illustrated by Caroline Watts and published by the British Artists' Suffrage League. This poster was originally designed to announce the procession of the National Union of Women's Suffrage Societies (NUWSS)⁶ on 13 June 1908 (McQuiston 1997:9). Figure 4.3 shows a T-shirt that is an example of the work of feminist designer Karen Savage, and was created to be part of the "Stereotypes with Attitude" collection (McQuiston 1997:17). The above two images showcase that visuals in various formats have been used to advocate for womxn's liberation.

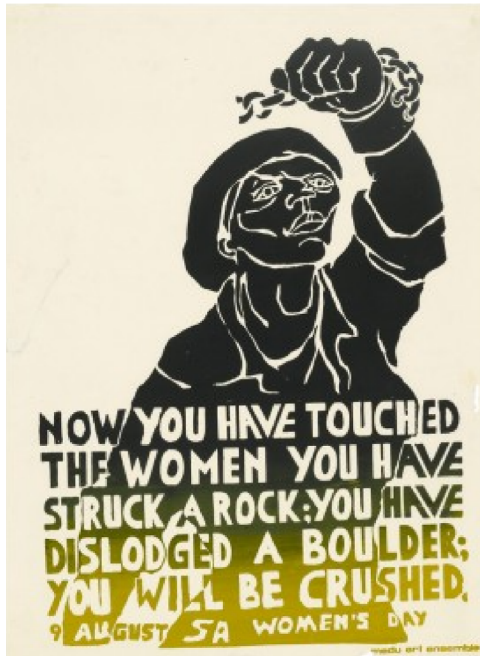


Figure 4.4: Seidman J, *South African Women's Day Poster*, 1981 (McQuiston 1997:214).

6 NUWSS was created 1897 by many of the suffragette groups across Britain combining and thus forming the largest organisation fighting for womxn's rights/suffrage (Hume 1982:iii).

McQuiston (1997) also looks at the relationship between the South African anti-Apartheid movement's use of protest posters in relation to the international womxn's movement. She (McQuiston 1997:212) states that "consciousness-raising projects and solidarity posters further acknowledged the role women were playing in the struggle". McQuiston (1997:214-219) discusses how these visuals not only aided the liberation of South Africa, but also communicated the struggles and the aspirations of Black womxn, as a marginalised group, to a larger audience. Figure 4.4 shows a screen-printed poster featuring an illustration of a womxn with broken shackles raising her fist in the air and a slogan reading, "Now you have touched the women you have struck a rock; you have dislodged a boulder; you will be crushed", with the National Women's Day date – 9 August. This slogan became a rallying cry heard during the 1956 women's march, after the Apartheid government issued a law stating that Black womxn, not only the men, were required to carry passes⁷ (You strike the women, you strike the rock!, 2020). This poster has since become symbolic of the gender and race struggle in South Africa, especially as an icon representing the courage of Black womxn (Kellner 2021). Clive Kellner compares the Women's Day poster to the Rosie the Riveter poster as having the same significance in the fight for womxn's rights (Kellner 2021). Kellner (2021) states that there is "a productive tension between the propaganda message of the poster medium linked to a collective social idea and the notion of the individual artistic identity behind the image." Even though the mediums differ between the two posters, both evoke the message of the individual womxn fighting in the middle of historical events reshaping society (Kellner 2021).

7 The Pass Law was a law enforced by the South African Apartheid government stating that all Black citizens must carry a passbook as a form of identification (You strike the women, you strike the rock!, 2020).



Figure 4.5: Blase C, *Vaginal Teeth* zine cover, 1998 (Triggs 2010:142).

Another medium of visual communication that aided the feminist movement is zine culture. Alison Piepmeier (2009:2) defines a zine as “quirky, individualized booklets filled with diatribes, reworkings of pop culture iconography, and all variety of personal and political narratives”. Zines can be seen as a “low-fi”, hand-made art form synonymous with underground and counter cultures. An example can be seen in Figure 4.5, featuring the cover with handwritten type and illustrations of a feminist zine called *Vaginal Teeth* from the “riot grrrl”⁸ era. Piepmeier (2009) analyses various feminist or

8 The term “riot grrrl” originated in the early 1990s “almost as a joke, an offhand comment that was written into mimeographed fanzines that circulated among punk rock and feminist communities”. Riot “grrrls” organised protest and punk performances and made art and zines, all in

“grrrl” zines addressing concerns from various womxn with differing opinions and understandings of feminism, adding that the inclusion of these diverse voices emphasised the notion of intersectionality within feminist thought. Piepmeier (2009:45) asserts that “grrrl” zines “were carrying on a feminist legacy”, helping mobilise the third wave of feminism, as well as establishing a particular type of youth vernacular, through the way they were addressing and challenging the sexism young feminists encountered in their personal lives.

Another example of the intersection of activism via visual communication and feminist narratives is shown in feminist comics and graphic novels, which communicate womxn’s unique voices. Hillary Chute (2010:3) defines the role of comics or graphic novels as a medium to reimagine, challenge, and confront conventions, stating that comics bring “to the forefront conversations about the political, aesthetic, and ethical work of narrative”. Furthermore, Chute (2011:116) states that comics “accommodate the interaction between the see-able and the sayable without attempting to smooth over the gap of reality”. Chute (2011:119) further credits comics as a medium which allows creators to express and document life stories, offering them an opportunity for authentic representation of diverse life experiences, thereby countering problematic single narratives present in society.

Anja Venter (2018), a South African self-identified feminist illustrator, creates various illustrations with feminist themes that she shares on her social media pages and websites. Venter does exhibit in person and sells physical items but most of her personal marketing takes place online. Venter designed and illustrated a T-shirt for the Mr Price PROJECT line, a limited range of T-shirts featuring designs illustrated by local illustrators, launched in October 2017 (Meiring 2017). She was one of six illustrators who took part in the 2017 series of PROJECT X T-shirts. The T-shirt (Figure 4.6) features a round emblem or logo design with a female figure in the centre

attempt to oppose the oppressive patriarchy (McDonnell & Vincentelli 2019).

flexing her arm with type at the bottom reading, “do it for yourself”. Venter references the iconic visual of ‘Rosie the Riveter’ (see Figure 4.1), thereby transferring this feminist icon’s connotative meaning to her design. Merchandise such as badges and posters have formed part of the feminist movement since the first wave (McQuiston 1997). The application of a feminist iconic sign on merchandise that was sold by a large South African fashion retailer carries significant feminist activist meaning, making such a message accessible to a larger audience and, potentially, making it more digestible for the mainstream audience. This illustration aims to create a sense of self-empowerment for womxn by communicating a feminist message through stylisation, iconography, and application.



Figure 4.6: Venter A, *Mr Price x Tee*, 2017 (Venter 2018b).

Another example of Venter’s feminist work is her series of embroidered patches titled *Jurassic Patriarchy* (2018a) which she sold on her website and marketed through her social media accounts. One of these designs, as seen in Figure 4.7, features an illustrated dinosaur in a business suit with typography at the top and bottom reading “Jurassic Patriarchy”. The humanised dinosaur wearing a suit and the typography referencing Steven Spielberg’s 1993 film *Jurassic*



Park creates an interesting visual full of social commentary and pop culture references. This illustrated patch design aims to raise awareness of the archaic and predatory nature of patriarchy by using pop culture references, as well as the embroidery production method, which carries its own significance. As A. Durham (1990:342) notes, womxn's aesthetic creative practices, such as embroidery, have been associated with the feminine ideal of submissiveness, yet these mediums offer womxn the ability to create their own meanings, which counters the assumption of feminine crafts as a sign of selflessness. The dinosaur reference alludes to the outdated ways of thinking associated with the patriarchy, and by offering this image through the medium of embroidery, adds a traditional feminine element (historical feminine crafts) as an innovative form of protest.



Figure 4.7: Venter A, *Jurassic Patriarchy*, 2016 (Venter 2018a).



Figure 4.8: Van Zyl A, *Respect Everyone Period*, 2020 (Van Zyl 2020).

Figure 4.8 features an illustration Alicia van Zyl posted to her personal Instagram page as well as on her free Protest Art page, which links to a website⁹ through which people can access and download the posters free of charge and use them to advocate for the causes they believe in, whether through printing and presenting them at a protest event or re-sharing them on their social media pages. This poster contains the words “Respect Everyone Period”, printed within a sanitary pad-shaped frame on a red drop-patterned background. By using the word “period” and placing it within the sanitary-pad-shaped frame on the red drop pattern, which simulates blood, she alludes to the message of gender equality and, in particular, to the normalisation of the female menstrual cycle. One can also interpret the word “period” in the command “Respect Everyone Period”, as referring to the full stop that indicates the end of a sentence, thus, implying the end of this discussion on equality in terms of gender, race, and sexuality and that no alternative to this imperative will be tolerated.

Her use of strong, bold, almost masculine, hand-drawn type and strong, striking colours enforces the power of the message of equality in the piece. Often in advertising and marketing aimed at womxn, soft, feminine colours, such as various shades of pink, are used to enforce gendering and denote femininity (Koller 2008:410). In contrast, Van Zyl uses white, black, and a bright red, thus making the image (and by implication the message) appear bold and striking. In this illustration her colour choices subvert the association of softness usually associated with feminine products such as menstrual pads, consequently making a powerful statement about the gravity of issues girls and young womxn from impoverished backgrounds experience during their menstrual cycle. Through her use of simple lines and bold artwork she utilises visual communication to effectively communicate a feminist message which is freely accessible for feminist activists to use during their marches or other protest events through Van Zyl’s protest art website.

9 Available at www.freeprotest.art.

Illustration as activism, online

Aristea Fotopoulou (2016:2) maintains that being feminist in contemporary society means that feminists are users and participants of media technology, social media, and other internet resources. Fourth-wave activists have the ability to use tools such as online activism and social media to challenge sexism and misogyny, thus allowing for further understanding and emphasis of intersectionality (Chamberlain, 2017:3; Rivers, 2017:5).



Figure 4.9: Video Music Awards, *Beyoncé performance*, 2014 (Arnold 2019).



Figure 4.10: Dior, *We Should All Be Feminist T-shirt on the Runway*, 2017 (Rodulfo 2017).

Mendes *et al.* (2019) write that fourth-wave feminism utilises new technologies to advocate, create awareness, and fight against feminist issues such as rape culture.¹⁰ According to Mendes *et al.* (2019:1), the various new feminist critiques, initiatives, and ideologies have gained higher levels of visibility as a result of the use of these new activist tools, including the influence of celebrities identifying as feminists and pop culture embracing feminist ideologies. Mendes *et al.* (2019:1) credit feminist declarations such as Beyoncé's "feminist" banner at the 2014 Video Music Awards (Figure 4.9), various popular magazines' special feminist issues, and Dior's 2017 "We should all be feminists" T-shirt (Figure 4.10) as evidence that feminism is visible in mainstream culture. Mendes *et al.* (2019:2) further argue that the increased visibility of feminist activist initiatives is largely because of the creative and innovative ways in which digital technologies are being used to mobilise feminism.

Hashtag activism refers to social media activism whereby participants use a hashtag to respond to, share, or participate in a movement, for example the #metoo and #timesup movements (Mendes *et al.* 2019). Jamillah Bowman Williams, Lisa Singh, and Naomi Mezey (2019:372) state that #metoo "converted an online phenomenon into tangible change, sparking legal, political, and social changes in the short run". Williams *et al.* (2019:375) further write that hashtag activism helps activists "organize and share information, push for freer expression, and propel political change". Social media activists have argued that the smallest online action, such as liking, sharing, or commenting, is seen as a form of participating in a particular movement (Williams *et al.* 2019:378). For example, the high engagement with the #metoo movement is evident of how online activity can be a catalyst for change and action; it offers legitimacy and visibility for the movement that

10 Mendes *et al.* (2019:6–8) describe rape culture as the cultural and societal discourse that condones and perpetuates problematic ideologies around sexual violence against womxn. Rape culture includes rape jokes, victim blaming, cat-calling, and other sexist acts that belittle womxn.

translates to offline spaces (Williams *et al.* 2019:383). The two important factors Mendes *et al.* (2019:140) highlight about hashtag activism is the potential for hashtags and social media campaigns to transfer to mainstream media, and how society must consider the outcomes of hashtag activism.

Digital feminist campaigns are a means of collective consciousness-raising, and this practice creates connections, solidarity, and a sense of community (Mendes *et al.* 2019:186). Mendes *et al.* (2019: 128-130) report that victims with a history of assault and harassment engaged with social media, through hashtags and online activist tools, more freely and comfortably than reporting such assaults to authorities. This fact highlights the ability of individual stories to achieve justice and empowerment and, in turn, reveals the overall feelings about the pervasiveness of abuse and harassment in society and the desire of the general public to change this situation (Williams *et al.* 2019:372). This response can also be seen in action taken locally after President Cyril Ramaphosa promised new courts, reviewing of cold cases, and harsher penalties for gender-based violence perpetrators after the outcry in response to Uyinene Mrwetyana's murder in 2019 and the similar deaths of many other womxn.

The amount of womxn who regularly use the internet, and related technologies and infrastructure, has doubled over the last five years in 34 African countries, increasing from 11% to 26% (Kagumire 2021). In South Africa, access to internet technologies, such as smartphones, was 51% in 2018, which is higher than the global computer ownership (Venter, Blignaut, Renaud & Venter, 2019:2). Despite this increase, womxn are still less likely than men to have access to mobile phones, daily internet access, computers, and social media platforms. The gender gap still is 8% to 11% (Kagumire 2021). Womxn who do have access and are using internet technologies still face enormous challenges and get pigeonholed as only "womxn's issues" (Kagumire 2021). Rivers (2017) and Chamberlain (2017:134) highlight some challenges feminists face online, such as cyberbullying, trolling, commodification, and a lack of protection against harmful content. Kagumire (2021)

states that the “marginalization within public discourse extends into the online world, where hierarchies of who is heard are recreated and extended from offline”. Often, online harassment can leak into the external world and many feminists are forced to leave their homes and take legal action to protect themselves and their loved ones (Chamberlain, 2017:141). Chamberlain (2017:129-136) states that for every feminist campaign there are forums that encourage rape culture and GBV as forms of jokes, and the anonymous nature of the internet makes hate easier to spread. Not only do feminists have to deal with the general harassment one faces online, but sexism still *thrives* online.

Consumerism is another challenge fourth-wave feminists face, as social media platforms and internet technologies are overrun with advertising and marketing which have not been kind to womxn (Chamberlain, 2017:127). Chamberlain (2017:127-131) states that “[w]omen themselves have become commodities”, highlighting how brand awareness has evolved to maintain some forward-facing support for womxn. Sheridan-Rabideau (2008:111) notes the decision by many feminists that “since there was no way out of consumer culture, people should work within available structures and adapt them for feminist ends”. Rivers (2017:57) adds that the popularity of feminism and commodification of feminism is the evident in the way high-profile celebrities declare their alliance with feminist values and ideals. A high-profile example was Beyoncé’s use of a “feminist” banner at the 2014 Video Music Awards, referenced previously. But even this type of feminist activism can be critiqued as a means of celebrities furthering their own brands (Rivers 2017:58). Rivers (2017:59) additionally identifies so-called “marketplace-feminism” as the practice by brands and companies of using their allegiance to feminism as a way to promote the “neoliberal vision of the empowered individual”. Schwartz (2021:21) adds that feminist issues on social media platforms can become oversimplified and distorted due to social media platforms becoming increasingly capitalist and consumerist.

Illustrator as Feminist Activist

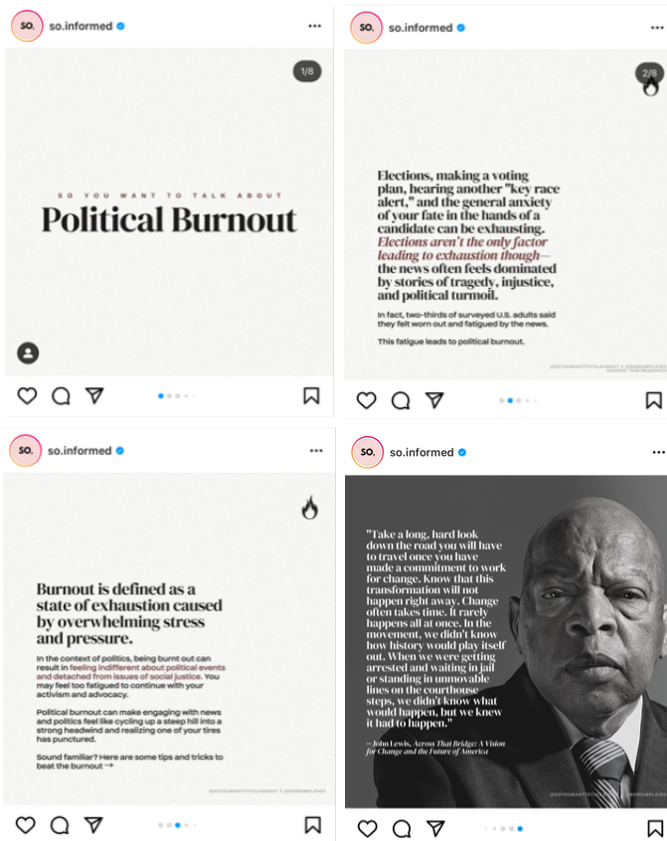


Figure 4.11 So Informed *Political Burnout* carousel slides 1, 2, 3 and 8, 2021 (Screenshots So Informed 2021).

Another challenge which faces social media platforms specifically is the issue of “slactivism”. One of the ways activist campaigns communicate and share information online is in the form of simple graphic carousel¹¹ posts, often featuring illustrated elements. The example shown in Figure 4.11 shows the typical structure that these posts follow, which includes a cover slide with a title of the content discussed in

11 A carousel post is the term used to describe one social media posting with various slides/images following one after another.



Figure 4.12: Impact, *Stop Asking Women When They are Having Babies*, 2021 (Screenshot Impact 2021).



Figure 4.13: Feminist, *Real Men Don't Rape*, 2021 (Screenshot Feminist 2021).



Figure 4.14: The Female Lead, *Consent slide 2*, 2021 (Screenshot The Female Lead 2021).



Figure 4.15: The Embrace Project, *When Will We Walk the Streets as Freely as Men Do?*, 2021 (Screenshot The Embrace Project 2021).

the carousel, a few slides with content which includes text and icons and, sometimes, illustrations (as seen in Figures 4.12 and 4.15) and a last slide with either a call to action, links to more resources, or links to fundraising pages. Other examples of the variety of aesthetics of these posts can be seen in Figures 4.12 to 4.15, ranging from minimally designed posts to those including illustrated type and illustrations. Erin Corbett (2021) and Liz Kraisinger (2021) note that the death of George Floyd in 2020 seemed to be the point after which these activist posts on social media platforms increased. Corbett (2021) writes that some organisations believe that sharing information on social media via the digestible carousel posts helps involve more people, often for the first time, making it a useful tool for reaching out to and educating larger audiences. Kraisinger (2021) identifies these infographic posts' greatest strength as their ability to make issues mainstream and normalise them amongst people who are then more willing to engage with social change movements. However, traditional means of activism are still needed because relying solely on these infographic posts on social media becomes "slacktivism¹²", and not "real" activism (Kraisinger, 2021).

Even though feminists online face these challenges, African feminist voices are still making an impact online and offline (Kagumire 2021). Despite economic and digital disparities on the continent, information is now even more accessible to the current generation than their parents' generation (Kagumire 2021). Rivers (2017:149) adds that, despite these issues, intersectionality and the fourth wave are connecting feminists across many waves and offer powerful tools for organising collective action and giving space to marginalised voices.

12 Slacktivism, or clicktivism, is the act of engaging with a social movement but with minimal effort and commitment (Fisher, 2020). This term is used to describe the way people often just reshare and "like" activist content and believe that that is all that is needed to make a change.

Conclusion

This paper dealt with the intersection of feminism, contemporary activism, and illustration, with a focus on South African issues. Feminism is currently in its fourth wave, which emphasises intersectionality and contemporary methods of protest, such as online activism. Contemporary activism utilises new media tools that are more creative, collaborative, and combine traditional and contemporary methods alongside online activist methods to mobilise support for social movements. Fourth-wave feminism brings such subjugation into the spotlight to show that the various gender-related issues are connected and that to achieve gender equality, each of the intersecting identity markers must be considered. The state of gender equality in South Africa draws attention to the very complex nature of the local fight for equality, which includes institutional issues and an inherently patriarchal culture. Even though South Africa has progressive laws and policies in place for equal representation in politics, it still has one of the highest levels of gender-based violence in the world. This crisis highlights the need for continued activism to address the persistence of gender inequality in South Africa.

Contemporary activism, which includes the use of creative media and evolving digital technologies and relies on the internet's influence on society, has had a significant impact on social movements. Illustration can communicate feminist messages, as demonstrated through the discussion of feminist illustrations and visual communication created by Miller, Watts, Seidman, Blase, Venter, and Van Zyl. Looking at contemporary South African examples of feminist illustrations accessible online, one still needs to keep in mind the limitations of online spaces. Womxn still face harassment and hate online, brands and corporations actively use social movements as marketing tools, and the digital divide still persists on the African continent. Noting this, I would like to still emphasise the positive influence and changes activism online and through visual communication tools like illustration has already done, and continues to do.

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Is Applied Drama and Theatre Ready to Embrace the 4IR?

A Reflection on a Playback Performance at a Women's Shelter in the Western Cape during COVID-19, 2021

Lireko Qhobela 

Introduction and context

Is applied drama and theatre in South Africa ready to embrace the Fourth Industrial Revolution (4IR)? This question came from the sudden scramble for innovation and resourcefulness during the COVID-19 pandemic, when tight restrictions of social distancing were introduced in 2020. Since restrictions were lifted in 2022, the need for Zoom interventions – which were the main points of access for practitioners during the first waves of COVID-19 – have seen less urgency. Instead, online platforms are now used as a quick way of joining in meetings, while rehearsals are preferred in-person. As part of the conversation on how the arts participate in the 4IR, this paper aims to highlight some of the ways applied drama and theatre was able to keep up (or not) with the development of technology during the global pandemic. The paper reflects on a case example that formed part of a practice-led research project. The case example is of a hybrid playback theatre performance that took place in the Western Cape at a women's shelter for gender-based violence (GBV). The performance combined Zoom communication with in-person facilitation, and drew attention to matters related to space, embodiment,

and ethical practice. The key suggestion is that applied drama and theatre in a South African context is not ready to embrace the 4IR; however, with more effort, it can begin to develop the technological expertise required to incorporate more digital interfaces in its interventions.

Applied Drama and Theatre

As this paper forms parts of a multidisciplinary conference on the role of the 4IR in the arts and education, I first define applied drama and theatre and playback theatre respectively. Applied drama and theatre is an umbrella term which refers to participatory drama practices in spaces outside of conventional theatre buildings (Balfour 2010; Nicholson 2005; Prendergast & Saxton 2013, 2009; Thompson 2003; Young-Jahangeer 2016). It encompasses a group of practices that are constantly transforming (Hartley 2012:xix). Its essential characteristic can be described as “a *performance*, to and with an audience” (Prendergast & Saxton 2013:xi). The participants “may or may not be skilled in theatre arts and [the performances are often directed] to audiences who have a vested interest in the issue taken up by the performance or are members of the community addressed by the performance” (Prendergast & Saxton 2009:6). Amongst many applied drama and theatre forms, playback theatre is one such form.

Playback theatre

Inspired by the work of Jacob Moreno’s psychodrama, playback theatre was initiated by Jonathan Fox in 1975 with the intention of having ordinary people come “together to celebrate, explore, or heal through ceremonial and artistic action and storytelling” (Salas 2009:445). A sense of community is built in response to personal and emotional elements of playback theatre which evoke a space for empathy, trust, and vulnerability (Fox & Leeder 2018:101). Catharsis can be generated from telling, witnessing, or “performing a difficult or traumatic personal story” (Fox & Leeder 2018:101). It is therefore considered a therapeutic form of applied

drama and theatre, but is not intended to be a therapy for its audiences and practitioners (Bird 2017:34).

Playback theatre “is equally at home in public theatres, in schools, hospitals, and institutions, corporate settings and conferences, and in forums for social change” (Salas 2009:445). Topics might explore a number of things such as diversity, gender-based violence, racial injustices, and death. The form invites audiences to tell their personal stories through a structured, improvisational process led by a conductor, players (or actors), and an accompanying musician. The conductor facilitates the performance and interlaces the stories of the community which are played back in dramatic form by the actors to the audience member who shared their story (Barolsky 2022:325; Fox 2007:91). This audience member is known as the “teller”.

Applied Drama and Theatre Online: A Practice-led Research Method

My use of “practice” in practice-led research refers to applied drama and theatre. Methods used to conduct interventions with community members in applied drama and theatre are often the same methods used to generate research data. “[T]he exchange between research and practice is immediate” (Schön 1983:308-309 cited by Gray 1996:22). This means that research and practice in applied drama and theatre often have an indistinct boundary (Hughes, Kidd & McNamara 2011). Similarly, in the case of other practitioner-scholars – Bjørn Rasmussen, Anada Breed (2016), Refiloe Lepere (2022), and Brad Haseman (2006) – the interventions *are* the research. There is a similarity here akin to the notion of praxis resisting the separation of theory and method, where one is not superior over the other (Hughes, Kidd & McNamara: 2011). To reiterate:

[t]he ambivalent position of applied drama and theatre has generated a diverse range of research projects, many of which combine these methodological approaches and also have multiple “uses”. These include: embodied, intuitive, embedded processes that might not lead to any discursive outputs [...]

“reflective conversations” and private journals of the reflective practitioner (Schön 1983; Taylor 1996:25–58); creative, visual, and discursive methods of participatory research, and action research. (Hughes, Kidd & McNamara 2011: 191–192)

Hudges, Kidd and McNamara (2011) also speak of a blurry boundary that exists within a “messy”, “unpredictable” and “complex” world of creative research and applied drama and theatre that offer an opportunity to interrogate research aims. In the case of this paper, playback theatre became an example of how technology interacted with the practitioners and the women at the shelter. By doing so, it illuminated issues such as embodiment, the use of space, and a necessary look at ethical practice.

Playback Theatre Online During COVID-19 (2021)

I briefly highlight how playback practitioners navigated an online performance during the COVID-19 pandemic at a women’s shelter. The work took the form of a hybrid performance, meaning that all practitioners called into the women’s shelter on Zoom, except for one (whom I have called Donna for the sake of anonymity). Donna was physically present with the women in the shelter and acted as a conductor for the performance. The other conductor was online. I was also present on the day as a performer, and I remember feeling as though I was a voyeur in the women’s home because I was looking in from Zoom.

The women could only gather around one laptop for that session and their sound could not transmit to us, but they could hear us. This meant that Donna had to use her cellphone as a microphone. She would occasionally crouch in front of the tellers so that they could be visible and audible to the rest of the performers on screen. The image of who was in the room that day was not clear. Donna negotiated between the multiple spaces and her job was to keep the physical and the digital rooms engaged. Because of the women’s experience with gender-based violence, we felt it was important for Donna to be physically present in the room with them in order to

determine what kind of atmosphere the playback performance was creating. Apart from juggling space, she was also juggling the women's sense of safety.

A few weeks later, I asked Donna about her experience mediating the performance that day. Below is her brief response from our interaction.

Donna: *What made it difficult for me was in the moment – all the chaos beforehand, as in suddenly devices wouldn't work and trying to improvise around devices and then being in the same space with a group of women who were not a community yet, and all of them were still so clearly, clearly, still in crisis. Uhm, and they found it so difficult to hear each other's stories. And it was a very, very difficult space to hold.*

For Donna, the hybrid intervention complicated the playback performance by forcing everyone involved to navigate space differently. The digital experience played its part by paradoxically connecting and disconnecting the playback process. For Donna, the reality of being in the same room as the women, while maintaining contact with her fellow players on screen, presented unique tensions in that she had to juggle multiple spaces, i.e., the safehouse and the practitioners who were connected on the digital platform. Because of this, Donna admitted to how difficult it was to lead that intervention.

It was made especially challenging when Donna learned that the group of women were new to each other and that the bond between them was not yet strong. Because their sense of community had not yet formed, they found it difficult to hear each other's painful stories. In turn, Donna was left to absorb some of the awkwardness in the room.

Donna: *[A]nd then she said the word rape. She was telling her story and she said the word rape and I could literally feel the group behind me because I was on the ground kneeling in front of her with a cellphone in my hand. [...] I could feel the response from the group behind me. It was like a shock. Uhm... and then*

they started leaving the room. It was a small group to start off with. So, if two people left it was almost half of the participants.

The word rape triggered a response from the group of women which brought about discomfort in the room. Amongst the performers, this sense of discomfort was readily perceived by Donna because she was present in the room. The rest of the performers on Zoom, however, could not fully access the emotional atmosphere. Reading the women's facial expressions was also compromised because, at times, the face masks interfered with the sound quality, therefore, hindering the overall communication. So, apart from juggling multiple contexts, Donna also needed to negotiate COVID-19 protocol, which required mask-wearing. With her cellphone, she also moved around the house. One moment she was in the kitchen and the next she was in the common area. At some point, there was even a crying baby which she managed to incorporate into the process. As co-conductor in the physical room, she had to make decisions for the benefit of everyone involved and help them transcend the chaos. Whether this was fully realised is still not clear.

The hybrid process was filled with various tensions and elicited feelings of sadness from some of the participants to an extent that, eventually, the playback performance had to end specifically because some of the participants were beginning to leave the physical room. After the performance, the practitioners shared that they had feelings of heaviness, lethargy, and nostalgia for face-to-face performances.

Challenges to consider

The experience at the women's shelter demonstrated what O'Connor and Anderson (2015) call work in the post-normal world; a world which is confronted by many crises at one time and introduces complexity, chaos, and contradiction (2015:10). The work with the women online further complicated the practitioners' engagement in the space, and brought up the need to consider ethical responsibilities. COVID-19 exacerbated the state of chaos in many places around the world

and the issue of gender-based violence in South Africa became particularly visible during lockdowns (Dlamini 2021; Ndlovu et al. 2022; Roy et al. 2022). The government failed to consider gender-based violence response services as essential during that time period (Roy et al. 2022:113). Like most organisations, the playback theatre group was attempting to do its part.

The idea of viewing the playback theatre performance through the lens of the 4IR becomes an alternative site to explore the interaction between technology and playback theatre. I note this with a great awareness that my knowledge of 4IR barely scratches the surface of what is an emerging but dense field, and so I am careful when I assume that Zoom is not the most complex of technologies within the larger world of the 4IR. However, if we consider the ways in which this basic technology complicated how the performers interacted with the women at the shelter, we can perhaps see how it challenged the practice by raising concerns about space and place, embodiment, and ethics.

Place

Although the use of digital technology in applied drama and theatre is not new (Cziboly & Bethlenfalvy 2020; Gallagher et al. 2020; Houlihan & Morris 2022; Tam 2020), the research on its connection to place appears to be underdeveloped (Mackey 2016:122). As I think through some of what I observed that day, I locate both technology and practice within what Bonnie Honig (1994) calls dilemmatic spaces. She describes it as circumstances that position people between two (or more) contradictions at any given moment. During the playback theatre performance, the 4IR positioned the practice at the centre of competing forces located in the complex matrix of South Africa's post-Apartheid realities, which include issues such as collective historical trauma, violence, unequal access to quality education, and poverty (amongst others). In other words, the intervention was already taking place in a context fraught with social challenges.

To quote Mckittrik and Woods' work on *Black Geographies and the Politics of Place*, they say:

[...] a broader, and ongoing, history of segregation, violence, and environmental racism, often concealed by partial perspectives and a disregard of the unknowable and unseeable, [come] clearly into view alongside the spatial and lived limits of democracy and citizenship (2007:3).

What the authors are referring to is a racial injustice which continues to manifest in the lives of black people and their living conditions. As such, one may argue that the 4IR is perhaps not the most pressing issue facing South Africa (Musgrave 2022). The majority of the country either cannot afford technologies of the 4IR or have never heard of them (Moloi & Mhlanga 2021). Other researchers go as far as to say that South Africa is not able to “take advantage of the opportunities” as well as “respond to the challenges presented by the 4IR” (Yu 2022:92) because of poor infrastructure and the larger population not having adequate access to it. As it is, applied drama and theatre in South African contexts seems to lag behind the conversation on 4IR because a lot of its interventions rely on human contact and typically work with communities that do not readily have access to modern technology. The 4IR may allow us to do more and propel us to think creatively about how we solve the world's problems, but along the way, it too may widen the gap between those who can afford to access the technologies and those who cannot.

With regard to the playback theatre performance mentioned earlier, examples of poor quality and access to better technology in areas where that access is challenged due to socio-economic factors was demonstrated by the kinds of gadgets used as well as their efficiency – more specifically, the unclear image produced by Zoom that day, the interruptions to the sound, and improvising between devises for better connectivity. If we suspend the issue of access to communities via electronic devices and for a moment look at the ways Zoom opened up an opportunity to explore multiple spaces in the playback performance, then there is a possibility for thinking

about the 4IR as providing a wider audience reach. But, of course, this is still very much a challenge for applied drama and theatre practice because its work is situated within the very contexts that struggle to keep up with and participate in the development of technology.

Combining technology and performance

When Fransson wrote *Manoeuvring in a digital dilemmatic space: making sense of a digitised society* (2016), the idea of a society dependent on digital technologies did not carry as much weight as it did in 2020 and 2021. Since March 2020, many organisations found themselves needing to make deliberate use of online conferencing platforms and not all systems were translatable online. Nonetheless, despite the many challenges COVID-19 presented to the world, the online space offered more opportunity for communication, learning, interaction, and a wider local and international network.

It seemed that online processes related to applied drama and theatre during COVID-19 took on an action research approach; an approach which “is an orientation to knowledge creation that arises in a context of practice and requires researchers to work with practitioners” (Huang 2010:93). This way of working is useful when trying to build and improve on practice. Published research that considers online intervention reflects on places such as Toronto, Canada (Gallagher et al. 2020), Norway, and Hungary (Cziboly & Bethlenfalvy 2020). The Global North, although challenged by the same pandemic, did not seem to experience similar social and technological challenges as did communities in the Global South.

Practitioners at the women’s shelter not only faced the difficulty of translating the playback performance online, but they also struggled with internet connectivity, as did their participants. The online space became, therefore, a new location; however, access to that location brought with it new kinds of limitations. For instance, practitioners were concerned about the obstruction to reaching communities that might benefit from experiencing the work. There was

also a fear that the applied drama and theatre sector might be annihilated due to the pandemic.

Despite that, however, working online engaged a kind of “digital dramaturgy” (Masura 2021:5) which enhanced the experience of what it meant to be a playback practitioner. Like virtual theatre, Zoom and MS Teams consisted of “a performative component” (Giannachi 2004:6). A practice-led research approach, in this case, invited an observation of how this component made up part of the experience of creating work. It was a unique requirement by practitioners to master technology and a unique opportunity for me as the researcher to inquire into that layer of experience. How practitioners “understand, relate to, and manoeuvre in the digital” world became important because it required different skills (Fransson 2016:2).

For instance, online, the role of the practitioner was blended with that of a technician; a rather new role they had to adopt (Masura 2021:4). It must be noted that the playback theatre process that occurred online was not the same as digital theatre. According to Masura (2021), digital theatre is live and incorporates digital technology as a fundamental element that shifts our understanding of theatre and the world (Masura 2021:6). On the other hand, Megan Alrutz’s (2011) work on digital story telling in applied drama and theatre, is not as close to Masura’s description of digital theatre, which aligns closely with what performing online means in the context of COVID-19. Alrutz instead focuses on physical spaces and places of performance, and incorporates digital media as part of her applied drama and theatre processes. Her work was written during a time when online work was not compulsory for community engagement.

Following Masura, the online playback theatre process could instead be understood as forming a larger conversation on digital performance and digital theatre which could be manipulated through space and time. The women did not necessarily experience the full production of the performance as they would have in person. Instead, they acted as secondary

participants, viewing images of live or, in some cases, pre-recorded performers on a screen. The computer screen was a portal for communication instead of an integral part of the performance experience. This drew attention to the differences in the use of digital technology with applied drama and theatre; not as digital theatre but as a portal. In this regard, Masura helps us to consider how space (as well as distance and disconnection) in online processes makes it clear how digital theatre's explicit use of digital technology facilitates continuity online.

Embodiment

The emotional labour (Hochschild 2012) it required that day to be fully present as a performer can be attributed to Zoom fatigue, which has been extensively written about (Bullock et al. 2022; Elbogen et al. 2022; Riedl 2022; Salim et al. 2022; Toney et al. 2021; Wiederhold 2020; Williams 2021). But, essentially, Zoom has the potential to heighten a sense of burnout, precisely because the work of applied drama and theatre is fuelled by connection with practitioners and their participants. However, in the playback performance, the digital interface acted as a middleman and interrupted what is typically designed to frame and manage sensory experiences.

How then did practitioners experience their instrument (their body-presence) when mediated through the digital space? Because the computer was not “wearable”, as it often is in digital theatre, symbolically speaking, the practitioner-in-role “bec[a]me a puppet, a clone, a magician” (Masura 2021:99) because the performance space had been altered and was mediated by technical instruments. The process then accommodated – even if not entirely – the digital experience as well. The practitioner was not necessarily wired for performing motion capture, motion triggering, nor motion tracking in Masura's literal sense, but was instead manipulated by the confines of the computer screen or a cellphone that restricted and/or liberated the drama process. They could be liberated creatively or restricted physically in space and time.

Moreover, online interventions are not as futuristic as the genre of digital theatre. The practitioner interacts with the audience in real time and relies on visual media to enhance the dialogue that is to be had with the participants. Masura, while reflecting on digital theatre, says:

When the living, biological body of the performer is seen alongside digital media, it is up to the audience to recognize their own human situation and determine the relative value of the contrasting entities on stage. In this didactic moment between digital and flesh, it is not essential whether the biological performer or the digital other is dominant. Whenever the human is viewed alongside the digital, the “live” body is resistant (Masura 2021:206).

Embodiment then, shifted and became something other than what the performers had come to know. The body became distributed across space and time and was accessible to many; what Masura calls a “self-distribution” (2021:238):

Through digital media, settings can shift in a moment, and distant but real places are brought together on stage, prompting new ways of looking at place. By linking performers in distant places, not only is the group of performers potentially expanded, as their cumulative playing space grows, but it becomes place-rich or a multi-layered place. [...] When “community” is invoked, it can be a powerful organizing term, a call to action, used to rally participation around collective ideals, teach values or lessons, honor members and places valued by the community, or mark a specific event. When you add technology to the mix, the two determining components, place and interest, can merge. In addition to community based on place or interest, in the case of cyber-communities, community is formed in a third intersecting space where interest and location meet, when the ability to meet in a shared space composed of multiple places is itself the shared interest of the members of the group (Masura 2021:235–37).

In light of this, Zoom conference calls, therefore, created multiple spaces from which the practitioners could extend their experience of the research through the playback theatre performance. The body became an important instrument for the performers of playback theatre to access theatrical presence and the presence of those who participated in the interaction. For instance, as the researcher, it became a required practice to attune myself to levels of affect that I would normally get in an in-person interaction. In addition to that, the performers' sensory apparatus was not only dis-located in space and connected via technology, but it too may have struggled to make sense of the information in the room(s).

Ethics

The use of technology invited a pause in how practitioners occupied a space that was deeply engrossed by traumatic histories, where social justice work required a delicate negotiation. What did it mean for the participants to be confessing pain to people scattered across a screen and on a phone? Did the presence of the performers on screen do justice to the experience? How might practitioners and scholars of the fields make sense of the parts that get lost in the technical difficulties?

As far as the ethics surrounding personal boundaries is concerned, Klaus Schwab points out that:

[i]t is in the biological domain where [he sees] the greatest challenges for the development of both social norms and appropriate regulation. We are confronted with new questions around what it means to be human, what data and information about our bodies and health can or should be shared with others, and what rights and responsibilities we have when it comes to changing the very genetic code of future generations (2017:26).

Being slightly behind the 4IR front, applied drama and theatre does not necessarily interact with the biological domain in

the way that Schwab outlines it. Rather, it invites speculation into how the space between practitioners and participants may need to be negotiated while working with, through, and despite the presence of technology. More than ever, it becomes the responsibility of the practitioner to ensure technological competence while carefully engaging with the physical, emotional, and psychological safety of the participants, especially in instances where interactions between people are physically disconnected.

Syed Jamil Ahmed (2022:93) suggests that ethics for applied drama and theatre “should come before efficacy, aesthetics, transformative agendas, theoretical underpinnings, and all else”. This may be an important point to ponder in the face of how we integrate technology as part of a “transformative agenda” and an added “aesthetic” that concerns an embodied practice of social justice. This ethical consideration is important for playback theatre because of its potential to elicit intimacy, catharsis and a therapeutic outcome. What would a “4IR-informed playback theatre” mean, exactly? The ethical considerations for such an approach would need more attention. For example, the aesthetic of that kind of approach would need to be considered carefully, given that a large part of the demographic that benefits from the work is on the other side of the digital divide.

Conclusion

The playback performance at the women’s shelter presented an opportunity to tussle with dilemmas in practice and engage with what it might mean to introduce technology in a playback theatre performance. The Zoom performance became a strategic tool that bridged the gap between the participants and the performers during the national lockdowns. Although it served to connect bodies across spaces, the limitations of Zoom also contributed to moments of alienation in the process by making it difficult for the performers and the conductor (the facilitator of playback theatre) to respond to some of the narratives that the women were sharing. Ideas of embodiment and framing were challenged, further raising concerns

about ethical consideration for doing such work when using digital platforms.

Creatively speaking, practitioners were able to adapt their approaches online, however, the human connection was lost or difficult to decipher. Unlike digital performance – where productions are intended for the digital to meet human engagement – translating an artistic medium on a screen that is meant for in-person, human-to-human social transformation introduced challenges such as access to the very platforms that host the interaction, i.e., Zoom, WhatsApp, and the internet. A dilemma this might create in the field of applied drama and theatre is the choice between innovation and access.

So, is applied drama and theatre ready to embrace the 4IR? The paper only presented *one* case example from *one* applied drama and theatre approach. To use it as a measuring stick is perhaps not sufficient. This was a brief discussion of when technology hampered the work. It is possible that other practitioners either of playback theatre or other applied drama and theatre approaches were successful with their integration of technology and the artform. Another limitation is that what I presented was only *one* way of conducting a hybrid playback performance. It does not exhaust the other ways that other practitioners might have attempted to do so. That said, given the considerations I outlined earlier, no, perhaps the field is not ready to embrace the 4IR, but the 4IR does give the field an opportunity to engage in future possibilities. As Schwab (2017:8) might add: the 4IR is growing at an exponential pace and continues to deepen its co-existence with society and as such urges stakeholders of global society, i.e., businesses, the government, institutions of higher education, as well as civil society, to embrace the responsibility to work together to grasp the complexities that come along with the current 4IR.

Notes

1. This study took place between June 2020 and December 2021 and mainly focused on applied drama and theatre practitioner experiences. It was approved by the Stellenbosch University's

Ethics Committee of the Faculty of Arts and Social Sciences. Before the study, practitioners read and signed an informed consent statement consenting to participate in interviews and applied drama and theatre workshops concerning their experiences in practice. The consent form stated that their anonymity would be maintained, as the work would form part of further contribution to new knowledge production pertaining to lived experiences of applied drama and theatre practitioners; continued monitoring and evaluation of applied drama and theatre interventions; and scholarly debates on the use of applied drama and theatre for transformative education in post-conflict/transitioning contexts like South Africa. Verbal consent from the playback group (which was later confirmed via email) was also obtained concerning this dissemination of the research.

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