From Technauriture to Cultauriture: Developing a Coherent Digitisation Paradigm for Enhancing Cultural Impact

Andre Mostert[1a], Bob Lisney[2b], Geoffrey M. Maroko[3c], Russell H. Kaschula[4d]

Abstract

Developing suitable frameworks and paradigms (theoretical and practical) is a challenge for all disciplines in the face of rapid technological changes. Technological advances are fundamentally changing discourse in many well-established areas of research; from advances in understanding the brain, questioning the informed wisdom of sectors of the brain, through to impacts of social networks on sociology, to digitisation of culture. Technology's potential is a double-edged sword which calls for coherent and reflective practices, to avoid the many pitfalls which abound. Kaschula recognised this as far back as 2004 in terms of orality, oral societies, and developed *Technauriture* as a framing solution. Drawing from this experience, the authors aim to expand the concept to offer a framing paradigm for culture in the form of *Cultauriture*. In this article the concept of Cultauriture is introduced and expanded to create a base for further research and dialogue with and between cultural practitioners, artists and policy makers.

[1] M.A., Email: andrem@cultauriture.com
[2] B.A., Email: boblisney@uk2.net
[3] Ph.D., Email: gmaroko@yahoo.com (Corresponding Author)
    Tel: +254-712-660-638
[4] Professor, Email: R.Kaschula@ru.ac.za
[a] University of East London, United Kingdom
[b] The Public Monuments and Sculpture Association, United Kingdom
[c] Machakos University, Kenya
[d] Rhodes University, South Africa

1. Introduction

> "What I really needed was a Grand Unified Theory of Culture that explains creativity, human interactions and progress". (Man, 2000, p. 206)

Changing technological and digital capabilities has opened extensive scope in all spheres of the modern economy, not least the cultural and creative sector (CCS). Perhaps this new digital era will help with developing this unified theory that humankind seeks. However, if anything, it is likely to make the interaction within the cultural sector more complex (Merritt, 2016). This scope and complexity is inevitably embraced and analysed in a staccato manner given the multimodal potential, applications and nodes that abound. This invariably overwhelms policy makers and practitioners alike, especially in terms of planned application of the potential and embracing opportunities that technological solutions offer (Bozeman, 2000).

With growing acceptance of something that approaches a Singularity and/or transhumanism future (Kurzweil, 2005; Raulerson, 2013; Steinhart, 2008; Vinge, 1993) the academic analytic framework needs to be robust. Any analysis does not enjoy the luxury of getting it wrong when it comes to our emerging technological future. Any errors may have a resonance that could have serious implications. For example, significant technological unemployment in the sense that the work environment is now dictated by access to technology and knowledge of technology. It can be argued that none could have foreseen how technology's relationship with human condition has and/or could evolve.

This complexity and impact is obvious even to the casual observer. For example consider a group of young people and their mobile phones, which they constantly access. This shows how rapidly smart phones have taken a central role in their day-to-day existence. Recent research has shown that owners of smart phones tend to pick up their phones between 150-200 times a day, indicating an interdependence between human and technology (Deloitte, 2015). Consequently, it is not unreasonable to conclude that smartphones "… control us, for our unconscious identification with them,

invests these objects with our person" (Drengson, 1982, p. 29). This reality has effectively brought the concept of the philosophy of technology to the forefront of human condition, a place that is not historically occupied. This lack of appropriate focus on the philosophy of technology is a serious problem and needs to be addressed. Is technology a self-propelling agent? How does technology evolve and how does this impact the human condition? How does technology fashion human thought? How does technology define and/or impact culture? Does technology drive culture or does culture drive technology? If one accepts that language underpins culture and moves it along in a Whorfian sense, then perhaps the same can be true of the relationship between language and technology.

Addressing these questions is not a simple task. One of the key contributing factors to this reality is the lack of effective cross-disciplinary applications regarding the philosophy of technology and the fact that it is a relatively new field. As recently as 2006, Val Dusek observed that "… as philosophy goes, philosophy of technology is a relatively young field … [t]he 'action' in early modern philosophy was around the issue of scientific knowledge, not technology" (Dusek, 2006, p. 1). This relatively new field when coupled with developments in the cultural and creative sector has resulted in a situation where technology is applied to culture and cultural artefacts in a haphazard and often unsustainable manner, due in part to the lack of effective commercialisation strategies. This has resulted in a dependence on public finance to support and maintain access to cultural artefacts.

2. Technology's Impact on Culture

Technology's impact on culture has received attention in terms of social construction of technology (SCOT) and technological determinism, but how technology is applied to culture is invariably empirically-positivist in nature. The latter is captured in Karl Mannheim's view that "… once established, scientific laws and mathematical verities become independent of history and culture" (Velody & Williams, 1998, p. 17). Velody and Williams, argue that the contemporaneous reality is one of proliferating hybrid constructivisms, "… avowedly (re)radicalizing

selected initiatives for the sociology of scientific knowledge and integrating them with radical feminist, neo-Marxist, postmodernist, cultural, cognitivist, literary-theoretic and other contemporary academic movements and developments" (Velody & Williams, 1998, p. 18). This hints at the idea of some grand narrative which is accessible to a very small cohort of interested parties and offers little practical material for policy makers and many practitioners within the cultural and creative sector.

The reality, notwithstanding grand theories, is that "[w]e live in societies which are rapidly transforming due, in part, to new technologies. The understanding of the relationship between culture and technology is then quite important to understanding our contemporary world" (Wise, 2006, p. 1). Slack and Wise (2007, p. 1) continue to observe that when "…people understand the relationship between culture and technology, they can evaluate the options and negotiate better choices". However, this relationship is complex, but in its most simplistic form the relationship between the two falls within a continuum that offers on the one side technological determinism and on the other cultural determinism. Where the relationship between technology and culture lies on this continuum is inevitably influenced by the disciplinary background of the critic. To effectively locate it in terms of the present analysis requires an analysis of the place of technology in society.

The status of technology has opened much debate in terms of the impact of technology. Therefore, an irony is emerging in terms of the philosophy of science and philosophy of technology. Feenberg (2003) argues that the former is seeking truth and that the latter is about usefulness. Today the degree to which technologies are embedded in human existence opens wide areas of debate. Feenberg (2003) in his speech to Komaba undergraduates observed that many traditional societies are built on customs and myths which maintain the fabric of their social mosaic and consequently, "… forbid certain kinds of questions which would destabilize their belief system" (p. 1). He further observes that "[m]odern societies emerge from the release of the power of questioning against these traditional forms of thought … [o]ne might say that scientific-technical rationality has become a new culture" (p. 1).

3. From Technauriture to Cultauriture

Given the nature and rapid trajectory that technological developments are following, the impact across many sectors of society is extensive, from highly positive to more negative outcomes. This has created an environment where technological solutions are applied in a haphazard and non-systematic manner, which often undermines the innate potential associated with the respective applications. Kaschula recognised the opportunities that new technologies presented (Kaschula, 2004a, 2004b, 2012; Kaschula & Mostert, 2009, 2011), in terms of effective digitisation of oral cultures, as a means of preservation, development, and enhancement. This led Kaschula to coin the term *Technauriture*, which recognises the three way dialectic between primary orality, literacy, and technology. Taking its etymological roots from *technology* and *auriture*, where auriture acts as a combination of the oral and the aural as well as retaining the *ture* from written literature.

Kaschula and Mostert (2011) developed a position paper entitled *From Oral Literature to Technauriture: What's in a Name* which was published as part of the World Oral Literature Project: Voices of Vanishing Worlds at Cambridge University. As Kaschula and Mostert observed "[o]ral poetry and, by extension, oral tradition is … intrinsic to the human cultural mosaic" (Kaschula & Mostert, 2011, p. 1). The term Technauriture endeavoured to address the need, as identified by Kaschula, for a "… theoretical paradigm … to better understand this mixing of genres and technologies" (Kaschula & Mostert, 2011, p. 1). Technauriture as paradigm offered the practitioners and producers of oral material a framework for conceptualisation of the interface, or the three dialectic between primary and secondary orality and technology (Kaschula & Mostert, 2011, p. 1).

The journey that Technauriture has taken, and the suggested Cultauriture, must be contextualised within the paucity of technological paradigms for effective trans-disciplinary applications. Cultauriture endeavours to address all aspects of technology, culture, orality and aurality, and

how culture is manifest, maintained, and developed in a digital age. Cultauriture aims to act as a coherent conceptual paradigm to locate all aspects of contemporary culture within a technological framework to ensure effective policy framing and avoid ad hoc application of new and innovative technologies, while also locating aspects of digital preservation, economic development, and cultural maintenance within a suitable analytical framework. Culture is by nature cross-disciplinary/trans-disciplinary and calls for cross fertilisation and avoidance of a silo analysis. Technauriture provides a conceptual base for wider application to the digitisation of culture. In order to achieve this, the authors have subsumed Technauriture into Cultauriture, and capitalised it in recognition of the importance of effectively mobilising the concept and recognising that technology is becoming a defining element of contemporaneous human existence. Cultauriture aims to create a coherence to the application of technological solutions and innovations in a manner that maintains and enhances cultural development, to promote cultural sustainability.

Social Constructivism, according to Wiebe Bijker (2001), offers a suitable starting point for

recognising the importance of developing the Cultauriture paradigm. Bijker argues that "… because we live in a technological culture, we have an obligation to understand that technological culture" (Bijker, 2001, p. 19). In this work Bijker (2001) argues for the role and importance of science-technology-society (STS) studies. Cultauriture aims to widen STS and add Culture as an integral aspect of this dialectic, presenting it as a four-way interface of science-technology-society-culture (STSC). It could be argued that the distinction is spurious in terms of society being an extension of culture. However, this could equally be levelled at the distinction between science and technology. Obviously, there is much debate that could be pursued at this stage. However, the authors wish to extract from the social constructivist perspective to inform the development of Cultauriture.

Using Bijker's (2001, p. 22) distinctions between standard and constructivism images of Science and Technology (S & T) it is the authors' intention to apply this to the ideas associated with Cultauriture as indicated in the table that follows.

Table 1
Views of Science and Technology (S&T) and Cultauriture

Standard view of S&T (Bijker)	**Constructivist View of S&T** (Bijker)	**Cultauriture**
Clear distinctions between political and scientific/technical domain	Both domains are intertwined; what is defined as a technical or as a political problem will depend on context	Society and Culture represent the context within which the domains exist and are intertwined
Difference between "real science" and "trans-science"	All science is value laden and may – again depending on context – have implications for regulation and policy; thus there is no fundamental difference between "real science" and "trans-science", "mandated science", or "policy-relevant science"	Any distinction is spurious in terms of the impact on society and culture, through Cultauriture the context is the landscape upon which value laden science and technology unfold
Scientific knowledge is discovered by asking methodologically sound questions, which are answered unambiguously by nature	The stabilization of scientific knowledge is a social process	Society and Culture are the social contexts within which scientific knowledge gains its credence
Social responsibility scientists and technologist is a key issue	Development of science and technology is a social process rather than a chain of individual decisions; political and ethical issues related to science therefore cannot be reduced to the questions of social responsibility of scientists and technologists	Society and Culture are those social processes but include all elements of social and cultural responsibility of all practitioners

Technology develops linearly e.g. conception – decisions - operations	Technology development cannot be conceptualised as a process with separate stages, let alone a linear one	Society and Culture are complex milieus that mix the linear and non-linear aspects of the dialectic between human, technology, and scientific development
Distinction between technology's development and its effect	The social construction of technology is a process that also continues into what is commonly called its "diffusion stage"; the (social, economic, ecological, cultural …) effectiveness of technology is thus part of the construction process and typically has a direct vice versa implication for technology's shaping	The relationship between Society and Culture and technology is totally integrated and the interface between shaping is complex and any distinction is artificial
Clear distinction between technology development and control	Technology does have the context-independent status that is necessary to hope for separation of its development and control; its social construction and the (political, democratic) control are part of the same process	Society and Culture are the driving forces and how technology integrates is context driven only in so far as it meets the goals of the societies within which it manifests
Clear distinction between technological stimulation and regulation	Stimulation and regulation may be distinguishable goals, but need not necessarily be implemented separately	There is no distinguishable aspect and the interface is opaque as social needs drive technology, and technology drives social needs while regulation integrates and stimulates
Technology determines society, not the other way around	Social shaping of technology and technical building of society are two sides of the same coin	These flip sides are defined by the various aspects of Society and Culture and definition flows are integrated and driven by the cultural context
Social needs as well as social and environmental costs can be established unambiguously	Needs and costs of various kinds are also socially constructed – depending on the context relevant social groups, varying with perspective	Recognition of the complexities of Society and Culture and the need to apply technological solutions cost effectively and in an appropriate manner to meet diverse needs and aspirations of societies

Cultauriture embraces many aspects of the constructivist perspectives, but aims to evaluate the role of culture, and bring it into the realm of being an overt reference for assessing the role of technology. Effectively trying to do for culture, in general, what Technauriture has done for the relationship between orality, oral cultures, and technology. By creating its own column in Bijker's table the authors are attempting to achieve this enhanced status for culture within the constructivist debate. This opens up the inevitable conundrum of what culture is. According to White's (1959) definition culture is "behaviour peculiar to Homo sapiens, together with the material objects used as an integral part of this behaviour", as cited in Urevbu (1997, p. 5). Urevbu builds on White's four jointly applicable meanings for the concept of culture:

1. A general state or habit of mind, having close relations with the idea of human perfection;
2. A general state of intellectual development in a society as a whole;
3. The general body of the arts; and
4. A whole way of life, i.e., material, intellectual and spiritual.

Urevbu (1997) argues that the link between culture and technology is implied in these definitions. The UNESCO definition is as

follows: "Culture is that complex which includes knowledge, beliefs, arts, morals, laws, customs, and any other capabilities and habits acquired by [a human] as a member of society".

4. Cultauriture, Ethnolinguistic, and Sociolinguistics

Any effective locating of the Cultauriture concept cannot be achieved without suitable treatment of the relationship between technauriture, cultauriture, and ethnolinguistic. The credit for spawning this sub-discipline has been ascribed to Edward Sapir (Nooriafshar, 2015). In developing Cultauriture as a framing paradigm, the role and importance of an ethnolinguistic perspective is essential, and allows for embedment of linguistic anthropological focus, which incorporates the aspects of "language in its biological and sociocultural contexts" (Nooriafshar, 2015, p. 126). While the biological perspectives are of limited interest in the present analysis, the sociocultural aspects are key. This sociocultural focus is by definition drawn from the sociolinguistic methodology, where the focus is on "studying the language in use, at the level of social group, not the language of an individual speaker which implies that sociolinguists' studies do not deal with prescribed rules but describes tendencies of a social group" (Tabatabaeian, 2015, p. 134). Cultauriture seeks to capture the relationship between culture and technology, and by extension the role of language, sociolinguistics and ethnolinguistic needs to be recognised and addressed to ensure the underlying aspects of language change, in the social contexts in which it is used, impacts the relationship between the three-way dialectic that is language, culture, and technology. Recognising the need to embed the language aspects within the Cultauriture concept, the authors believe that linguistics anthropology offers the fulcrum around which the interactions can be best achieved. "Linguistic anthropology as practices today is the understanding of the crucial role played by language and other semiotic resources in the constitution of society and its cultural representations" (Meidani, 2013, p. 145). In the Cultauriture sense it is essential to recognise "that the meaning is socially constructed, *(but)* it is not constructed out of a cultural void" (Kumbalonah, 2013, p. 114) If the human context did exist in a cultural void there would

be no call or need for Cultauriture, as such a void would ensure the need to neutral cultural contexts. The dynamic nature of language and cultural and the manifestation of technological development requires a conceptual framework that maintains the situated context within which cultural artefacts are created. Later in the paper the *Rhodes must fall* campaign is used to expand this viewpoint. Extensive attention in the literature has is given "in understanding culture and intercultural communication" (Zabihi, 2013, p. 132), but less in terms of the impact of language change, technological transformation, and cultural contexts on the value and/or perspectives on cultural artefacts. For example, those from antiquity are viewed as valuable, in and of themselves, and impervious to contemporary sociocultural and/or political perspectives. Aspects of linguistic prejudice, changing political sensitivities and other cultural lenses have a neutral impact on such artefacts. However, contemporaneous perspectives impact directly on more recent artefacts in some cases stretching back over 100 years (i.e. Rhodes must Fall). Similarly, the language aspects of culture need to be recognised in terms of the pejoratives that impact how culture is experienced. As Zabihi observes with regard to teaching, "[t]eaching is constrained by culture and the socio-cultural context in which it is performed" (Zabihi, 2013, p. 131), so by extension culture is constrained by the language or sociolinguistic context in which it is experienced. This hints at the role of language and identity, not on an individual level, but on a social group level. In the conventional language and identity sense, Pishghadam and Saboori (2014) observe that identity refers to "the way one understands his/her relationship to the world, the way such relationship is built across space and time" (p. 64). In developing the Cultauriture concept, the authors are endeavouring to develop the relationship between language change and the issues associated with cultural identity and the manifestation of temporal challenges associated with the valuing of cultural artefacts, inter alia. Kuhiwczak offers some insight into the nature and impact of changing social perspectives, and quotes Bhabha from *The Location of Culture*. "[i]t is from those who have suffered the sentence of history – subjugation, domination, diaspora, displacement – that we learn our most enduring lesson … that the

affective experience of social marginality … transforms our critical strategies" (as cited in Kuhiwczak, 2014, p. 104). Kuhiwczak continues with how the hierarchies associated with culture impact the underlying meaning of culture, and how this meaning is firmly located within the dominate discourse. For example, "Bhabha's argument is not generalized; it is firmly situated in the particular postcolonial discourse as developed in the academic in the last thirty years or so" (Kuhiwczak, 2014, p. 104). This impact of the reigning discourse of analysis when coupled to dynamitic language change and changing social meanings and values, especially in terms of changing political perspectives, calls for a paradigm that is both temporally sensitive and recognises the need to inform cotemporary viewpoints with historically natural lenses.

5. A Critique of Cultauriture

Cultauriture aims to deliver a suitable theoretical and practical paradigm that captures the dialectic between society, technology, and culture. Cultauriture expands the concept of Technauriture into a wider concept that aims to capture all aspects of the interface between technology and culture, while creating suitable theoretical frameworks for integrating cultural development with the philosophy of technology, and establishing analytical tools for assessment and evaluation of existing and future applications of technology to cultural modalities. Cultauriture aims to embrace the aspects of technology, society, and culture that promote cultural sustainability and cultural entrepreneurship. In terms of the practicality, Cultauriture is the exploration of the meaning of culture drawn from the contemporary application of technological and systematic skills to provide knowledge to inform how we understand a community's reaction to contemporary and historical art. This will result in all heritage culture to be significant, and to be understood and appreciated.

Cultauriture treats technology as an enabler for all things cultural, allowing technology to enhance and support the locating of cultural artefacts within relevant social contexts. Furthermore, it also recognises the empiricist-positive reality of society and culture aiming to strike a balance between the empirical outcomes and the need for theoretical framing.

Developing the Cultauriture paradigm offers a coherent framework for assessing, manipulating, and harnessing technology to support society and the cultural landscape and it solidifies the philosophical base of the relationship between technology, society and culture, and the reality within the diverse cultural practices and applications of technology.

Implicit in this analysis is an approach to the philosophy of technology that has society and culture as the central and defining elements. The role of technology as supporting human evolution has long been recognised, immaterial of the underlying philosophical perspective. However, technology as an enabler of culture has received less attention due to the bias toward the scientific aspects of technology. It is argued in this article that the idea of the Philosophy of Technology is not as mature or advanced as would be expected, given the nature of technology within contemporary societies.

"The philosophy of technology deals with the nature of technology and its effects on human life and society…the philosophy of technology as a coherent field of research does not yet exist" (Kroes, 1998, p. 1). This lack of coherence is confirmed by Scharff (2003) when they state that "… the relevant recent emergence of philosophies of technology, an impressive diversity of approaches has already developed…not surprisingly (they) tend to reflect the characteristics of predominately empiricist-positivist tradition (p. 170). If one accepts Kroes's (1998) explanation, that the concept of the field associated with the philosophy of technology is viewed as not being a coherent field, this shows the challenge associated with creating a suitable integration of issues associated with culture, language, and identity, a philosophical debate indeed.

Kroes (1998, p. 1) argues that there are two delineations within the field in terms of the definition of technology: "the distinction between technological (artificial) and natural objects. It involves the relation between man, nature and culture. The second pertains to the distinction between science and technology as types of knowledge". The bias toward the science-technology aspects of the debate is not a surprise, as the philosophy of science has generated more output and is seen as a key

aspect of modernism, where modern technologies are scientifically based as opposed to the traditional forms of technology. Kroes also opens the area of technology as an autonomous agent. "It deals with the question of whether technology follows its own inevitable course of development, irrespective of its social, political, economic and cultural context" Kroes (1998, p. 1). Cultauriture aims to take hold of the course of technological development in terms of its impact and interface with society and culture.

Whether technology operates under its own volition or is socially determined, it follows a fairly consistent trajectory. Drengson (1982, p. 29) offers four stages for technology:

1. *Technological anarchy* – the dominant philosophy of the 19th century which exhibits the type of neo-classical economic philosophy of the 20th century, which held that the market would ensure the correct outcome in terms of which technologies would come to the fore. "It is an expression of optimistic self-assertion and individual opportunism" (Drengson, 1982, p. 30). This philosophical perceptive allows for technological autonomy on a global scale.

2. *Technophilia* – Drengson (1982, p. 29) argues that the anarchistic perspectives gives way to technophilia where the "… products of our technology become not only productive instruments but also our toys". In the present milieu considering that owners of smart phones tend to pick up their phones between 150–200 times a day, our technology is much appreciated (Deloitte, 2015). Consequently, it is not unreasonable to conclude that "they tend to control us, for our unconscious identification with them invests these objects with our person" (Drengson, 1982, p. 29). This technophilia leads inevitably to a love of technology; it delivers technology to the central role of human existence, and "turns the pursuit of technology into the main end of life … [a]t this point humans are technologized by their own love of the technical and of techniques. Life becomes mere mechanism" (Drengson, 1982, p. 29)

3. *Technophobia* – as the opposing force against technophilia this emerges only "…

when it is realized that only human and humane values can curb the threats of a technology running out of human control" (Drengson, 1982, p. 30). In terms of this perspective the possibility of technological autonomy is rejected in favour of human autonomy over technology.

4. *Technological appropriateness* – Drengson argues that this is the fourth stage and represents a maturing of a "…reciprocal relationship between technology, person and world … [a]ppropriate technology requires that we reflect on our ends and values, before we commit ourselves to the development of new technologies, or even to the continuation and use of certain older ones" (Drengson, 1982, p. 31).

In the first three stages mentioned above there is a sense of humanity as recipient of an autonomous agent, technology. Only in stage four does the relationship show the relevant maturity that will need to be characteristic of developments associated with effective mobilisation of technology for cultural maintenance, enhancement, and development. It is this fourth stage that will be a key focus for the analysis of effective mobilisation of technology for cultural development. If the relationships with such technology agents are to serve the human process, they will have to be in the service of appropriate outcomes.

Cultauriture aims to act as the paradigm for achieving an appropriateness for application of technology to cultural development and sustainability. Finding this balance and ensuring technological appropriateness, is unlikely to be achieved through dialogues and discourses of this nature, but rather through application by organisations, stakeholders, and agents within the cultural sphere. Developing the Cultauriture framework and relevant analytical parameters will allow for the consolidation of methodologies and bring a coherence in terms of goals and objectives of applying new technologies to cultural artefacts and their impacts on the society and cultures within which they manifest.

In order to create suitable analytical parameters, it serves the dialectic to address cultural complexities within the framework of the Actor-Network Theory (ANT). Latour (1993, p.

5) offers the following as a broad analysis upon which to overlay ANT, "[o]ur intellectual life is out of kilter. Epistemology, the social sciences, the sciences of texts - all have their privileged vantage point, provided that they remain separate". This separateness is counterproductive in the cultural realm, and it is incumbent on cultural practitioners to embrace the technological advances in a coherent and effective manner, beyond the novelty element. What motivated Kaschula's (2004a) Technauriture perspective is the mobilisation of technology to capture minority cultures inter alia. Coupled to this goal is the movement toward a trans-disciplinary methodological framework that is essential to the enhancement and maintenance of oral cultures, offering a perfect base for any analysis of the innate value of technology to cultural development.

Technauriture effectively acted as a building block for Cultauriture. This is in line with Latour's perspective that the reigning world view is limited in its use of one-dimensional language which treats nature and culture as opposite poles, resulting in knowledge and artefacts being subject to social constructivism or by nature, realism. Latour (1993) calls for a transcendence of this dualism so that

> … it is possible to understand the simultaneous construction of culture, society and nature … instead of being opposite causes of our knowledge, the two poles are a single consequence of a common practice that is now the single focus of our analysis. Society (or Subject, or Mind or Brain …) cannot be used to explain the practice of science, since both are results of the science and technology making. (p. 281)

This social constructivism has not served the capturing of oral cultures, as its silo approach has eschewed the requisite trans-disciplinary approach. Indigenous cultures have by definition been much more integrated, not least in terms of the communing with nature. Technauriture acted as a catch all for oral cultures, as Cultauriture aims to act as an effective tool for the opportunity for the digitisation of culture in its present form.

ANT does not enjoy unanimous praise and has been criticised for, inter alia, ignoring factors such as race, class, gender, and thus limiting its scope for challenging issues of racism, oligarchy, etc. (Bank, 2011). While these criticisms are of philosophical merit and warrant further investigation for any scholar of ANT, in the context of this article ANT offers a suitable paradigm in terms of the relationship between culture, technology, and society.

6. Concluding Remarks: Cultauriture in Action

To show how the Cultauriture approach works in practice some contemporary examples from the world of public sculpture indicate why it is important to capture societies' engagement with culture. The cultural experience is often mediated by professionals who help frame the wider societal perspectives on culture by extracting new findings from archives, archaeology, and our socialisation in a contemporary society. The historically static nature of cultural artefacts has contributed to an anachronistic perspective, which offers both a nostalgic journey and a window on the society's and an individual's past. As society's value systems change, so does the assessment of what is and what is not of cultural value. The linear nature of society invariably delivers a linear perspective on culture and cultural artefacts alike and generates "new meaning" (Nolasco, 2017).

This new meaning and understanding though, comes from one, or a small number of persons with specialised knowledge, interest, with a wealth of study and learning, who have a desire to engage peers and students and interested parties in this debate. This approach to study and learning promotes appreciation of the arts and artefacts in time, place, social, and political history. Cultauriture seeks to add a deeper level of meaning that derives from multicultural, new generational, and contemporary social and political changes essentially from the bottom up, but led by the discipline of recording by using modern technology (i.e. not a Facebook or twitter free for all) that offers a moving context of meaning. What has meaning today should still have meaning in the future but for different reasons. Technology offers immersive contextual scope that allows for intertemporal data exchanges and has the potential to widen understanding and by extension appreciation.

The Rhodes Must Fall example offers insight into the role and potential of Cultauriture as a methodological, meta-cultural paradigm, especially in regard to the concept of counter-memory (Bosch, 2017). Through the application of the Cultauriture as a framework for supporting neutral memory production, which is temporally sensitive, and not driven by normative contemporaneous perspectives, will create a better model for cultural appreciation and cultural maintenance. The historical figure Cecil John Rhodes (1853-1902) was much lauded in his time and in an age that is an anathema to most contemporary societies. Despite this change in the society's norms and standards, Rhodes continues to occupy prominent sites in our communities and he now has come to be known as a pariah due to increasing knowledge and awareness of the world's colonial and imperial history. In Bristol and Oxford, England, in Cape Town, South Africa, and in Richmond, Virginia, USA, there have been demonstrations and requests to remove statues that had stood for many years. These activities have given much oxygen to the concept of "decolonising the mind" (wa Thiong'o, 1998), with its key tool, the English language.

Cultauriture endeavors to use technology to overlay the cotemporary with the historical to maintain a neutral time line for the cultural dialogue, and to allow the dialectic between society, culture, and technology to deliver insight into the human journey. Cultauriture does not take sides, it delivers the human journey, not simply to inform but to inform in a contextual manner. The Rhodes Must Fall example represents a physical manifestation of a changing value system; Cultauriture aims to support this expression in a more formalized and a more neutral perspective.

What will be digitized and captured through Cultauriture is press coverage and the debates in the minutes of town hall meetings, complemented by a more measured and shared approach to the oral and aural history, which would allow a much wider debate about the past and the future to take place. These examples are but a minor reflection of the substantial debate there may be concerning all forms of culture. By using a neutral tool like Cultauriture it becomes possible to capture a wide range of views, opinions, feelings, and responses to our current cultural environment. These can be shared with all, analyzed and presented to reflect current approaches to our cultural world. Current technology allows us to capture, share, analyze, and disseminate findings using all means of data management in a way not previously available. What cannot be allowed is to let the technology be a depository of data which is inaccessible or ineffectively mediated and curated. The Cultauriture framework has the potential to be the collective frame through which we view the past, present, and future of society and culture.

Cultural reductionism is not possible, so developing an analytical framework such as Cultauriture offers a paradigmatic and ontological base to develop a strategic and effective approach to the impact of technology on culture. Through developing Cultauriture these complex cultural networks and interfaces can be assessed, new approaches in terms of the application of technology can be applied, assessed, adapted, and expanded to meet the underlying needs of cultural development and social wellbeing though a process of digitisation using contemporary technologies. Cultauriture attempts to start to frame an effective answer to the question raised by Murris (2016, p. 274): "What is left out, forgotten or ignored by using the discursive apparatus of the social sciences only?".

References

Bijker, W. E. (2001). Understanding technological culture through a constructivist view of science, technology, and society. In S. H. Cutcliffe & C. Mitcham (Eds.), *Visions of STS. Counterpoints in science, technology, and society studies* (pp. 19-34). Albany, NY: State University of New York Press.

Bosch, T. (2017). Twitter activism and youth in South Africa: The case of #RhodesMustFall. *Information, Communication and Society, 20*(2), 221-232.

Bozeman, B. (2000). Technology transfer and public policy: A review of research and theory. *Research Policy, 29*(4-5), 627-655.

Deloitte. (2015). *Industry 4.0. Challenges and solutions for the digital transformation*

and use of exponential technologies. Retrieved from http://www2.deloitte .com/content/dam/Deloitte/ch/Documents/manufacturing/ch-en-manufacturing-industry-4-0-24102014.pdf

Drengson, A. R. (1982). Four philosophies of technology. In C. Hanks (Ed.), *Philosophy today* (pp. 103-117). New York: Wiley-Blackwell.

Dusek V. (2006). *Philosophy of technology: An introduction*. Malden: Blackwell Publishing.

Feenberg, A. (2003). *What is philosophy of technology?* Retrieved from https://www.sfu.ca/~andrewf/books/What_is_Philosophy_of_Technology.pdf

Kaschula, R. H. (2004a). Imbongi to slam: The emergence of a technologised auriture. *Southern African Journal of Folklore Studies, 14*(2), 45-58.

Kaschula, R. H. (2004b). Myth and reality in the new South Africa: Contemporary oral literature. In C. Feral (Ed.), *Founding myths of the new South Africa* (pp. 103-118). Reunion: University De La Reunion.

Kaschula, R. H. (2012). Technauriture: Multimedia research and documentation of African oral poetry. In D. Merolla, J. Jansen, & K. Nait-Zerrad (Eds.), *Multimedia research and documentation of oral genres in Africa: The step forward*. Berlin: LIT Verlag.

Kaschula, R. H., & Mostert, A. (2009). Analyzing, digitizing and technologizing the oral word: The case of Bongani Sitole. *Journal of African Cultural Studies, 21*(2), 159-176.

Kaschula, R. H., & Mostert, A. (2011). *From oral literature to technauriture. What's in a name?* (Occasional Paper 4, World oral literature project). Cambridge: University of Cambridge.

Kroes, P. (1998). Technology, philosophy of. In E. Craig (Ed.), *Routledge encyclopaedia of philosophy*. Retrieved from http://faculty.ycp.edu/~dweiss/phl390_philtech/Philosophy%20of%20Technology%20(Routledge).pdf

Kuhiwczak, P. (2014). Transculturation and multilingual lives: Writing between languages and cultures. *International Journal of Society, Culture and Language, 2*(2), 103-111.

Kumbalonah, A. (2013). Caliban's meaning: The culture of language. *International Journal of Society, Culture and Language, 1*(2), 104-116.

Kurzweil, R. (2005). *The singularity is near: When humans transcend biology*. New York: Viking Press.

Latour, B. (1993). *We have never been modern* (C. Porter, Trans.). New York, London: Harvester Wheatsheaf.

Man, J. (2000). *Alpha beta: How our alphabet shaped the western world*. London: Transworld Publishers.

Meidani, E. N. (2013). Living language: An introduction to linguistic anthropology, Laura M. Ahearn (2012). *International Journal of Society, Culture and Language, 1*(2), 145-149.

Merritt, B. (2016). The digital revolution. *Synthesis Lectures on Emerging Engineering Technologies*, *2*(4), 1-109.

Murris, K. (2016). #RhodesMustFall: A posthumanist orientation to decolonising higher education institutions. *South African Journal of Higher Education, 30*(3), 274–294.

Nolasco, S. (2017). *From Tazan to Homer Simpson: Education and the male violence of the West*. Rotterdam: Sense Publishers.

Nooriafshar, M. (2015). An introduction to linguistic anthropology, Salzmann, Z., Stanlaw, J, & Adachi, N. (2015). *International Journal of Society, Culture and Language, 3*(2), 125-130.

Pishghadam, R., & Saboori, F. (2014) A socio-cultural study of language teacher status. *International Journal of Society, Culture and Language, 2*(1), 63-72.

Raulerson, J. (2013). *Singularities: Technoculture, transhumanism and science fiction in the 21st century*. Liverpool: Liverpool University Press.

Scharff, R. M. (2003). The task of a philosophy of technology. In R. C. Scharff & V. Dusek (Eds.), *Philosophy of technology. The technological condition: An anthology* (2nd ed., pp. 170-171). London: Wiley Blackwell

Slack, J. D., & Wise, J. M. (2007). *Culture and technology: A primer*. New York: Peter Lang Publishing Inc.

Steinhart, E. (2008). Teilhard de Chardin and transhumanism. *Journal of Evolution and Technology, 20*(1), 1-22.

Tabatabaeian, M. S. (2015). What is sociolinguistics? G. Van Herk (2012).

International Journal of Society, Culture and Language, 3(1), 133-138.

Velody, I., & Williams, R. (1998). *The politics of constructivism*. London: Sage.

UNESCO Cultural Diversity (n.d.). Retrieved from http://www.unesco.org/new/en/social-and-human-sciences/themes/international-migration/glossary/cultural-diversity/

Urevbu, A. O. (1997*). Culture and technology: A study in the 1997 theme*. Paris: UNESCO.

Vinge, V. (1993). *The coming technological singularity*. Retrieved from http://www.accelerating.org/articles/comingtechsingularity

wa Thiong'o, N. (1998). Decolonising the mind. *Diogenes, 46*(184), 101-104.

White, L. A. (1959). *The evolution of culture*. New York: McGraw-Hill.

Wise, J. M. (2006). *Technological culture*. Retrieved from http://www.cct.go.kr/data/acf2006/mobile/mobile_keynote2_Macgregor.pdf

Zabihi, R. (2013). Aspects of culture in second language acquisition and foreign language learning, J. Arabski & A. Wojtaszek (2011*). International Journal of Society, Culture and Language, 1*(1), 131-136.