Digital Humanities

in precarious times

EDITED BY

Mirna Nel, Phil van Schalkwyk, Abiodun Salawu,
Gustav Butler & Gilbert Motsaathebe

Digital Humanities in precarious times

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Mirna Nel, Phil van Schalkwyk, Abiodun Salawu,
Gustav Butler & Gilbert Motsaathebe

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Vusiwana C Babane, Department of Educational Psychology, Faculty of Education, University of the Western Cape, South Africa

Zilungile Sosibo, Professor of Education, Faculty of Education, Cape Peninsula University of Technology, South Africa

Peer-review declaration

The publisher (AOSIS) endorses the South African 'National Scholarly Book Publishers Forum Best Practice for Peer-Review of Scholarly Books'. The book proposal form was evaluated by our Social Sciences, Humanities, Education and Business Management editorial board. The manuscript underwent an evaluation to compare the level of originality with other published works and was subjected to rigorous two-step peer-review before publication by two technical expert reviewers who did not include the volume editors and were independent of the volume editors, with the identities of the reviewers not revealed to the volume editors or authors. The reviewers were independent of the publisher, volume editors and authors. The publisher shared feedback on the similarity report and the reviewers' inputs with the manuscript's volume editors or authors to improve the manuscript. Where the reviewers recommended revisions and improvements, the volume editors and authors responded adequately to such recommendations. The reviewers commented positively on the scholarly merits of the manuscript and recommended that the book be published.

Research justification

This book focuses on the challenges and opportunities experienced in the Digital Humanities (DH). The main thesis of this book is on DH in precarious times, while also reporting on topics and research methods in a variety of Humanities subject fields. Digital Humanities is a vibrant and dynamic multidisciplinary, interdisciplinary and transdisciplinary field that encompasses a wide array of disciplines, methodologies and approaches. At its core, DH represents a fusion of computational methods with humanistic inquiry, leveraging technology to explore and analyse various facets of human culture, society and history. This field's nature allows scholars from diverse backgrounds, including literature, history, linguistics, cultural studies and more, to collaborate and engage in innovative research projects that transcend traditional disciplinary boundaries.

All the chapters in this book represent a scholarly discourse and provide original research. The chapters are based on different methodologies ranging from an interdisciplinary approach to a philosophical desk study, case studies, qualitative studies and a semi-structured survey.

In those instances where chapters are based on Master's degree (MA) or Doctor of Philosophy degree (PhD) studies, the editors and authors confirm that they have been revised by more than 50%, and the relevant acknowledgement was provided. The chapters that are based on MA or PhD studies are as follows: 'Constructing the dystopian in digital realms' by Liam Reinhold Rothballer [dissertation not yet submitted for examination], 'Digital craftsmanship in South African sculptural practice and the impact of new technologies on fine art and craft' by Jonathan van der Walt, 'Harnessing digital communication technology to mobilise health awareness' by Adedamola Temitope Akinlade, Eliza Melissa Govender and Elvis Madondo, 'The virus and the vaccine: Curatorship and the disciplinary outsider' by Nina Liebenberg and 'A strategic integrated communication framework for child protection organisations in South Africa: The role of digital media' by Anette Degenaar and Lynnette M Fourie.

All chapters were submitted to iThenticate, a plagiarism detection software platform and where applicable, authors adapted text and inserted acknowledgements of texts that demonstrated high similarity. However, no plagiarism was detected regarding literature reviews, research methods, findings and scientific contributions, and all chapters are free of plagiarism.

The intended target audience is scholars and experts in DH.

Mirna Nel, Deputy Dean for Research and Innovation, Faculty of Humanities, North-West University, Vanderbijlpark, South Africa.

Phil van Schalkwyk, Languages and Literature in the South African Context Research Focus Area, Faculty of Humanities, North-West University, Potchefstroom, South Africa.

Abiodun Salawu, Indigenous Language Media in Africa (ILMA) Research Niche Area, Faculty of Humanities, North-West University, Mahikeng, South Africa.

Gustav Butler, Understanding and Processing Language in Complex Settings (UPSET) Research Focus Area, Faculty of Humanities, North-West University, Vanderbijlpark, South Africa.

Gilbert Motsaathebe, Indigenous Language Media in Africa (ILMA) Research Niche Area, Faculty of Humanities, North-West University, Mafikeng, South Africa.

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List of abbreviations and acronyms

1IR	First Industrial Revolution
4IR	Fourth Industrial Revolution
AeP	Australian e-Portfolio Project
AGYW	adolescent girls and young women
AI	artificial intelligence
AIDS	acquired immunodeficiency syndrome
BIS	Bachelor of Information Science
BRICS	Brazil, Russia, India, China and South Africa
CAD	computer-aided design
CEO	chief executive officer
ChatGPT	chat generative pre-trained transformer
CMS	content management system
CNC	computer numerical control
CP	child protection
CPO	child protection organisation
CPOs	child protection organisations
COVID-19	coronavirus disease 2019
CT	computerised tomography
DCT	digital communication technology
DCTs	digital communication technologies
DH	Digital Humanities
DUT	Durban University of Technology
FLC	faculty learning community
GDE	Gauteng Department of Education
GIFs	graphics interchange formats
GLAMs	Galleries | Libraries | Archives | Museums
HE	higher education
HEI	higher education institution
HEIs	higher education institutions

HIV	human immunodeficiency virus
HSRC	Human Sciences Research Council
HSSREC	Humanities and Social Sciences Research Ethics Committee
IAMCR	International Association for Media and Communication Research
ICT	information and communication technology
ICTs	information and communication technologies
ILMA	Indigenous Language Media in Africa
LMS	learning management system
M&A	Manuscripts and Archives
MAFA	Master of Fine Art
NPO	non-profit organisation
NPOs	non-profit organisations
NRF	National Research Foundation
NWU	North-West University
PDF	portable document format
PLWHIV	people living with human immunodeficiency virus
PrEP	pre-exposure prophylaxis
SABC	South African Broadcasting Corporation
SACM	South African College of Music
SACSSP	South African Council for Social Service Professions
SANEF	South African National Editor’s Forum
SCS	Sculpture Casting Services
SIC	strategic integrated communication
SICs	strategic integrated communications
StatsSA	Statistics South Africa
SUN	Stellenbosch University
T&L	teaching and learning
TUT	Tshwane University of Technology
UCT	University of Cape Town
UKZN	University of KwaZulu-Natal
V&A	Victoria and Alfred
VJOY	Vodacom Journalist of the Year
WHO	World Health Organization
WIL	work-integrated learning

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Notes on contributors

Abiodun Salawu
Indigenous Language Media in Africa (ILMA) Research Entity,
Faculty of Humanities, North-West University,
Mahikeng, South Africa
Email: abiodun.salawu@nwu.ac.za
ORCID: https://orcid.org/0000-0002-1687-4621

Abiodun Salawu is a professor of journalism, communication and media studies and the director of the Indigenous Language Media in Africa (ILMA) research entity at NWU, South Africa. He has lectured and researched journalism, media and communication for 30 years in Nigeria and South Africa. Before his academic career, he practised journalism in several print media organisations in Nigeria. Salawu has published many scholarly publications in academic journals and books, edited and co-edited eleven books and authored one. He regularly presents research papers at local and international conferences. Salawu has also attended fellowships as a visiting researcher at the University of Oxford, UK (Oppenheimer Fund Academic Exchange); the University of Dar es Salaam, Tanzania (CODESRIA/ Carnegie African Diaspora Academic Support to African Universities); Lincoln University, UK (IRG/UK – SA Researcher Links Grants Programme); Addis Ababa University, Ethiopia; and the University of Goroka, Papua New Guinea. He has also won several research grants. He is a co-vice chair of the International Association for Media and Communication Research (IAMCR) journalism section and a member of the editorial/advisory boards of many journals. He was involved in founding the International Association for Minority Language Media Research. He is an NRF C1-rated researcher and a member of CODESRIA's College of Senior Academic Mentors. He is also a distinguished professor in the School of Liberal Arts and Humanities, Woxsen University, Hyderabad, India.

Adedamola T Akinlade
Division of Society and Social Change, Department of Sociology,
College of Humanities, School of Social Sciences, University of KwaZulu-Natal,
Durban, South Africa
Email: akinladea@ukzn.ac.za
ORCID: https://orcid.org/0009-0005-3476-4986

Adedamola T Akinlade obtained his PhD in Culture, Communication and Media Studies from the Howard College campus of the University of KwaZulu-Natal (UKZN). He is currently a lecturer at the School of Social Sciences in the Department of Sociology at the Howard College and Pietermaritzburg campuses of UKZN. He lectures undergraduate and postgraduate students at an honours level in the clinical sociology subdivision. Before entering academia, he had years of industry experience in a number of corporate sectors; Akinlade worked in various agencies, non-governmental and clients' sides, where he was in charge of media relations, community engagement and development in health, youth and women programmes, charitable establishments, communication management and public relations among others. Akinlade believes the nexus between his private sector and academic experience would benefit his academic prospects and the quest to impart young minds in the university learning space. He is a member of relevant professional bodies. He researched and published book chapters and worked on several journal articles while contributing to this book. Akinlade's research interests include intersectional collaboration on social issues and the environment, interventionist approach to social problems, social change, multidisciplinary approach to culture and society, public health communication, inequality, social movements, tactical media studies and effects, social interventions and strategic application, community engagement, participatory communication and corporate social responsibility.

André Gouws[a,b]
[a]Department of Languages and Cultural Sciences,
Faculty of Humanities, Akademia,
Pretoria, South Africa
[b]School of Communication Studies,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa
Email: andreg@akademia.ac.za
ORCID: https://orcid.org/0000-0001-8180-2491

André Gouws is a digital and visual journalism lecturer at Akademia, an independent HEI in Pretoria, South Africa. Before joining Akademia, Gouws was a lecturer at the School of Communication at NWU, Potchefstroom, South Africa and the Department of Journalism at Stellenbosch University, Cape Town, South Africa. He graduated with an MA in Journalism and Media Studies (*cum laude*) from Rhodes University, South Africa. He is completing his PhD at Stellenbosch University, focusing on the digital public sphere. Gouws was appointed an extraordinary researcher at NWU Potchefstroom campus in March 2023. His research interests include journalism education, peripheral journalism and digital journalism. Gouws has presented several papers at South African and international conferences. His most recent international presentation was a paper on peripheral journalism at OCP23 (conference of the International Association for Media and Communication Research) in Lyon in 2023. Gouws published a chapter on decolonising the journalism curriculum through open educational practices in the scholarly book *Contextualised Open Educational Practices:*

Towards Student Agency and Self-directed Learning (AOSIS Books, 2022). Gouws received a Teaching Excellence Award at NWU in 2021 for teaching with information and communication technologies (ICTs).

Anette Degenaar

School of Communication,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa
Email: anette.degenaar@nwu.ac.za
ORCID: https://orcid.org/0000-0002-2767-5986

Anette Degenaar is an experienced communications specialist with expertise in the non-profit sector. Degenaar is a senior lecturer at the School of Communication, NWU, on the Potchefstroom campus in South Africa. She holds a Bachelor of Commerce (BCom) and an MA in Communication. She obtained her PhD in Communication Studies at NWU, Potchefstroom Campus (2021), focusing on developing a strategic integrated communication framework for child protection organisations in South Africa. Her research aimed to address the unique communication challenges faced by these organisations.

Eliza M Govender

Culture, Communication and Media Studies, School of Applied Human Sciences,
Centre for Communication, Media and Society, University of KwaZulu-Natal,
Durban, South Africa
Email: govendere1@ukzn.ac.za
ORCID: https://orcid.org/0000-0002-0937-9438

Eliza M Govender is an associate professor and academic leader of the Centre for Communication, Media and Society (CCMS) in the School of Applied Human Sciences at UKZN, South Africa. Govender is an NRF-rated researcher and is internationally recognised in the field of health communication from a social change perspective. Her teaching and research interests include entertainment education, communication for social and behavioural change and participatory methodologies for implementation science research in human immunodeficiency virus (HIV) combination prevention. Govender has been nominated as chair of the Health Communication Working Group of the IAMCR for a second term. She serves on the editorial board of *Communicare* and the *Journal for Applied Communication Research*. Her co-edited books *Communicating COVID-19 Interdisciplinary Perspectives* (Springer, 2021) and *Communicating COVID-19: Media, Trust and Public Engagement* (Springer, 2024) explore the interdisciplinary communicative responses from various countries and expand the conversations to highlight some of the communication and media challenges to address health and pandemics.

Elvis Madondo
Department of Public Relations and Communication,
Faculty of Management Sciences, Durban University of Technology,
Durban, South Africa
Email: elvism1@dut.ac.za
ORCID: https://orcid.org/0000-0002-6263-1604

Elvis Madondo joined the Durban University of Technology, Durban, South Africa, as a lecturer in 2019 in the Department of Marketing and Retail Management and later moved to the Department of Public Relations Management. Madondo obtained his PhD in Management Sciences, specialising in Marketing, from Durban University of Technology. Madondo has presented research papers at eleven international conferences and published six articles in various journals. His research interests lie in social media marketing, customer relationship management, digital marketing, advertising, ethics and consumer behaviour.

Gilbert Motsaathebe
Indigenous Language Media in Africa (ILMA) Research Entity,
Faculty of Humanities, North-West University,
Mafikeng, South Africa
Email: gilmot2000@yahoo.co.uk
ORCID: https://orcid.org/0000-0002-8681-6945

Gilbert Motsaathebe is a full professor at NWU affiliated with the Indigenous Language Media in Africa (ILMA) research entity. He obtained his PhD in Film and Media Studies from the University of the Witwatersrand. He was, until recently, the editor-in-chief of *Communicare – Journal for Communication Studies in Africa*. Motsaathebe previously lectured at the University of Johannesburg (Johannesburg) and the Cape Peninsula University of Technology (CPUT) (Cape Town) in South Africa, the United Arab Emirates University (Al Ain, United Arab Emirates), and several higher education institutions (HEIs) in Nagasaki, Japan, before working in the Media Relations Directorate in the Office of the Premier of the North West province of South Africa. He started his career at Bop Television, which later merged with the South African Broadcasting Corporation (SABC), where he was a news producer and sub-editor for the station's primetime news before being recruited by e-TV in 1999. After a time at e-TV, Motsaathebe left for the United Kingdom on a two-year working holiday visa, and upon returning to South Africa, he joined CPUT, where he worked for ten years as a senior lecturer. He serves on the Panel of Judges for South Africa's premier competition for journalists: the Vodacom Journalist of the Year (VJOY). He is an NRF-rated researcher with numerous peer-reviewed articles published in acclaimed journals. Motsaathebe has published eight books with publishers such as Palgrave Macmillan, Rowman & Littlefield/Lexington Books and Routledge.

Gustav Butler

Understanding and Processing Language in Complex Settings (UPSET) Research Entity,
Faculty of Humanities, North-West University,
Vanderbijlpark, South Africa
Email: gustav.butler@nwu.ac.za
ORCID: https://orcid.org/0000-0002-2631-9939

Gustav Butler started his academic career at Vista University in Bloemfontein, South Africa. After that, he was employed at Technikon Northern Gauteng (now known as Tshwane University of Technology) and the University of Pretoria, both located in Pretoria, South Africa, lecturing on academic language ability and literacy. He completed his PhD in 2007 with a focus on developing the academic writing ability of postgraduate students. Butler joined NWU as senior lecturer and subject chair of the Subject Group: Academic Literacy at the Vanderbijlpark campus in 2009 and served as the director of the School of Languages at the Vanderbijlpark campus from 2015 to 2018. He is the director of the Understanding and Processing Language in Complex Settings (UPSET) research entity affiliated with North-West University's School of Languages. His research falls within the Applied Language Studies sub-programme, one of three sub-programmes within UPSET. Butler's primary research interests include the design of academic literacy interventions and determining the impact of such interventions on student success. His research further focuses on the development of academic writing, explicitly referring to the writing difficulties experienced by postgraduate writers. He is also a permanent staff member of the School of Languages in the Subject Group: Academic Literacy, which focuses on providing support to first-year students towards developing the specific academic literacy abilities required for successful study at the tertiary level of education.

Jonathan van der Walt

Department of Visual Arts,
Faculty of Humanities, Nelson Mandela University,
Gqeberha, South Africa
Email: jonathan.vanderwalt@mandela.ac.za
ORCID: https://orcid.org/0000-0002-9923-803X

Jonathan van der Walt is an artist and academic based in Gqeberha, South Africa, focusing his practice primarily on the discipline of sculpture. Van der Walt obtained his Bachelor's (BA) degree, cum laude, in Fine Art (Sculpture) at Nelson Mandela University, Gqeberha, South Africa, in which he explored the blurred lines between high and low art within contemporary society. This exploration became the launching pad for research into craftsmanship in contemporary art, which was the central theme of his Master of Fine Art (MAFA) (Sculpture) thesis, for which he was awarded his degree in April 2017. Van der Walt is an associate lecturer in the Department of Visual Art at Nelson Mandela University, gallery manager and curator of the department's Bird Street Gallery. He has furthered his professional practice and visual art portfolio through persistence in developing his professional art career, nationally and internationally, specifically distinguishing himself through a focus on traditional art practices combined with 3D technologies. Van der Walt participated in the Luciano Benetton Foundation Small Canvas Project, exhibiting in Venice, Rome and New York as part of the South Africa collection, as well as exhibiting in the 'Through Our Eyes' exchange at the Ritz Theatre and Museum in Jacksonville, Florida, USA.

Liam R Rothballer
Department of History of Art,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa
Email: liamrothballer248@gmail.com
ORCID: https://orcid.org/0000-0003-0804-1483

Liam R Rothballer is an MA student in History of Art under the guidance of Dr Louisemarié Combrink at NWU on the Potchefstroom campus, South Africa. He is a co-curator of the Cloud Matters group exhibition, which accompanied the NWU Digital Humanities in precarious times conference in November 2022, alongside Dr Annemi Conradie-Chetty and Nokukhanya S Khumalo. Rothballer was working on a study on the anthropology of space, eclectic architecture and environmental storytelling tropes of the dystopian in visual media while contributing to this book.

Lynnette M Fourie
Focus Area Social Transformation, School of Communication,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa
Email: lynnette.fourie@nwu.ac.za
ORCID: https://orcid.org/0000-0002-7128-4958

Lynnette M Fourie is the Focus Area Social Transformation director and a lecturer in the School of Communication Studies, NWU, South Africa. She obtained her MA in 1997 and PhD in 2004 from NWU, focusing on political communication. Her primary research focuses on electoral communication in a developing democracy. Fourie has also published widely on the concept of participation in the field of development communication and stakeholder relations in the field of corporate communication. She is particularly interested in how development and corporate communication intersect in the non-profit South African sector as a developing country. Fourie served on the executive committee of the South African Communication Association (SACOMM) from 2008 to 2009 and was president from 2009 to 2011. Fourie is a member of the IAMCR. She received the IAMCR Award as a promising young researcher in 2008. Fourie serves on the editorial board of the journal *Communicare*.

Marenet Jordaan

Department of Journalism,
Faculty of Arts and Social Sciences, Stellenbosch University,
Stellenbosch, South Africa
Email: marenet@sun.ac.za
ORCID: https://orcid.org/0000-0002-7150-8659

Marenet Jordaan is a lecturer and researcher in the Department of Journalism at Stellenbosch University, Cape Town, South Africa. She graduated in 2000 with a Bachelor of Arts (BA) degree, specialising in Publishing (*cum laude*) from the University of Pretoria, South Africa, where she was awarded the Vice-Chancellor's medal for the best student in the Faculty of Humanities. After completing her Bachelor of Philosophy (BPhil) in Journalism at Stellenbosch University, she worked in various roles at *Die Burger* and *Rapport* newspapers. Between 2009 and 2014, she was a lecturer in the Journalism Programme at the University of Pretoria. While working at the University of Pretoria, she obtained her Master of Philosophy (MPhil) in Journalism from Stellenbosch University, focusing on the role of the then-still-new phenomenon of social media use in newspapers. Jordaan returned to Stellenbosch University in 2015 to lecture on the honours and MA programmes. She completed her PhD focusing on the Afrikaans online news publication *Netwerk24* in 2018. In 2020, she received a Stellenbosch University institutional teaching excellence award. Jordaan has presented papers at various academic conferences, including two iterations of the World Journalism Education Congress and in 2023 at the International Communication Association's annual conference. Jordaan's current research interests include newsroom ethnography, newswork cultures, journalism ethics, journalistic role conceptualisations and journalism education.

Micaela Scholtz

Department of Visual Arts,
Faculty of Humanities, Nelson Mandela University,
Gqeberha, South Africa
Email: scholtzmicaela@gmail.com
ORCID: https://orcid.org/0000-0003-1992-9760

Micaela Scholtz is a trained graphic designer and researcher engaged within a multidisciplinary space, known to articulate and author complex visual communication solutions in unique and carefully considered ways. In 2020, Micaela obtained her MA in Graphic Design from Nelson Mandela University, South Africa, and has since lectured in the subject area. Scholtz's practice and research mainly concern two distinct subjects: the representation of women and its impact on personal experiences with the invisible illness, endometriosis. Secondly, her interest lies within hybrid visual arts education, identifying problems about portfolio practice teaching and learning (T&L) and providing logical solutions and processes to overcome them.

Mirna Nel

Deputy Dean for Research and Innovation,
Faculty of Humanities, North-West University,
Vanderbijlpark, South Africa
Email: mirna.nel@nwu.ac.za
ORCID: https://orcid.org/0000-0003-0170-3296

Mirna Nel is a qualified speech therapist who worked for fifteen years in the support services of the Gauteng Department of Education (GDE), South Africa. Nel was appointed senior lecturer in 2006 and promoted to associate professor in 2013 and full professor in 2018 at North-West University (NWU), South Africa. Nel's teaching expertise includes inclusive education, learning support and life orientation, for which she initiated and developed several modules at NWU. In 2016, she was appointed as a research professor in the Optentia Research Focus Area and in 2019 as Deputy Dean for Research and Innovation in the Faculty of Humanities. Nel has been involved in several national and international collaborative research projects focusing on inclusive education for the last 20 years. She has published several articles in national and international journals, written numerous chapters in national and international books, co-edited and sole-edited textbooks, and supervised and delivered Master's (MA) degree and Doctor of Philosophy (PhD) students. Nel has presented conference and keynote papers at national and international conferences, where she has also conducted workshops and presented lectures at various European universities and was a panellist at international colloquiums and conferences. She was awarded a C1 rating by the South African National Research Foundation (NRF).

Nina Liebenberg

Department of Fine Arts,
Faculty of Humanities, University of Cape Town,
Cape Town, South Africa
Email: ninaliebenberg@gmail.com
ORCID: https://orcid.org/0000-0002-5078-5331

Nina Liebenberg has spent the last ten years working at the University of Cape Town's Centre for Curating the Archive, convening a selection of courses for its curatorial programme. Using curation as a methodology, Liebenberg explores overlaps and connections between various university departments and regularly draws on the expertise of individuals from disciplines ranging from chemistry, medical imaging, physics, engineering and botany to create artworks and curate shows portraying the intersection between the quantifiable and the poetic. Her PhD thesis (2021) took the form of an object study that exposed the limitations of insider knowledge and categorisation systems within the academic departments of the University of Cape Town and demonstrated the explanatory, interdisciplinary potential of curatorship and artmaking. While contributing to this book, she was a postdoctoral researcher at the University of the Arts, Helsinki, Finland.

Phil van Schalkwyk

Languages and Literature in the South African Context Research Unit, School of Languages,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa
Email: phil.vanschalkwyk@nwu.ac.za
ORCID: https://orcid.org/0000-0002-4259-7074

Phil van Schalkwyk holds a PhD in Linguistics and Literary Theory from NWU, South Africa. He is an NRF-rated professor in the School of Languages at NWU, where he lectures on Afrikaans and Dutch literature. His previous experience includes almost five years teaching South African Studies at the Institute of English Philology, Adam Mickiewicz University, Poznań, Poland (2001–2006). Mainly active in the field of comparative literature, he focuses on relationality and rhetorical constructions in Afrikaans, South African and Dutch prose and poetry. Van Schalkwyk has presented research papers at conferences in South Africa, the Netherlands, Belgium, Poland and the USA and published in the following peer-reviewed journals: *Dutch Crossing*, *Konteksty Kultury*, *Critical Arts*, *Journal of Humanities*, *Stilet*, *Literator*, *Tydskrif vir Nederlands en Afrikaans* and *South African Journal of Linguistics*. His book chapters include contributions to: *Anna M. Louw: Fassinerende, veelkantige skrywer* (South African Academy for Arts and Sciences, 2021); *Verbintenis en venster: Die Nederlandstalige letterkunde van aanvang tot hede* (Van Schaik Publishers, 2019); *Perspektief en profiel: 'n Afrikaanse literatuurgeskiedenis* (Van Schaik Publishers, 2015); *Crossing Borders, Dissolving Boundaries* (Brill, 2013); *Shifting the Compass: Pluricontinental Connections in Dutch Colonial and Postcolonial Literature* (Cambridge Scholars Publishing, 2013), and Beyond the Threshold: Explorations of Liminality in Literature (Peter Lang, 2007). Van Schalkwyk was awarded the 2019 South African Academy's Esther Greeff Prize for his article on the novel *Wolf, wolf* in the context of Eben Venter's oeuvre, published in the *Journal of Humanities* in 2017. He has been co-editor-in-chief of the accredited journal *Literator* since 2017. In June 2021, he was appointed research director of the Languages and Literature in the South African Context research unit at NWU.

Preface

Mirna Nel
Deputy Dean for Research and Innovation,
Faculty of Humanities, North-West University,
Vanderbijlpark, South Africa

Phil van Schalkwyk
Languages and Literature in the South African Context Research Unit, School of Languages,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa

Abiodun Salawu
Indigenous Language Media in Africa (ILMA) Research Entity,
Faculty of Humanities, North-West University,
Mahikeng, South Africa

Gustav Butler
Understanding and Processing Language in Complex Settings (UPSET) Research Entity,
Faculty of Humanities, North-West University,
Vanderbijlpark, South Africa

Gilbert Motsaathebe
Indigenous Language Media in Africa (ILMA) Research Entity,
Faculty of Humanities, North-West University,
Mafikeng, South Africa

In a modern and fast-evolving technological world, precarity has become more notable. Precarity or precariousness means being uncertain or feeling insecure. McCormack and Salmenniemi (2016, p. 2) describe precarity and precariousness in current times as 'an intensification and an increasing normalisation of insecurity and instability in our sense of selves, our work/home lives (or even in this impossible separation), time, space and belonging'. Moreover, digital transformation has led to the 'datafication' of societies and individuals, resulting in new complexities and potential vulnerability in our interactions with technology (Kakalic & Hancock 2023). Thus, it is crucial that the Humanities subjects make their voice heard where the focus is on human beings, their culture and values.

This book was initiated after the first Digital Humanities in Precarious Times conference organised by the Faculty of Humanities at North-West University in South Africa focusing on Digital Humanities (DH) in precarious times and held at the Riverside Sun Hotel in Vanderbijlpark, South Africa, on 02–04 November 2022. The conference aimed to bring together scholars from different fields of study in the Humanities to report on research and

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practice related to DH. Papers presented at the conference looked into human skills such as creativity, innovation, adaptability, empathy, integrity and imagination as quintessential to ensure that everyone reaps the advantages of a digital world. Some of the papers presented were collected for publication in this book after a thorough internal selection and peer-review process. The conference aimed to bring together scholars from different fields of study in the Humanities to report on research and practice related to DH. Papers presented at the conference looked into human skills such as creativity, innovation, adaptability, empathy, integrity and imagination as quintessential to ensure that everyone reaps the advantages of a digital world. Some of the papers are presented in this book after a thorough peer-review process.

The first chapter, by Liam Rothballer, explores how spatial-architectural features visually construct and narrate digital realms characterised by dystopian attributes of human corruption, suffering and survival in computer games. In the second chapter, Jonathan van der Walt presents a philosophical desk study which examines the evolution of craft and craftsmanship as it relates to predominantly Western developments in the fine arts to establish a historical precedence for analysing digital craftsmanship. Micaela Scholtz uses a case study in Chapter 3 to argue that visual arts education should embrace the implementation of various digital pedagogical approaches. In Chapter 4, André Gouws and Marenet Jordaan study an authentic teaching model that imitates industry, which was created for two South African universities. Through a review of the literature and a reflection on an authentic newsroom, they argue that theory and practice in journalism education can be reconciled through a teaching and learning model that embraces authentic learning. Chapter 5 by Adedamola Akinlade, Eliza Govender and Elvis Madondo, looks at digital media technology in a communication space as a divergent platform of knowledge exploration, unloaded pertinent aspects of affordances it contributes to the world of communication in modern society, and construed inherent concepts in social media, social networking sites, the Internet and other aspects of the digital communication technologies. The chapter also explored students' insights into how digital media platforms can advance the promotion of human immunodeficiency virus (HIV) prevention strategies, such as the uptake of oral pre-exposure prophylaxis (PrEP), a significant public health approach to taking charge of their own health and well-being. In Chapter 6, Nina Liebenberg asserts that data generated by current research provide exciting new dimensions to existing archives, enabling the transformation of these historical materials. Furthermore, the digital space provides a platform through which this shapeshifting can manifest. This chapter explores these possibilities by using the methodology of an object study conducted on an archival holding of the University of Cape Town – a small medicine chest housed in the Manuscripts and Archives (M&A) Department as part of a larger collection of papers called the BC666 Floyd Family Papers. Anette Degenaar and Lynnette Fourie, in Chapter 7, investigate the field of DH and digitalisation’s effects on the non-profit sector, with a particular focus on the child protection sector in South Africa. Through a qualitative study, they explored the need to balance the benefits of digital media against the risks of statutory confidentiality breaches and sharing unverified information.

We hope that the research presented in this book will add more insight into DH.

Chapter 1

Constructing the dystopian in digital realms

Liam R Rothballer
Department of History of Art,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa

Abstract[1]

Notions of the dystopian are often used in reference to narratives containing post-apocalyptic settings and concomitant breakdowns in social, cultural and political structures. The dystopian is thus a form of socio-cultural and socio-political critique that became quite prevalent in modern and postmodern literature and is predicated on narratives of a society that has experienced some form of cataclysmic breakdown of order, social cohesion and stability. Instances of the dystopian in contemporary digital media realms – such as those in interactive video games – show a heightened interest in the built environments that these stories take place in, foregrounding their role as more salient than being dramatised backdrop settings in the narrative. Consequently, digital realms and their built environments – especially those in video games such as *Dark Souls: Remastered* (2018),

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[1] This chapter is based on the author's working Master's degree (MA) thesis, Rothballer LR, 'Dark Souls: spatial-architectural features of the dystopian in a multivalent gamespace', that is to be yet submitted for examination in fulfilment of the requirements for an MA degree in the discipline of Art History at the School of Communication, Faculty of Humanities, North-West University, South Africa, with Prof. Louisemarie Combrink as supervisor and Mr H Fourie as co-supervisor.

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Horizon Zero Dawn (2017) and *Cyberpunk 2077* (2020) – arguably use spatial design and architectural features quite strongly to create layers of narrative meaning that are signalled via formal components of their spatial composition. This interdisciplinary study explores how spatial–architectural features visually construct and narrate digital realms characterised by dystopian attributes of human corruption, suffering and survival in video games. To understand how space and architecture are prominent means of communicating socio-cultural concerns in digital instances of the dystopian, this chapter examines characteristics of dystopian storyworlds that construct spatial–architectural features as narrative meaning-making devices such metaphors, tropes, allegories and motifs. These are devices that lead to their consideration as a narrative construct with embedded and embodied diegetic meanings.

■ Introduction

The research presented in this chapter entails parts of salient theories that are being expanded upon in my MA thesis. It offers an interdisciplinary approach – drawing on post-classical narratology, the anthropology of space, political sociology and architectural theories, as well as transmedial studies – towards the analysis of spatial arrangements in built environments and storytelling techniques most prominently found in interactive, digital video games that are predicated on dystopian narratives. More specifically, this chapter explores how the notion of the dystopian is constructed in the digital realms and storyworlds of contemporary dystopian video games with an emphasis on their thematic, visual and narrativised characteristics.

Initial findings have shown that digital realms are comprised of built environments that establish the dystopian as a concrete motif throughout gameplay events. This is achieved by using certain stylistic designs and spatial–architectural elements to visually convey prevailing tropes associated with the genre (e.g. ruined buildings, wastelands, Gothic cathedrals and crowded cities). These spatial–architectural elements essentially become narrative devices that – through their spatial arrangement and organisation – tend to suggest an outcome to a series of usually dramatic events rather than explicitly telling the player what has transpired before entering a particular game space. Almost like vignettes, in this way, the spatialities of the games gain a measure of agency (that is usually associated with characters or narrative agents) in conveying and guiding the unfolding of narrative events.

These spaces invite the player audience to build their own interpretation and understanding of the history and context of the storyworld, implying that these spaces are designed to evoke narrative meanings among those who engage with the games' spatial content beyond what is initially perceptible. To that end, this chapter therefore explores constructions of the dystopian in digital realms with regards to its spatial–architectural characteristics through an analysis of examples from contemporary video games – namely *Dark Souls: Remastered* (FromSoftware, 2018), *Horizon Zero Dawn* (Guerilla Games, 2017) and *Cyberpunk 2077* (CD Projeckt Red, 2020). I thus offer a brief discussion of more recent conceptions of the dystopian, as well as how the genre itself has developed along with current trends in socio-cultural commentary and critique. This discussion is then followed by an analysis of visual tropes and characteristics of the dystopia found in prominent areas from the three selected video games, namely Anor Londo, All-Mother's Embrace and Night City. This discussion is further supplemented by other related spatial–architectural domains in comparable dystopian media.

The argument is made that the spatialities of digital realms found in these dystopian video games are: (1) organised in a manner that facilitates narrative events as they unfold and (2) constitute the spatial–architectural features that, most saliently, contribute towards thematic and narrative meanings representative of dystopian tropes that recur across these types of video games.

■ The contemporary dystopian in digital realms

To explore the dystopian, one must first be familiar with its status as a presumed counterpart and sometimes foil to the utopian. Utopias are, by definition, non-existent societies that are built upon the foundations of rational thought, benevolence and equity for all its citizens. Some of the earliest conceptions of utopias are derived from literary instances in speculative treatises such as Plato's *Republic* (*c.* 375 BCE) and Sir Thomas Moore's *Utopia* (1516). These works describe examples of harmonious societies ruled by a singular government and possessing a seemingly perfect socio-political legal system. The utopian inspired mankind to pursue the ideal of perfection, yet when attempts are made to conceive them, the inclusion of human factors does not seem to allow for these perfect societies to exist in the real world. In fact, what often happens is instead the achievement of a society that becomes corrupted by rampant consumerism, free-market liberalism and materialistic lifestyles, and thus commodified to the point of devaluing its original premise (Baccolini 2004).

The dystopian, by way of comparison, emerges in novels written from the early 19th century onwards and is hinged on interrogating and problematising the mostly human error and dehumanisation, perhaps ironically, prevalent in corruptible utopias. Reflecting the prevailing fears of dehumanisation and an increasingly dysfunctional society under the promise of uniform progress, dystopian narratives constitute a critical response to the mechanistic industrial revolutions of modern imperialist states, as well as postmodern issues such as re-emerging Cold War anxieties, worldwide disasters (both artificial and natural) and the invasive threats of totalitarianism (Moylan 2000). By the mid-20th century, following a short-lived revival of utopian ideals, several prolific authors shared an existential dread that inspired a cultural shift away from a technophilic or 'progress over all else' paradigm and spurred a rising, pervasive need to warn future generations of the terrors intrinsic to socio-political and socio-cultural tendencies of the time (Baccolini 2004; Baccolini & Moylan 2003; Schuknecht 2019).

The likes of writers such as Yevgeny Zamyatin, Aldous Huxley, EM Forster, George Orwell, Ray Bradbury and Margaret Atwood laid the foundation for dystopian narrative structures, presenting several trademark characteristics that have become synonymous with the image of 'classical dystopian' societies. These tend to include societal hierarchies that are usually under the governance of a single, systemic, totalitarian entity (e.g. The Party in Orwell's *Nineteen Eighty-Four*) and are driven forward by means of considerable scientific and technological advancements. However, the cost of this progress is often made in lieu of consideration towards preserving diverse cultural bodies – absolute obedience and conformity at the cost of humanity. Classical dystopian storyworlds are revered with dread as epitomic explorations of the human condition. Yet, they remain limited by their focus on the complexities and failures of attitudes surrounding topics like technophilia, capitalism and early globalisation – a hindsight that has since been acknowledged by more contemporary scholars and writers (Baccolini 2004; Baccolini & Moylan 2003).

Although the dystopian may have its roots in the development of literary works detailing an anti-utopian critique – or otherwise antonymic forms of the utopian setting – it had already begun to develop into a self-standing literary form as early as the mid-20th century (Abrams & Harpham 2015; Heuser 2003; Moylan 2000; Schmeink 2016). Narratives predicated on the concerns of the dystopian have an inherent focus on a series of unfolding events and places that define an established *tópos* [Greek: τόπος]. For example, Orwell's *Nineteen Eighty-Four* takes place in London. Still, it is a London that has become the capital city of Airstrip One – a major province of the totalitarian superstate of Oceania, which is locked into a perpetual war with the other two superstates of Eurasia and Eastasia.

While the public is mostly aware of the ongoing war, they are not privy to the details of its development. Much of the news broadcasts are unreliable, with an orator spokesman notably changing the name of the state's current enemy mid-sentence on the sixth day of Hate Week (Orwell 2008, p. 188). Even Winston, the novel's protagonist, is involved with the invention of an imaginary war hero in the Ministry of Truth's records. Any dissidence or deviation from the Party's ethos, including potential offences, is forbidden and is met with swift retaliation. As a result, the residents of Airstrip One know not to question the Party's vague news broadcasts and accept everything they say as truthful, even if that information blatantly contradicts prior knowledge.

Of greater interest to this study, however, is the implication that the notion of *tópos* highlights that spatial designs, relations and shared experiences can act as narrative 'expressions' in relation to the characters and similar agents that exist in dystopian realms (Bertetti 2017; Claeys 2017; Montfort 2007). For instance, the iconic Ridley Scott film *Blade Runner* (1982) similarly depicts a futuristic vision of Los Angeles where genetically engineered incipient humans known as 'replicants' are created to act as a synthetic workforce for wealthy humans on space colonies away from Earth. The opening scenes of the film establish that replicants are now illegal on Earth after they revolted against their masters. People seem to live in fear that anyone they know could be a rogue replicant looking for revenge, especially since the newest generation of workers is made to appear 'more human than human'. This fear is substantiated to the audience by the fact that the company responsible for their assembly, the Tyrell Corporation, and its respective multicomplex headquarters appear to dominate the Los Angeles city skyline despite the fact that it is actually situated outside of the city itself – suggesting a prominent fear on the periphery of people's daily lives.

Replicants thus have a looming presence in the Los Angeles of *Blade Runner* – one that is signalled to narratively by the egregious visuals of the Tyrell Corporation's overly massive pyramid-like structure. Also of note regarding spatial relations is that the company's founder, Eldon Tyrell, lives at the very top of this building, which furthers an implied sense of disparate class divisions by quite literally living above those workers responsible for producing his wealth. *Blade Runner* is critically acclaimed for its depiction of the dystopian future in the late-20th century; however, as was the case with the dystopian genre over the course of the late 1960s, it also reflects, to a smaller degree, on the nature of humanity and the essential questions as to what makes one human – what distinguishes 'us' from 'other' entities like automatons or robots (echoing a trend in posthumanism thought).

Likewise, authors and artists working with the dystopian after the 1980s have since brought into the mix new critical perspectives and concomitant interest in spatialities that more accurately reflect political and cultural shifts experienced globally over the last 20–30 years. As a result, the dystopian of the 21st century has transformed into a concept that, I argue, often constructs spatial realms that provide a context and setting for interrogating human nature, an idea that appears to dominate contemporary popular fiction (Barton 2016; Stein 2016). *Dark Souls: Remastered* (2018) is an updated version of a highly praised action role-playing video game that exemplifies these more recent concerns of the contemporary dystopian by offering an exploration of human nature that is inherently tied to the spatially driven exploration of a fading dark fantasy kingdom. The game was originally released in September 2011, with the remastered version updated for release in May 2018. The only notable differences between the two versions are visual and performance enhancements, mostly to do with improved graphical settings and frame rates, as well as some minor updates to gameplay mechanics. Unlike the dystopian stories found in *Nineteen Eighty-Four* and *Blade Runner*, the narrative of Dark Souls culminates in direct confrontations against the ruling members of the state – holding them, perhaps, accountable for the indirect harms they have inflicted upon their kingdom's denizens.

Rather than becoming overwhelmed by the anxieties inherent in dystopian societies, more recent trends in dystopian narratives seem to be in favour of protagonists taking direct action against their oppressive regimes. More often than not, they are now set up to win against impossible odds because their task, as dystopian heroes, is to help reshape their world in a period following a cataclysm; after chaos has surpassed order (Rosenfeld 2005). The core of the dystopian has thus evolved from warning its audience against encouraging pursuits that might break the world into a desperate call to action to address what is now breaking down the social order. As a result, the dystopia of the 21st century has been transformed into a concept that, I argue, often constructs story worlds and spatial realms in fictional narratives to provide context and grounding for interrogating human nature in real-time simulations.

Theoretical framework: Space and architecture as narrative devices

The theories discussed further on are developed as an extension of classical narratology – which is focussed centrally on the study of literature (Genette 1980; Ionescu 2019) – applying notions of narrative theory to stories and texts that utilise visual storytelling techniques and more implicit means of narration. In the digital realms of video games, for example, one encounters built environments that appear to embody the dystopian through their arrangement of spatial–architectural elements and the subsequent characterisation of these elements with regard to the game's narrative aspects. This idea is built on the belief that aspects of a space's design coalesce into a multivalent construct, formulating and defining one's experience of that kind of interactive environment (Lefebvre 1991; Tschumi 1994; Zoran 1984).

The architectural historian and scholar Charles Jencks (1977) argues that objects of spatial inquiry hold multiple meanings and values – like components of a natural language – that can overlap and even oppose each other. The meaning of an architectural structure is, therefore, derived from its inner cohesion (or lack thereof), its relation to other structures surrounding it and how these objects, edifices or sites are used and experienced by people at any given time. For example, church halls and basilicas are typically perceived as meeting sites. They are thus often used as places of assembly, but when that perception is challenged by the introduction of a group of university choir performers, for example, the meanings related to the spatial design and arrangement of a church hall are adjusted in the mind of an observer to account for this experience. In short, the site remains the same formally, but the people using it at any given time determine its spatial experience.

Moreover, Jencks argues that the idea of deriving meaning from spatial designs extends to objects and elements of a built environment that can shape and influence their perception in society at large, achieved through means of analogy (Jencks 1977; Michael, Yaacob & Ali 2020). In other words, he claims that there exists a kind of visual language of architectural elements that elicit linguistic-like features of metaphor, allegory and symbolic codes to guide a viewer's understanding and 'reading' of buildings and the built environment. These features coalesce into visual tropes that an observer can associate with a particular visual style or spatial characteristics. By applying these theories of architectural language to the built environments of digital realms, one finds that video games can similarly construct visual design tropes that represent spatial meanings developed by one's experiences of real-world architecture and social spaces.

A player can therefore co-determine what the intended meaning – and even potential use(s) – of a spatial–architectural element is based on their mental association with its design to real-world analogies and further predicated through the behavioural tendencies associated with these kinds of sites. For instance, to continue the aforementioned example, a church hall found in a video game may be recognisable by its central-plan layout with a characteristic nave, aisles and possibly a raised stage or altar with easily accessible points of egress, even if the site is not being used for mass assembly at any point during gameplay. The spaces in digital realms of video games – or even just elements of their design composition – slowly but surely turn into physical manifestations of socio-cultural identities that can be used to express humanlike needs, values and behavioural norms through visual means (Bronner 2014; Smith 2010).

The built environment thus has a fundamental role in the organisation and memory of spatial experiences. However, its functionality as a structuring and organisational force may extend beyond the spatial dimension of orienting a player in digital space to include socio-cultural aspects and influences as well. In this chapter, the aspects and influences studied below relate directly to notions of storyworlds founded in the dystopian genre (i.e. wide-open desolate spaces contrasting with more crowded urban districts, wastelands, overgrown and dilapidated buildings, overcrowded or abandoned city centres, etc.).

This manner of narrativising space provides a means of organising the dystopia in the digital realms portrayed in video games. Indeed, digitally built environments – much like real-world edifices and cities – appear to be constituted of similar spatial–architectural features that allow them to communicate narrative meaning almost linguistically. These basic elemental units of a digital space's visual design and composition are thus often used in conjunction with each other to establish meaning in the mind of a player. When these features are used in tandem with environmental storytelling techniques, they amass the potential to function in a similar manner to narrative devices like metaphors, allegories and motifs in narratives.

In another video game, *Horizon Zero Dawn* (Guerilla Games, 2017), players can traverse a variety of post-apocalyptic environments ranging from overgrown forests and ruined urban towns to well-maintained tribal villages, with a focus on remaining undetected by large groups of hostile human factions and mechanistic animal-like creatures. Spatial awareness and comprehension become integral to advancing the story of the game, with subtle paths of safety suggested through dangerous areas by the layout of valleys, overgrown buildings and broken walls that serve as cover from antagonistic non-player characters and artificial intelligence (AI) enemy units. Outside of combat sequences and their associated spatialities, the player also needs to solve a variety of environmental puzzles that require them to use objects – like discarded batteries, ladders and other climbable structures – to reach or unlock other areas and are also afforded the opportunity to improve their playable character's attributes and gear at camps and hubs scattered throughout the world.

By extension, the player thus begins to associate each of these spatial–architectural elements with specific features of gameplay and quickly learns how to progress through the overarching narrative based on their experiences with similar environments and spatial–architectural elements in areas they have encountered previously. Essentially, one can think of these spatial–architectural elements (e.g. ladders, pointed arches, shapes of structures, etc.) as the smallest possible units that convey and construct narrative and gameplay-related meanings in a digital space. They allow for cognitive links to be made to prior areas in the game's storyworld, as well as to elements of real spaces in the physical world (a workbench can be used to craft items, a ladder can help to reach new areas, etc.). To illustrate this point, the following sections present discussions of prominent environments and gameplay areas taken from popular dystopian video games from the last fifteen years. These include *Dark Souls: Remastered* ([2011] 2018), developed by FromSoftware and published by Bandai Namco Entertainment; *Horizon Zero Dawn* (2017), developed by Guerrilla Games and published by Sony Computer Entertainment; and *Cyberpunk 2077* (2020), developed and published by CD Projekt Red.

■ Analytical approach

This section aims to identify meanings and patterns in how spatial–architectural elements of dystopian video game realms are encoded with metaphorical meanings that guide a player's understanding of spatial experiences and navigation in-game. In addition to this, it seeks to present a synthesis of how concepts related to the game's narrative and dystopian themes are communicated and linked via these features. There are salient means of analysing how architecture – and, by extension, space – communicates or conveys meaning, as discussed, yet most of these theories and methods are designed for investigating instances of real space. Although the spaces and structures in digitally built environments are often allegorical to those found in real space, their analysis still requires a means of categorising and discussing the meaning of their spatial–architectural features in relation to a digital context (Aarseth 2007; Waltz 2010).

Therefore, Jencks' (1977) theory of architectural language offers a sound basis for investigating these features of digital realms, but it only accounts for one part of the 'conversation' taking place between digital space and the player. Here, the social and interactive dimensions of space become significant. Architectural meaning is subject to both the viewer's perception of spatial–architectural elements and the spatial practices occurring within that space (Lefebvre 1991). The meanings of architectural metaphors are thus fairly malleable, but they require an acknowledgement of their social dimension to determine what meaning can possibly be derived at a specific time of observation (Alexander 2002; Jencks 1977; Michael et al. 2020). By expanding upon the notions regarding an architectural language – mostly based on the points of departure outlined above in Jencks' theory (1977) – one can, therefore, utilise these theories as tools for the interpretation and analysis of a dystopian video game's spatial–architectural elements and apply them to a digital realm.

The five main spatial–architectural features presented below may thus be derived from insights offered by Jencks (1977) and Lefebvre (1991). These will guide the interpretation of the dystopian video games under study. They are as follows:

1. **Sequential elemental units:** The visual characteristics of architectural designs that are used to construct recognisable spatial–architectural forms (e.g. doors, paths, points of egress, etc.).
2. **Spatial markers:** Elements that link to others regarding their actual or implied spatial positioning and organisation in relation to one another.
3. **Metaphors and metonymy:** Elements that are encoded with a layer of deeper thematic meaning and metaphoric associations with cultural, geographical, temporal, political, historical and other similar categories.
4. **Allegories:** Extended metaphors with moral or political significance that are consistently used throughout the 'text' of the game's storyworld (relating, in the context of the present study, to their treatment of dystopian themes and concepts).
5. **Patterns of spatial use:** Repetitions and collections of conjoined elements that may inform one of the kinds of activities (spatial practices) that occur in a specific spatial context.

When these elements have been identified within specific instances of built environments in the digital realms, links can be drawn between their functional and allegorical roles in the context of the game, highlighting values that express narrative meaning related to overarching tropes of the dystopian.

■ Anor Londo in *Dark Souls: Remastered* (2018)

As mentioned previously, *Dark Souls: Remastered* is an action role-playing game set in a fictional dark fantasy kingdom, where players take on the role of the 'Chosen Undead' – an undying warrior who champions the remnants of humanity in a world beset by death and decay. The game itself provides players with complex, challenging spatial experiences such as navigating labyrinthine structures, traversing dungeons littered with traps, and climbing along the rampart walls and flying buttresses of massive Gothic cathedral-like palaces. The premise of its fictional world revolves around the cyclical nature of life and death brought into being by the advent of a primordial Fire's sudden appearance and how this flame granted exceptional power to four exalted beings who came to rule over its domain. These four beings once waged war against an ancient race of stone-skinned dragons and won, eventually establishing a golden age kingdom in their place that they named Lordran. The main storyline deals with the prophesied downfall of this kingdom in the aftermath of numerous failed attempts made to preserve its splendour in the face of encroaching darkness.

The built environments found in *Dark Souls* are eclectic, with many of the locations evocative, either overtly or more vaguely, of real-world buildings from numerous architectural styles throughout human history. These include examples of the medieval European Gothic, Khmer and Romanesque styles, among others. The Japanese developers obviously use these visuals to establish and maintain the setting of the game's narrative in a Western-inspired fantasy kingdom. Still, there are also qualities deeply rooted beyond their surface value that emerge when considered alongside their appearances throughout the narrative. One such location is Anor Londo, one of the mid-stage areas the player will encounter after around 15–20 hours of gameplay.

In the context of the game's storyworld, Anor Londo is believed to be the home of the few remaining deistic ruling class in Lordran and guards an important item – the Lordvessel – that the player needs to acquire in order to access later stages of the game. With its gleaming white marble structures, flying buttresses and ornamental crowned pinnacles, the area resembles the design of the Milan Cathedral [Italian: *Duomo di Milano*], the largest Gothic cathedral in the Italian Republic. Appropriately so, I would argue, since this kind of late Romanesque leading into early Gothic style is often characterised by what was then an emerging desire to build immense structures that embodied a sense of divine reverence and awe while simultaneously displaying the power and influence of the archbishops overseeing these structures. Almost immediately, it marks Anor Londo as a holy site of governing power in the kingdom of Lordran; one that should instil a comparable sense of reverence and awe in the player upon first encountering it.

Furthermore, when this association with religious symbolism is combined with the image of a setting sun seen in the distance behind the main cathedral-like structure – an image that is associated with the leading ruler of Lordran, Gwyn the Lord of Sunlight – it encapsulates Anor Londo as a last remaining bastion of safety that does not quite fit in with the rest of the dark and decaying world around it. Other areas that the player must first progress through beforehand in order to reach Anor Londo – like the Undead Burg, Sen's Fortress and Firelink Shrine – are characterised by their unassumingly bland complexions, wandering hostile guards and overgrown ruins, all of which evoke a sense of disarray seemingly felt in the rest of the kingdom.

By means of contrast, Anor Londo appears as a sudden juxtaposition of some semblance of welcoming order and authority remaining in the world.

Yet this sudden sense of serenity does not remain as comforting as one might hope because as the player begins to explore the glistening halls and towers of Anor Londo, more and more of the façade around its mysterious existence begins to dissolve. From the early stages of the game, Anor Londo is set up through conversations with other characters in the world of Lordran to be the absolute seat of power of the kingdom, so one may reasonably anticipate it to be bustling with life – traders, other adventurers and these so-called god-like rulers that are continuously mentioned by name over the course of the narrative.

In truth, however, the capital is all but deserted save for the few sentinels patrolling its streets, the battalion of demonic creatures responsible for its upkeep, a pair of the most challenging boss-type enemies in the game and one lone remaining god hidden below the palace which is using the last remnants of their illusory magic to keep up the image of its grandeur. Regarding the dystopian, Anor Londo activates a number of tropes of the genre, as explored in the following sub-sections.

Religious-like ideology

As the seat of power for the gods in this fictional realm, Anor Londo symbolises their rule over Lordran. Here, the image of the sun in the distance is allegorical to Lord Gwyn, the current ‘king' and Lord of Sunlight, who led the charge against the dragons in the war centuries before. The use of architectural elements closely associated with Gothic cathedrals and similar worship sites associated with the Catholic faith (and thus also its hauntings of power struggles, mystery and punitive dread) strengthens this idea of divine reverence. Yet the fact that these structures are now mostly used as military fortifications instead of peaceful religious sites leads to them being interpreted as a desperate attempt to cling to remnants of a ruling body that is failing to maintain order across the kingdom.

Restricted history and secrecy

Along with the uncertainty surrounding the future of failing dystopian states, knowledge of the past is usually restricted in dystopian societies by those in power, often to prevent any potential revolt or dissidence against their usually oppressive authoritarian body of state. The player can disrupt the illusion surrounding Anor Londo if they attack the illusory image of the princess character who bequeaths the Lordvessel unto them at the end of the level. Doing so turns all creatures in the vicinity hostile towards the player. It dispels the image of the setting sun behind the main cathedral-like palace, revealing Anor Londo to be as dark and dilapidated as the rest of Lordran.

In addition to the points listed, it is also interesting to note that although Anor Londo is one of the few areas where the players can actually see the sun in the game's skybox during the course of gameplay (i.e. the source of light, albeit an illusion), it is not the highest point in relation to other areas around it. After claiming the Lordvessel in the palace, the player opens a path leading out of Anor Londo to an archive observatory that is situated on a mountain range surrounding the area (echoing the Tyrell Corporation in *Blade Runner*). Highlighting this spatial relation further solidifies the failings of Anor Londo as a poorly crafted attempt to coerce the player's character into trusting those who are desperately trying to stay in power. At the same time, they keep the closely guarded secret that everything they have tried to do to remain in power has been futile. In truth, Anor Londo is no longer a site of worship nor a haven for the gods but a fortified encampment. It embodies the fear that these god-like beings have of losing control and the lengths to which they are willing to go to ensure that no one outside of the capital realises this. Almost ironically, it does the exact opposite of its intended purpose and solidifies the fact that there is no more order left in Lordran, only ghosts of its governing body.

■ All-Mother's Embrace in *Horizon Zero Dawn* (2017)

Similarly, *Horizon Zero Dawn* is set in a distant imagined future where humanity has brought about its own self-assured downfall. Through pursuing a means of monopolising an advanced technological warfare market, a corporation known as Faro Automated Solutions lost control of powerful militant robots that soon overran the planet and began stripping its biosphere. In an attempt to prevent a global extinction-level event, safeguards were created by some of Earth's brightest minds in the form of self-replicating, animalistic machines to restore life to Earth through a terraforming project codenamed 'Zero Dawn'.

The game itself takes place centuries after this potential extinction-level event was barely prevented, when Earth's biosphere has reached a state of balance strong enough to begin supporting life again (a trope often highlighted in contemporary dystopian literature – the idea of hope at odds with existential dread). In this new era, descendants of humanity have since splintered into factions that resemble primitive tribes, each with its own grasp of technological developments that have been recovered from their regional predecessors – referred to collectively as the 'Old Ones'. These tribes co-exist peacefully with the animalistic machines that are responsible for maintaining ecological balance, hunting them occasionally for materials and technological parts while simultaneously at war with each other. The game's narrative follows the journey of Aloy, a young huntress from the

Nora tribe who is a matriarchal hunter-gatherer living in a mountain valley between the North American states of Colorado, Wyoming and Utah. The early stages of the game are set in this valley region following Aloy's attempts to uncover the source behind a sudden corruption that is poisoning the land and turning the machines throughout All-Mother's Embrace into deadly, bloodthirsty beasts.

Aloy was initially cast out from the Nora tribe at birth after she mysteriously appeared in the heart of the mountain's temple – a site that holds significant spiritual meaning to the shamanic Elders of the Nora tribe. Here, they revere a disembodied voice in the mountain as a deity lovingly called 'All-Mother', which inspires the Nora's naming of their valley territory as 'All-Mother's Embrace'. The player is thus tasked with a quest to uncover Aloy's past while trying to find a cure for the emerging corruption. This temple is later revealed to be an advanced technological facility designed by an Old World scientist, Elisabet Sobeck, and plays an integral role in the Zero Dawn safeguards' ability to assist with repopulating humanity (another aspect of dystopian anxiety – questions surrounding the end of humanity, together with an interrogation of human nature and its enthusiasm for technophilia mixed with the trepidation of technophobia).

The valley itself is maintained by the Nora as sacred land and is thus enclosed within a guarded perimeter that has three main gates, each along the territory's eastern boundary lines that lead into the rest of the explorable world outside of the mountainous areas. Within these boundaries lie three major settlements of the tribe, each named after some relation to All-Mother. Mother's Cradle lies to the south, surrounding a small lake that has become the tribe's main source of fishing. To its west lies Mother's Watch, which serves as the main security checkpoint controlling access to All-Mother's Mountain. To the north, and directly set into the mountain base itself, lies the largest village of the Nora tribe – Mother's Heart – which is home to the tribe's matriarchs and serves as the political and trade capital of Nora's sacred lands. These settlements vary in size and population, but each is modelled after the designs and primitive styles of the Nora tribe that have settled in the valley. The Nora appear to hold a strong sense of community, with most of the houses in these settlements being communal lodges with rows of individual bedding cots. Several open public areas are scattered throughout the three main settlements – Mother's Heart, Cradle and the Watch – used in-game for observable group meetings, educational lectures, public storytelling sessions and ritualistic ceremonies.

Indeed, the entirety of the Embrace is sacred ground to the tribe's members, believed to lie under the watchful sight of All-Mother, who resides in the mountain at Mother's Heart. Even though those who speak out or act against the tribal laws set by the matriarchs are cast out from the Nora settlements themselves, they are required to stay within the boundaries of these sacred lands. As the narrative unfolds, Aloy discovers that she is, in fact, a genetic clone of Sobeck that was created by the AI subsystems of Zero Dawn to assist with restoration efforts to its damaged protocols across the region. On her quest to do so, Aloy is later granted safe passage beyond the valley of All-Mother's Embrace in order to fulfil her purpose and uncover more about the reasons behind Zero Dawn's apparent sabotage.

Horizon Zero Dawn depicts a fresh perspective of a post-apocalyptic world that is not as desolate or ravaged as expected. Ruins and remnants of humanity are still scattered throughout the world, but they are overgrown – reclaimed by nature over the course of time it has taken for the planet to heal from human greed and corruption. Although no longer in use, these ruins remain seminal components of the Old World throughout the narrative; their forms contrast with the Nora villages and embody meaningful potential for both narrative and gameplay purposes. It thus offers a more serene version of the wasteland trope that is often associated with the dystopian, establishing the role of the surrounding land as a sacred aspect of life to the tribal members of the Nora who live there while simultaneously granting the environment a subtle sense of agency in the development of the plot.

■ Night City in *Cyberpunk 2077* (2020)

In *Cyberpunk 2077*, players can experience the alluring lights and thrills of Night City – a futuristic amalgamation of capitalistic innovation analogous to real-world cities like Los Angeles and Tokyo – through the eyes of V, a freelance mercenary trying to make a name for themselves in an unforgiving, fast-paced world of rampant crime and corporate greed. For V, Night City defines their *raison d'être* as much as Lordran does for the Chosen Undead and All-Mother's Embrace does for Aloy. However, unlike the desolate ruins of Lordran or the vast open wilderness of the Embrace, Night City is absolutely teeming with life and activity from sunrise until the early hours of the following morning.

The city itself is divided into six major districts, each dominated and controlled by at least one major gang. To the north is Watson, a district characterised by its nightlife and prominent East-Asian influences. To the south are Pacifica and Santo Domingo, areas of urban industrial projects and upper-class residential suburbs leading into vacation resorts along the eastern coastline. Westbrook lies to the north of these districts and remains an influential site for the wealthy elites, celebrities and corporate members looking to network and grow their business investments. At the centre of Night City lies Heywood and the Corpo Plaza – a showcase of corporate skyscrapers contrasted with southern slums that form some of the most secure and fortified parts of the city. In *Cyberpunk 2077*, corporations have become as powerful as small-scale government states, earning them the right to act as democratic entities that form part of the majority of the city council governing Night City.

As a result, general lawlessness and criminal acts are common in the day-to-day proceedings of Night City residents. Law enforcement and privately hired security/muscle are often the only means of ensuring domestic security for those who can afford it, but the general populace still struggles under the rampant crime and corruption embedded throughout the city. This is where freelance mercenaries like V come into play. In Night City, someone always wants someone else intimidated, challenged or killed, and if they are important enough, the payout could be substantial. Mercenaries usually make quick changes, running escort or delivery jobs for members of the wealthy elite, but assassinations, hijacking and even acts of domestic terrorism are just as common. This facet of life in Night City earned it its nickname, ‘The City of Dreams’ – a place where people come looking to pursue their wildest hopes and desires but often fall short and end up dead or disillusioned in the process.

Outside of the characteristic crime and general lawlessness, the city also offers a vast, sprawling cultural melting pot that shows major influences from capitalistic ideologies. Projections of advertisements engulf skyscrapers and infrastructure, neon signs are cast into the skyline and the authority of corporate companies can be felt everywhere. It makes the city feel alive, to the point where it seems as if the choices taken in navigating it are directed by the grids and pathways presented within its labyrinthine network. During gameplay, it feels as if the city itself has a bearing on the unfolding of the narrative. A fast-paced consumeristic lifestyle characterises Night City, and these socio-cultural tendencies are reflected by a pervasive need for the player always to be chasing the next best thing – regardless of whether it is an unnecessary household appliance or a rare weapon of mass destruction.

■ Findings

This chapter argues for a profound correlation between spatial characteristics’ visual design and detailing and the people (or players and characters) who traverse a space’s boundaries. Of further interest is the observation that dystopian storyworlds often entail a collective dread felt in the imagined aftermath of profound breakdowns in the social order. Each of the examples discussed above is characteristically emblematic of the societies that choose to live within them and reflect their respective denizen's anxieties surrounding the demise of social, political and cultural institutions. Anor Londo is kept a closely guarded secret because the gods are fearful of their failures. All-Mother's Embrace is the promise of new life, struggling to thrive under the throes of post-apocalyptic warfare. Night City is the bleeding heart of late-stage capitalistic and consumeristic lifestyles.

All of these locations differ drastically in their visual styles but serve similar functional and allegorical roles regarding their respective games. The dystopian is embodied within all of these environments, to varying degrees of critique on current socio-political and socio-cultural trends, including totalitarian propaganda, the fallout of man-made disasters and the addictive, volatile thrill of fleeting instant gratification. These anxieties relate to cataclysmic breakdowns of societal order and have thus been projected onto speculative landscapes through the act of narrativisation, through the recurring use of dialectic spatial structures and their characteristics.

The thematic, visual and narrativised characteristics of dystopian storyworlds make them well-suited for the genre because they embody the importance of an innate relationship between humanity and their *tópos*. The games discussed in this chapter each have unique environments in their visual design and layout. Yet, they may be classified under the ambit of the dystopian because, fundamentally, they are all concerned with a spatially dominated level of narrative meaning-making through communal actions in gameplay. These spaces are intrinsically wound up into the grander scheme of the dystopian narrative, reflecting aspects and qualities of the people living in them while also embodying qualities of the dystopian that they express to the player during the act of gameplay.

■ Conclusion

The ways in which we think about spatiality and architecture are changing. There is an agreement between what a visual form is and what it means, and these features work together as complementary aspects of spatial–architectural elements to create what is dynamically experienced and understood through the wider spatial and social organisation. However, these spaces, built environments, and their meanings exist in a state of flux – as their interpretation is predicated on the changing social dimensions of architecture and culture that we may be consciously, or only subconsciously, made aware of. When this dialectic manner of visual meaning-making is translated into the built environment of a video game – a storyworld in the digital realm – there are combinations of spatial and architectural features that may construct recognisable themes, motifs and imagery to suggest deeper levels of narrative meaning and gameplay potential associated with an overarching concept like the dystopian.

Therefore, dystopia is no longer a reflection on contemporary society as it reflects human nature in the 21st century, a point that marks the later influences of postmodern thought and critique – humanity cannot exist without acknowledging human error. Human nature is thus characterised by a stubborn, persistent resilience that echoes the imagery of dilapidated ruins, dandelions growing out of concrete, and the infernal buzz of a neon sign that continues to display only half of the original word it holds. Thus, to be human is to be dystopian, to endure suffering at the behest of corruption, greed and warfare, and yet maintain some sense of a utopian impulse of hope nonetheless. Indeed, hope remains carved into the very ramparts that have been erected around human culture and societies, and it calls for one to break them down so that we may eventually build them up again and again.

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Chapter 2

Digital craftsmanship in South African sculptural practice and the impact of new technologies on fine art and craft

Jonathan van der Walt
Department of Visual Arts,
Faculty of Humanities, Nelson Mandela University,
Gqeberha, South Africa

Abstract[2]

The following philosophical desk study seeks to examine the evolution of craft and craftsmanship,[3] as it relates to predominantly Western developments in the fine arts, to establish a historical precedence for an analysis of digital craftsmanship. In addition, the chapter presents a

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[2] This chapter represents a reworking of more than 50% of the author's Master's degree (MA) thesis, 2017, 'Craftsmanship in contemporary art: An exposition of selected artists', awarded in the discipline of Fine Arts (Sculpture) at Nelson Mandela Metropolitan University, South Africa, with Dr David Jones as supervisor.

[3] The gendered language used in this paper is not intended as bias toward any particular sex or social gender. Within the context of this research, the suffix '-man', in words such as 'craftsman' and 'craftsmanship', does not refer to only males or men. I have, in places where it felt needed, replaced the words 'craftsman' and 'craftsmen' with 'craftsperson' and 'craftspeople', respectively.

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comparative analysis of the technological impact of photography on the discipline of traditional Western painting at the turn of the 20th century as a discussion point in re-examining the benefits of digital three-dimensional (3D) technologies for contemporary sculpture, with specific focus on a South African art context.

Contemporary art is experiencing a return to a greater interest in the highly crafted aesthetic achieved through increased creative and technical ambition and application. Because of the concept-driven move from artist-as-craftsman to artist-as-manager, the artist often turns to the skills and expertise of specialised craftspeople to make ideas come to life. When considering the post-digital world as a world recreated by the digital moment, which becomes intertwined with our daily lives, what does it mean for the material-encumbered notions of craft and craftsmanship?

The complex relationship between art and craft has existed for centuries. With each industrial revolution, both art and craft had to adapt to the influx of new technologies, innovations, and ways of thinking and being. The rise of the machine in the First Industrial Revolution (1IR) threatened the physicality of the craftsman, while the digital turn in the Fourth Industrial Revolution (4IR) threatens materiality.

In this chapter, I present a craft that has had to adapt to the intricacies of changing technologies and which has comfortably transitioned to the digital, perhaps more so than art itself has.

Theoretical framework

A crafty algorithm: Foreword by ChatGPT[4]

The contemporary world differs significantly from its state a few decades ago. Advancements in technology have brought about many changes, not only in but also in the way we create and appreciate art. As a result, it is becoming increasingly important to explore the relationship between art

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[4] ChatGPT (chat generative pre-trained transformer) is an artificial intelligence natural language processing tool developed by the company OpenAI and launched in November 2022. It has been programmed with an incalculable amount of text data from human and Internet-based input and analysis to understand context and relevancy to generate human-like responses to questions and commands (Entrepreneur Staff 2023).

The input prompt that generated this foreword was as follows: ‘Write a 300-word academic foreword for Jonathan van der Walt’s chapter on how new technological advancements have affected the disciplines of fine art and craft, in which he highlights the potential that digital 3D technologies have in improving the art discipline of sculpture, from his perspective as a practising sculptor and academic. Also include a short note on how he notes the effects that technological developments in optics and photography had on the field of traditional painting and how art and craft adapted to these changes as a point of comparison on how contemporary artists and craftspeople can adapt to the Fourth Industrial Revolution’.

and technology and to consider the implications of new developments for the future of artistic practice.

In this chapter, I provide a thought-provoking analysis of how new technological advancements have affected the disciplines of fine art and craft, with a particular focus on the potential of digital 3D technologies in the art discipline of sculpture. As a practising sculptor and academic, I would like to discuss insights into how these new technologies can be used to improve traditional techniques and create new possibilities for artists. The chapter discusses how digital 3D technologies can help sculptors produce more accurate and intricate works with greater control over the creative process and that these technologies can be used to enhance rather than replace traditional techniques, providing new tools and methods for artists to work with. This nuanced approach is important as it highlights the need for artists to be open to new possibilities while still valuing and preserving traditional techniques.

The effects of technological developments in optics and photography on the field of traditional painting are notable, and how art and craft adapted to these changes. This historical context is an important point of comparison, as it highlights the ways in which artists and craftspeople have adapted to new technologies in the past. It also reminds us that the 4IR is not the first time that technology has disrupted the arts and that artists and craftspeople have always found ways to incorporate new tools and techniques into their practice.

■ Introduction

The ‘Foreword’ acts as a point of conceptual interplay with the themes of the chapter itself. The craft of this research culminating in a body of academic writing, as well as the human author who wrote it (me), are introduced by that which has neither a head nor a hand. However, it exists because of the specialised craft of many humans who developed the technology. Additionally, its database, and dare I say, its understanding, continues to develop every second, thanks to the millions of heads and hands that use the platform daily.[5] One could argue that artificial intelligence (AI) knows more about what it is to think and communicate like a human than we do because it learns not only content but the communicative nuances and structures from conversational and instructive interactions with tens of millions of humans daily. The foreword written by no one thus becomes an intriguing and relevant element as AI is one of the latest

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5. May 2023 saw the highest monthly website visits for ChatGPT at 1.8 billion; on average, it receives over 1 billion each month (Shewale 2023).

technological disruptors that questions the role and identity of contemporary art and craft; although with that in mind, current theoretical and ethical discourse on AI within the arts is not unpacked in the following chapter. Artificial intelligence here acts as a palette cleanser, setting the tone as an active, collaborative proponent of the discussion itself.

Digital craftsmanship is a complex and loaded concept. The very name is antithetical, and to understand the characteristics and processes that attempt to define it, some form of agreement is required regarding its foundation, namely the equally contested and poorly understood notions of craftsmanship or craft. The terms 'digital' and 'craft' are only mutually incompatible when one equates the latter with the traditional, material-laden idea of craftsmanship as a physically laborious activity, such as carpentry or leatherwork. This understanding encompasses a view that the skilful human hand manipulates physical materials to create something new, not necessarily creative,[6] but something other than the material's original state.

Understanding the notion of craft is easier said than done, and this is evident by the numerous views and theories on the matter, as well as the many arguments and counter-theories within craft discourse (Peach 2009). Given my position as a researcher and fine art sculptor, this chapter incorporates the views of theorists and scholars who present a bias towards an understanding of craft concerning the fine arts. Furthermore, the structures that guide and govern the South African art and craft industries today are built upon a Western model (Buchholz & Wuggenig 2005). The notion of an internationalised art world is more open to cultural participation than cultural contribution or change, and therefore, non-Western artists and curators must still work within the confines of a Western structure, both within their national contexts and on the global stage (Buchholz & Wuggenig 2005). It is with this understanding that in order to provide an analysis of fine arts and crafts within a South African context, the brief historical precedence provided is predominantly from a Western perspective.

The first section provides context on the complex relationship between fine art and craft by tracking developments in sculpture and how its associations with labour created rifts between them and other fine art disciplines such as painting. Next, I turn the lens onto the discipline of painting and how it had to battle new optic technologies in the 1IR. Modern and contemporary discourse on craft is presented to challenge the historical

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[6] In Richard Sennett's *The Craftsman*, he purposefully avoids using the word 'creativity' as much as possible. He claims that the word is too problematic, alluding to a 'mystery of inspiration' and 'claims of genius' (Sennett 2008, p. 290).

understanding of the craft as it is abject to art, broaden its definitions and push its limitations. What follows is a look into postmodern and contemporary artists who have distanced themselves from the physical making processes, opting for a managerial approach and determining the implications of the artist/assistant/craftsman relationship. The final two sections contrast a traditional craft and a post-digital current and future; firstly, the traditional process of lost-wax bronze casting is explored, its historical significance to the continent of Africa and its symbiotic relationship with the contemporary South African art world. Secondly, the post-digital artisan is discussed, highlighting the potential benefits of cross-dimensional artmaking.

■ The crafty sculptor

As early as ancient Greece (800–480 BCE), sculptors were considered inferior to painters and architects. Some sculptors, such as Polyclitus, achieved recognition and fame; however, this had little impact on the status of sculptors. Sculptors predominantly collaborated with architects, creating decorative or relief sculptures to enhance elements of the buildings and temples. The only time the sculptor was given free rein was in creating sculptures for temple interiors as dedications to please or impress the gods (Wagenknecht-Harte 1989). Ancient Roman master architect and engineer Vitruvius (80–70 BCE) drew a definite line between craftsmanship (hand) and theory (head) over 2,000 years ago. He stated that craftsmanship belongs to those who are trained in a single trade. In contrast, theory is shared with all educated people, placing the educated generalist as a dominant force over the craftsman specialist (Sennett 2008). The work of the sculptor came to be more highly regarded in the Middle Ages (fifth- to fourteenth centuries CE); however, it was still considered a subset of the mechanical arts, as it had been during ancient Rome (Wagenknecht-Harte 1989). At the end of the 13th century, the legal status of sculptors, painters and architects was equal to that of other manual workers. They were artisans who belonged to guilds, providing support to those who belonged to guilds and supporting one another within their specific occupation (Belloc 2011; Hall 1999). Painters' guilds were grouped with cabinet and paper makers, while sculptors were grouped with stonemasons and bricklayers (Hall 1999). Sculpture was, yet again, usually relief work applied to religious architecture under the architect's instruction. The demarcation of the various guilds did not mean they did not collaborate, as painters and sculptors often worked together on the same artwork, such as the painting of sculptures and altarpieces (Hall 1999).

The specific distinction between art and craft first arose in Western society during the 16th-century Renaissance when painting and sculpture reached a new status of importance owing to its elite support. Craft, or the crafts, consequently, sank to a lower rung in status, as they were considered merely utilitarian or decorative (Neapolitan & Ethridge 1985). This distinct class of artists, or practitioners of the liberal arts, was considered similar to that of philosophers, scientists, writers and mathematicians, whereas craft was consigned to the world of manual labourers. Only during the Italian Renaissance (approx. 1340–1550 CE) was there a revival in 3D sculpture. However, feuds soon developed between the painters and the sculptors as painters were trying to distinguish themselves as intellectuals, and sculptors were naturally associated with manual labour (Hall 1999).

Michelangelo was the ideal example of a craftsman-as-artist. As a young boy, he had been fascinated by stonecutters for a long time and wanted to become one of them. It was only because of his father's (a nobleman) concern for his reputation that Michelangelo was ushered into studying under the supervision of sculptor Donatello. Michelangelo saw himself as much a manual labourer in his artistic practice as the stonecutters he had admired as a boy. He used his strength, hammer and chisels to carve stone, but he differed in that he could see figures in the stone and had the talent to make them come to life (Land 2013; Van der Walt 2017). Michelangelo is often regarded as the true Renaissance man, a term used to describe an artist with exceptional skills in various fields (Wagenknecht-Harte 1989). Many might argue that although he won the personal battle against Da Vinci,[7] it was sculpture that was lost, as it was still deemed limited in its use of subject matter, whereas countless options were available to the painter (Hall 1999).

It was only during the seventeenth and eighteenth centuries that the distinction was formalised with the incorporation of the fine arts as an academic discipline within state-sponsored academies (Petry 2012). This, along with the rise of enlightenment in the 18th century, promoted the value of individualism, originality and rebellion. In this period, educated people were discrediting traditional beliefs, and art became an individual expression of higher truths, catering for those interested in the mind and imagination.

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[7] In 1504, Michelangelo and Leonardo da Vinci's careers intersected for the first time when they were both commissioned separately to paint battle scene murals in the same grand meeting room of the Palazzo della Signoria (Budd 2010). The Palazzo della Signoria commissions were meant to encourage rivalry between the two artists. Michelangelo jumped at the opportunity as it was a chance for him to prove to his patrons and to the people of Florence that he could create a composition equal to, if not better than, that of the established master. All the pressure of possibly being humiliated by a young sculptor might have become too much for Da Vinci, as he abandoned the painting in 1506. Michelangelo, concerned primarily with proving himself against Da Vinci, decided not to complete the mural either and instead took up commissions at St. Peter's Basilica and the Sistine Chapel, which cemented his reputation as both a master sculptor and painter (Duncan 2004).

This further separated art from its associations with the material and utilitarian limitations of craft (Deresiewicz 2015).

These fundamental changes in thought coincided with the 1IR and the realities and threats to life in the Machine Age (Lovejoy 1997). With these changing technologies, sculpture was no longer considered second to painting. Instead, it thrived with the rise of object-based art. Three-dimensionality was encouraged as it was perceived that tension and movement could only truly be conveyed through an object that occupied the same space as the viewer. This meant that painting became a limited discipline, and painters had to try new ways of making their two-dimensional medium more object-like. Thus, movements such as the Cubists and techniques such as collage gained popularity (Hall 1999). It was a period in which artists were considered cultural aristocrats and the *avant-garde*. However, after the Second World War (WWII), art became institutionalised, and consequently, the artist struggled to survive as a solitary genius. The safer route for an aspiring artist in the emergence of modern capitalism was to become a professional and to work hard towards a degree much as a doctor or lawyer would, supported by arts councils, funding bodies, educational programmes and institutions, residencies and awards (Deresiewicz 2015).

■ The crafty painter

The 1IR was initially considered a major obstacle to craft and, in turn, to the discipline of sculpture, as machines threatened the physicality of craftspeople in their ability to work endlessly, never tiring or complaining (Sennett 2008). However, painting was greatly threatened by a new machine, namely the Daguerreotype photographic camera (Lovejoy 1997). Like most inventions, it was not an entirely new idea but an innovative development upon an existing process or technology, and it required the discovery of a specific process of light-sensitive chemistry to create the basis of the photographic camera we know today (Lovejoy 1997). This missing piece of the process allowed the permanent capturing of images translated by the *camera obscura*, a natural phenomenon in which light passes through a lens or simply through a pinhole onto transparent paper, reflecting an upside-down image of nature (Lovejoy 1997). This optical technique was documented as being used as a mechanical aid for artists 300 years prior to the invention of photography, when Da Vinci noted the use of it in the Italian Renaissance as a tool for solving issues around placement, compositional and proportional accuracy (Guarnieri 2016). Studies in optics trace the Western history of this phenomenon to the philosopher Aristotle in ancient Greece, who viewed the reverse image of a solar eclipse through a pinhole (Encyclopedia.com 2023). However, there are earlier written records investigating light that Chinese scholar and philosopher Mo Tzu left (*c.* 470–391 BCE), affirming that light travels in straight lines, which are evidenced by a camera obscura (Guarnieri 2016). It is believed that the prominent Muslim scholar Ḥasan Ibn Alal-Haytham (*c*. 965–1040 CE) from Egypt is credited with inventing the camera obscura as we came to know it (Guarnieri 2016). Al-Haytham's seven-volume treatise, the *Book of optics*, incorporates the first clear explanation of the camera obscura outside of Mo Tzu's affirmations in China (Guarnieri 2016). Although Leonardo Da Vinci noted the benefits of the camera obscura to the drawing and planning process, it was the Dutch 17th-century painters who whole-heartedly accepted the technological aids into their practice (Lovejoy 1997). None more so than Jan Vermeer (*c.* 1632–1675), whose documented use of the *camera obscura* and suggested use of its adaptation, the *camera lucinda*, which includes an additional mirror that overlays the canvas, allowing the artist to outline the reference image (Lovejoy 1997; Wheelock 2000).

The controversial documentary *Tim's Vermeer* (2013) highlights research into these optical devices and the great painters of the Dutch Renaissance who used them. The major controversy surrounding the documentary is that an inventor and software engineer, Tim Jenison, who is not a painter, attempted to recreate his own Vermeer masterpiece using these optical devices in question and achieved unnervingly accurate results (Cohen 2013). His experiment questions the skill set and genius of some of the artists of the past, as well as the lengths and degrees to which some artists may have used technological mechanical aids within their artistic practice.

On the other hand, photography allowed the optically projected image to be permanently fixed onto paper, a revolutionary means of representation, reproduction, documentation and duplication (Lovejoy 1997). The introduction of photography produced intense and widely differing views on the arts. In reference to artists in the Machine Age, writers John Ruskin (1819–1900) and William Morris (1834–1896) deemed that art and machines were incompatible (Henderson 1998; Shrimpton 1998). Critic and painter Paul Delaroche (1797–1859) famously exclaimed in 1839 that 'from today, painting is dead' (cited in Lovejoy 1997, p. 23; The Editors of Encyclopaedia Britannica 1998). However, many artists, including Eugène Delacroix (1798–1863), Gustave Courbet (1819–1877) and Jean-Auguste-Dominique Ingres (1780–1867), became advocates for the integration of photography into their paintings and would often commission photographs for reference material in their compositions (Fernier 1998; Huyghe 1998; Lovejoy 1997; Shelton 1998).

From our contemporary perspective, we know that painting is indeed not dead and is still thriving, albeit an adapted or evolved discipline.

Walter Benjamin (1968) highlighted art's ability to adapt to changing technologies in his essay 'The work of art in the age of mechanical reproduction' whereby he states the following:

> The history of every art form shows critical epochs in which a certain art form aspires to effects which could be fully obtained only with a changed technical standard, that is to say, in a new art form. (p. 237)

Benjamin refers to the introduction of photography and cinematography as a shattering of tradition and a crisis in representation without it being a fundamental shift in the Western paradigm of art. Margot Lovejoy (1997, p. 3) expands on this by suggesting that the introduction of digital simulation has now 'shattered the paradigm of representation we have been operating under since the Renaissance'. She means that although photography was a new scientific and mechanical tool, it was inherently a copy of the real, much in the same way a painting was. A photo-realistic painting thus becomes a copy of a copy, which Jean Baudrillard (1929–2007) refers to as a *simulacra* (Baudrillard 1994; The Editors of Encyclopaedia Britannica 2007). A digital simulation, on the other hand, is a computerised mathematical model of the real, a new kind of representation, or a virtual reality (Lovejoy 1997).

Science and technology's impact on the arts is undeniable, with art declaring its death or end[8] several times in the last 150 years; however, Wolter-Abele (1996) contends that art always survives as it adapts and changes its identity. In this way, similarities can be drawn between the introduction of photography nearly two centuries ago and the impact of the digital in postmodern and contemporary art. The Shock of the New[9] technology offended many; however, under the surface there were practising artists that saw the benefits in working with the changing technology. In addition, there were also other craftspeople that had prior knowledge of the technologies and processes and found new

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[8] Two notable bodies of writing in this regard are Arthur C Danto's *The End of Art* (1984) and Donald Kuspit's book of the same name, published in 2004. Although their 'ends of art' share similarities, their differences lie in their attitudes toward the outcome. The end of art does not refer to the end of artistic practice in the literal sense. Both Danto and Kuspit acknowledge that art will continue to be made, for Danto in the form of 'post-historical' art and for Kuspit, as 'postart'. Danto refers to the end of art as the end of 'historical art'; he considers that the history of art is a development of art searching for a philosophical self-consciousness of its own identity, independent from imposed definitions and constraints by external forces. Art, therefore, became conscious of its own history, making the consciousness of its own history an element of its identity and consequently becoming philosophy itself. While Danto claimed that 'historical art' ended once it realised its own essence, Kuspit counterclaims that art has ended because it abandoned its own essence when it became indiscernible from everyday artefacts (Elwell 2012).

[9] It is written here in uppercase as a subtle reference to the acclaimed eight-part television series, *The Shock of the New*, written and presented by Robert Hughes. It was a critical exploration into the impact of modern art and architecture, first aired on 21 September 1980 (BBC 2023).

opportunities for themselves in the art industry, such as John Edwin Mayall (1813–1901) and Alfred Stieglitz (1864–1946) who were early exponents of fine art photography and its implementation into art galleries and museums (Kostov 2018; Szarkowski 1998). An interesting question arises: While art has been fearing for its life, what has happened to the idea of craft?

■ A thinking craft

There has been a rejuvenated interest in craftsmanship in the last few decades, and according to scholar Thijs Willems (2018), it is possibly an interest as a reaction to the more dominant trend of digital technologies. He states that this has arisen because digital technologies are perceived to challenge our place in the world, while the traditional idea of craft is a reminder of 'human, material and embodied ways of engaging in […] production or making' (Willems 2018, p. 7).

In his book *The Craftsman*, Richard Sennett (2008, p. 290) claims that moments of intuitive leaps happen after repetitive and reflective hand-or-tool-based actions, stating that 'all techniques contain expressive implications'. Sennett (2008) contends that craftsmanship is quality-driven and skills-based. As the level of mastery is heightened, technique no longer becomes a mechanical exercise because both the head and the hand are fully engaged. Craftsmanship is often a skill that is passed down through generations of refinement and problem-solving; it adapts and changes as new technologies improve processes or present new obstacles. This notion of craft can thus range from pottery and raising a child to open-source computer programming and web development (Sennett 2008). Therefore, although craft does not need to remain constrained to that which is material, concern arises about the degree of engagement or skilful involvement the human has within the production process (Willems 2018). Sennett does, however, err on the side of caution with regard to a dependence on digital technologies, more specifically makers and architects utilising computer-aided design (CAD), whereby the software solves generated problems, and there is a disconnect with the on-the-ground practical problems and solutions. His concern is that people might let the machines do the learning, and the people become witnesses of the development of skills but do not end up participating in the process. Sennett (2008, p. 44) thus incisively argues that 'when the head and the hand are separate, it is the head that suffers'.

David Pye (1968) presents a definition of craftsmanship that is less concerned about Sennett's ideas on the quality of the final product produced by the engaged craftsperson. Instead, it notes its quintessential character of making as being at risk. For Pye (1968), craftsmanship is:

> [*S*]imply workmanship using any kind of technique or apparatus, in which the quality of the result is not predetermined, but depends on the judgement, dexterity and care which the maker exercises as he works. (p. 2)

What is interesting to note is that Pye provides this definition 40 years prior to the publication of Sennett's *The craftsman*, yet it seems more inclusive of the idea of a digital craft. Perhaps this is because Pye's positionality is that of a craftsman and designer, whereas Sennett's analysis of craftsmanship is from the point of view of an economist (Houlihan 2018). Pye's belief that the quality of the result is one that is not predetermined shows critical insight into supporting the use of digital technologies as a tool used by a craftsperson and that they are not bystanders watching an activated machine perform a predetermined task (Ingold 2000; Willems 2018).

Glen Adamson is one of craft's most adamant champions. In his book, *Thinking Through Craft*, as the title suggests, he attempts to bring to the fore a critical theoretical discussion on craft, treating craft as an idea and not just an association with the decorative or utilitarian properties of the crafts, such as ceramics, metalsmithing and woodworking (Adamson 2007). As art transitioned from the material and object-based into an undefinable field of performance, experience and idea, craft continued to operate within its self-imposed limits, quietly adapting to changing processes, applications and technologies. Adamson argues that craft should not be considered as another entity inferior to art because of these limitations but that this idea of 'inferiority might be the most productive thing about it' (p. 4). He refers to craft as transcending disciplines and existing in motion and states that craft is not a classification of objects, people or institutions but rather is an analysis of an approach, an attitude, a process or a habit of action. His book thus analyses craft, firstly, as being supplemental to art, as opposed to art's claim to autonomy, and secondly and more importantly, craft as having an emphasis on skill. Therefore, craft is not a defined practice but a way of thinking through practices of all kinds. As Adamson states, 'there is no reason that any one medium or genre of production should be more conducive to this way of thinking than another' (p. 4).

■ A crafty business

Art transitioned from the material, which was always rooted in the skills and process of craft, to a dematerialised emphasis on the idea, yet for the most part, art still requires the crafted object to convey the idea. Craft, if considered as a way of thinking through all practices and disciplines, has quietly and seamlessly upgraded its skill set and knowledge to the changing technologies. This distancing from the production process is evident when analysing successful contemporary artists such as Jeff Koons (1955–) (Wainwright 2007b).[10] The balloon designer Jeff Koons's *Balloon Venus* (2008–2012) created the first maquette sculpture, which required specialised 3D computerised tomography (CT) scanning to increase its scale. The sculpture was finally fabricated by a German firm, Arnold, who developed a custom steel alloy that gives it its extremely reflective surface (Stoller-Lindsay 2014). Koons is often criticised for his lack of practical involvement in the production of his own art, employing hundreds of assistants, artisans and craftspeople to produce his work, openly stating that he is an ideas man who does not get physically involved as he does not have the necessary abilities (Maltby 2012). For Koons, if a final artwork is the result of one's intention, then it does not matter who or what produced it. Additionally, he believes that if you keep your distance from the production process, you can make clearer decisions and avoid getting lost in the processes (O'Hagan 2009).

Much like Koons, British artist Damien Hirst (1965–) also successfully distanced himself from the making process (Wainwright 2007a). Once, when speaking about his famous spot paintings, Hirst (cited in Brown 2015, n.p.) said that '[*t*]he best spot painting you can have by me is one by Rachel [*Howard*]', who was his favourite assistant at the time (Thompson 2008). The irony here is that by both Jeff Koons and Damien Hirst blatantly leaving physical making to the craftspeople, they are, in fact, supporting both the art and craft industries. Catherine Milner states that through his financial support of the bronze foundry Pangolin Editions in London, Damien Hirst became the 'unwitting saviour of an English craft' (Milner 2010). This was the craft of bronze casting, and prior to Hirst's arrival at the foundry, co-owner of Pangolin Editions, Claude Koenig, had claimed that there was a feeling that a bronze sculpture was old-fashioned, but then '[h]e changed our world[he] made it hip' (Milner 2010). The owners, Koenig and her husband, Rungwe Kingdon, now have constant financial support from contemporary artists such as Damien Hirst, Antony Gormley (1950–) and Marc Quinn, to name a few (Kuiper 2010; Riggs 1997). They are also very sensitive regarding accusations of the artists' non-involvement. Because of their successful relationship with contemporary art, they have expanded their business, building a foundry in Uganda to initiate a metalwork industry there and opening a gallery in King's Cross, London (Milner 2010).

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10. For Jeff Koons to produce the ten paintings and ten sculptures he averaged per year, he employed 128 people at his studio as of July 2014. This included 64 in the painting department, 44 in the sculpture department, ten in the digital department and ten people in administration, and this does not consider the specialists, fabricators, and institutions he consults (Sischy 2014).

The inflated prices seen in contemporary art facilitate the increase in the use of assistants, as successful artists do not want to risk not meeting their dealer's obligations. This is dividing the art world, as some collectors and dealers pay more for artwork produced by the artist's hand, while others claim that assistants are necessary in the contemporary art market (Sesser 2011). Contemporary artists who utilise factories of assistants often justify their production process with the argument that it has been a tradition in art for centuries. However, there are significant differences between the two processes. Firstly, the Old Masters mostly had apprentices as opposed to assistants, and these apprentices would learn the skills from the master until they were accomplished enough to become masters themselves (Sherwin 2012). They were regarded as pupils working under the master artist and their educated and experienced talents, starting out with menial studio jobs and progressing to being trusted with carving the master's final sculptures (Wayne 2014). Each master–apprentice relationship varied quite considerably. In some cases, the line between the two became blurred, most notably and controversially in the case of master sculptor Gian Lorenzo Bernini (1598–1680) and apprentice Giuliano Finelli[11] (Hibbard 2000; Montagu 1985). However, even with these blurred lines, the contemporary artist-assistant relationship differs significantly in that the artist usually does not provide educational training in specialised practical skills as the assistants work tirelessly on various small routine-like projects that collectively make a complete work, or the artist goes straight to the professional craftsperson to make it in its entirety (Wayne 2014).

In the process of contemporary art production there are varying modes of collaboration[12] and there are varying degrees of practical involvement by the artist in each mode. All parties involved in a collaboration benefit in their own specific ways, and the artist's primary role within the collaborative process is to provide the artistic idea. It is ultimately the artist's technical

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[11] In Jennifer Montagu's article, 'Bernini sculptures not by Bernini' (1985), she uses Professor Rudolf Wittkower's writings on Bernini as a basis to answer questions about the sculptors and assistants who worked under the master sculptor and how he felt about them and their contributions. Bernini's sculpture *Apollo and Daphne*, which is highly acclaimed for its many impressive technical details, such as Daphne's hands morphing into delicate twigs and leaves, came under scrutiny when it was exposed that these details, which brought Bernini numerous praises, were fact, primarily the work of Giuliano Finelli. Finelli, who was younger than Bernini, had proven his talent and attention to delicate detail on several other Bernini sculptures. Still, time and time again, he was exploited by the master sculptor, who was supposedly jealous of Finelli, finally denying him the promotion he had been promised and resulting in Finelli's departure from his studio.

[12] Sculptor Nancy Holt defines these modes as namely 'correlative', 'collaborative' and 'cooperative'. The correlative process refers primarily to sculptures made for a specific site or space. The collaborative process is when the designers, artists, and architects involved in a project collectively attempt to solve problems to devise a unique solution for a group from diverse disciplines as opposed to an individual. The cooperative process begins with the artist and his or her conceptual idea for an artwork, and the landscape architect and engineer make the artist's vision practically and logistically possible (Wagenknecht-Harte 1989).

abilities, workload and artist-identity or brand that will determine the extent to which he or she will contribute to the collaboration, whether that be a simple idea, a sketch, a maquette or a large-scale sculpture ready for installation (Wagenknecht-Harte 1989).

The craftsman and sculptor, Nigel Schofield, provides a service for artists willing to pay the price for their lack of expertise in the form of his company, MDM Props, based in London, UK. Schofield, who is one of three directors of MDM Props, originally started the business for prop construction for theatre productions and sets for theme parks, and now the company boasts a team of 60 engineers, designers and fabricators that produce over 300 art pieces a year, many of which are displayed in some of the world's most prominent museums and galleries (Kitamura 2009). Some of their clients include Damien Hirst, Anish Kapoor (1954–), Tracey Emin (1963–), Gavin Turk (1967–), Marc Quinn, Anselm Kiefer (1945–), Gary Hume (1962–), Kendell Geers (1968–), Sir Antony Gormley (1950–), Yinka Shonibare MBE (1962–) and the Chapman Brothers (Chilvers & Glaves-Smith 2015a,b,c,e; Kuiper 2011; Galerie Ron Mandos 2024; MDM Props 2023; Raz-Russo 2010). Originally, they were a theatre set and props fabricating warehouse when established in 1993. It was only when Damien Hirst outsourced them for some resin casts that other artists and galleries noticed the advantages of working with MDM Props. Some artists collaborate with the fabricators who oversee various stages of the production, while other artists offer little more than a basic idea or sketch. Schofield never confuses his role, and although it is his team's hands that make the artwork, he stresses that it is the artist's work that is created, not theirs (Kitamura 2009). MDM Props remain fairly unknown, even within the art world, for the most part owing to the insistence on confidentiality by the artist. However, some artists, such as Marc Quinn, famous for his sculpture of the supermodel and socialite Kate Moss in a yoga pose, which was fabricated by MDM Props, are very open about how their work is made. Quinn praises Nigel Schofield and his technicians as his hands and arms. He considers the relationship as his version of a contemporary studio, stating that 'It's quite obvious you can't do it all yourself, so I'm not going to pretend I did' (Kitamura 2009). Schofield and the team are praised for their flexibility and eagerness to experiment and for taking pride in their own ability to work within the palette of each artist (Kitamura 2009).

An adapting craft

One of the most traditional crafts that has been in support of the arts for centuries, namely the lost-wax bronze casting process, also transitioned to the use of digital computer-assisted technologies of 3D scanning and computer numerical control (CNC) milling over 20 years ago for the primary purpose of large-scale sculpture creation (Hamel 2018; Yang 2022). Many bronze foundries around the world now house 3D technology departments for ease of this and other processes.

Bronze casting is the most popular metal for casting sculptures and has had a long and turbulent history (Velimirović 2018). Although the Greeks and Romans are best known for early bronze casting, owing to their long and supported use of the medium and the large scale to which these sculptures were cast, they were not the only civilisations nor the first to do so (Velimirović 2018). Some Egyptian statuettes date as far back as 1550 BCE, which coincides with bronze castings from the Chinese Shang dynasty (1600–1046 BCE); however, it is the *Dancing Girl* from the ancient city Mohenjo-Daro, Pakistan, that is considered the oldest bronze-cast[13] sculpture, dating back to 2500 BCE (La Niece et al. 2002; Stubbs 2020; Velimirović 2018). Aside from the bronze sculptures of ancient Egypt, the method of lost-wax bronze casting has been practised throughout the continent of Africa for centuries. The Igbo-Ukwu are one of the earliest groups of West Africans to cast bronze using the lost-wax process, with some excavated bronze works dating back to the tenth (possibly ninth) century (Apley 2001b). Although research is inconclusive as to how this process was introduced to the region, it is obvious that sculptors from West Africa were creating some of the 'most inventive and technically accomplished bronzes' around 500 years before the arrival of Portuguese explorers in 1484 (Apley 2001a, 2001b).

Advancing eleven centuries, and the craft of lost-wax bronze casting continues to thrive in Africa, adapting to the changes in a rapidly developing technological society. Local artists in South Africa have been using the technologies provided by foundries and workspaces to assist in the realisation of projects and artworks for several decades. Sculpture Casting Services (SCS), based in Cape Town, South Africa, is one of Africa's largest fine art foundry and fabrication facilities. Sculpture Casting Services offers accurate enlargement facilities using 3D technologies and designing and engineering skeletal armatures for large and small sculptures (Crawford 2023a). Sculpture Casting Services is the team behind creating the nine-metre-tall Nelson Mandela bronze sculpture installed at the Union Buildings, Pretoria, South Africa, in 2014. The process started with a 3D scan and enlargement of the original small-scale sculpture by André Prinsloo and Ruhan Janse van Vuuren. The digital form was enlarged and cut into foam using a CNC machine from the scan, and a finishing layer of sculpting clay was applied (Brand South Africa 2013). This was followed by the laborious

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[13] In 1897, two sculptures of Egyptian Pharaoh Pepi I Meryre were excavated, and they are the oldest known life-size metal sculptures dating back to *c.* 2300 BCE. However, these sculptures were not cast in bronze but constructed out of riveted copper sheets (Heinz 2002).

process of molding and casting the 3.5-ton bronze sculpture, which comprises 147 individual pieces cast at different SCS foundries across the country and finally welded together (Brand South Africa 2013). Sculpture Casting Services has been consistently expanding since it was founded in the 1990s by Robert Knight, who was later joined by his brothers Warren and Bruce, which has culminated in the merger with Bronze Age Foundry from SCSs Holdings, launching two new galleries and the largest foundry in the southern hemisphere in the Victoria and Alfred (V&A) Waterfront Silo District in Cape Town, South Africa, in October 2016 (Crawford 2023a). Three years prior to this merger, the foundries worked together, along with Preferred Solutions, to form the company 3D Echo Tech for the sole purpose of assisting artists with the latest 3D technologies (Crawford 2023a). Director and chief executive officer (CEO) of SCS Holdings, Warren Knight, motivates that they are more than just a foundry and that they 'have used the latest technology available to increase [*their*] quality and offer more services that allow artists to express their visions without fear of failure' (cited in Crawford 2023a).

These facilities and workflow processes provided by foundries such as SCS Holdings are very common in creating much of the contemporary sculpture in South Africa and internationally. Practising South African sculptor Zelda Stroud provides an insightful analysis of the act of making by hand and digital aid in contemporary South African sculpture in her mini-thesis, 'Making matters: The hand of the artist in contemporary South African sculpture' (2016). In her research, she highlights the 'valuable physical and psychological benefits inherent in the personal production of artworks that cannot be experienced if the work is delegated to assistants or outsourced' (Stroud 2016, p. 6). She notes that in a capitalist society, where an artist is also trying to make an income and meet clients' requirements and deadlines on commissioned pieces and therefore becomes *extrinsically motivated*,[14] it is easier and quicker to make use of the available technologies and facilities provided by foundries, such as 3D scanning and CNC machining (Stroud 2016). She admits to having incorporated these technologies within her own commissions but continues to add that once the foundry is involved, she begins to feel detached from the artwork and the process, and 'the only benefit that remains is the money and the publicity' (Stroud 2016, p. 90).

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[14] In Stroud's research, she cites motivational theorist Teresa Amabile's factors for motivating individuals in the workplace. According to creativity and motivation theorist Teresa Amabile (cited in Stroud 2016, pp. 62–63), there are those individuals who are 'intrinsically motivated' or 'process focused'; Stroud compares these to artists who are physically involved in the creation of their artwork and use it as a form of self-expression. The other category is that of the 'extrinsically motivated' or 'product-focused'; these are motivations that exist apart from the process or work itself, such as deadlines, rewards, praise, etc.

In recent years, there has been a surge of South African artists who have embraced the use of the 3D technologies made available through foundries and fabrication spaces, allowing them to create and make real ideas that would traditionally take many years to create, if even at all possible. Artists Nandipha Mntambo and Zanele Muholi have both incorporated 3D scanning and CNC milling for the creation of large-scale bronze sculptures in their recent exhibitions at Everard Read and Southern Guild respectively (Crush 2023). Mntambo is best known for her sculptural cowhide forms and has been producing sculptures for most of her professional art career and, therefore, the transition to digital sculptural assistance was natural, whereas Muholi is primarily a photographer and their expansion into large-scale bronze sculptures as seen in their exhibition *ZANELE MUHOLI*, which opened earlier this year, is a fresh experience in among their familiar photographic oeuvre (Everard Read 2023; Raymond 2023). In preparations for Mntambo's 2021 solo exhibition *Agoodjie,* she worked with Workhorse Bronze Foundry in order to create the 3-metre-tall bronze figurative sculptures of 19th-century Benin warrior women (Everard Read Gallery 2021; Sey 2023). Much like the London-based craftsman Nigel Schofield and his company MDM Props, Johannesburg-based Workhorse Bronze Foundry, led by sculptor and craftsman Louis Olivier, presents itself as a collaborative fine art foundry, providing artists with access to necessary specialised skills, facilities and technologies to make their artistic ideas materialise (Crawford 2023b). For the large (and small maquettes) to be created, Mntambo dressed up and posed in the specific attire before being 3D scanned in parts and digitally assembled by a technician, in the process creating an accurate duplication of her (Crush 2023). In reference to this process, Mntambo states (cited in Crush 2023):

> You are making a copy in the most exact way. This allows you to bridge the gap between what you see and how it is captured. What would have taken me eight months to do I can now do in two. (p. 5)

In addition to Mntambo, Workhorse has supported many other South African artists, including William Kentridge (1955–), Brett Murray, Norman Catherine, Haroon Gunn-Salie and Nicolas Hlobo (Crawford 2023b). Mntambo, Muholi and most of the artists that use 3D technologies in fine art foundries are utilising them for the purpose of aiding a labour-intensive process, a means to an end or, as Stroud (2016, p. 64) expresses it, a 'quick-fix', and the artists are not engaging with the technologies as a rich contributor to the conceptual underpinning of their artistic investigation, or in fact the digital as the studio space of creation. Ruhan Janse van Vuuren, the sculptor co-responsible for the commission with SCS of the Nelson Mandela sculpture at the Union Buildings, along with many other large-scale commissions with Dionysus Sculpture Works, is one local artist who does place the digital at the forefront of his artistic practice

(Strauss & Co. 2023). His latest body of work combines strong figurative and object-based compositions and continues an exploration of prevailing themes of valuation and devaluation (Website of South African Artists, n.d.). Janse van Vuuren experiments with 3D scanning, digital assembly, printing and CNC milling as a form of creation that is familiar yet manipulated and deformed (Website of South African Artists, n.d.). As the art objects exist between life scans, wax and clay modifications and bronze casts, they are not entirely dependent on the automation of digital production. However, the artworks 'embrace our technological reality [*acting as*] a meeting point for technology and nostalgia' (Website of South African Artists, n.d.).

Even with the rapid advancements in technologies, the traditional craft of bronze casting is not being left behind; in fact, there is an optimistic confidence that the processes involved will merely change and become more efficient, as has happened in the last 20 years. One of these optimistic craftsmen is Clint Howard, owner of Deep in the Heart Foundry in Texas, the United States of America (USA), who admits that his mold storage facility takes up considerable warehouse space and is susceptible to human error and degradation to time and the elements (Hamel 2018). He foresees that foundries will soon be able to store 3D digital-mold files on cloud-based servers. In addition, Howard questions what the process of making a monument will be in 50 years' time because the artists of today are already embracing new technologies by digitally sculpting on the computer (Hamel 2018).

■ A digital craft

Historically, much like the initial backlash against photography in fine art over a century ago, fine art also resisted the inclusion of digital technologies within its canon (Lovejoy 1997). For example, the 3D animation studio Pixar was nominated for an Academy Award in 1986 for the best 3D digital animated short film. It was a groundbreaking feat for the computer and film industries, but the art world did not seem to take it as seriously as it should have. Edwin Catmull (1945–present) noted in the book *Computer Animation: A Whole New World* (1998) that at that time (of the Academy Award nomination in 1986), most traditional artists were afraid of the computer. They did not realise that the computer was merely a different tool in the artist's kit but instead perceived it as a type of automation that might endanger their jobs' (cited in Rosenthal 2018, p. 237). As a result, during the 1970s and 1980s, there were several artists and digital craftspeople who had been using computer-based processes, software and algorithms in the production of their art but who struggled to receive mainstream recognition (Lovejoy 1997). In reference to Pixar's animations, Andrew Darley (2000), author of *Visual digital culture*, alludes to Baudrillard in categorising Pixar's means of production as a *studio simulacrum*:

> [*As the films are not created using the*] 'usual paraphernalia of either live-action or cartoon film production. Instead, cameras, lights, locations, sets, props, actors, cels, paint, puppets and so forth physically disappear – replaced by their virtual or surrogate counterparts within the programs of computers'. (p. 84)

What is most fascinating here is that an entire virtual industry has been created that is hugely beneficial for creatives. Computers have, therefore, not endangered the livelihood of creatives but have, in fact, done the complete opposite. We are now seeing, for example, that both physical lighting specialists and virtual lighting specialists have separate and supported career paths.

Thijs Willems (2018), in his article, 'The meaning of craftsmanship in a digital age: The possibility for digital crafts?', references anthropologist Tim Ingold and his interest in how technology enables or constrains the making of something, ultimately attempting to blur the boundaries between human and non-human. Willems expands on this by presenting an example of traffic control room operators and the digital tools through which 'they read, feel, sense and judge what happens outside by skilfully attuning their bodies and whatever information or visualizations their tools make available to them' (2018, p. 11). Although the introduction of digital technologies has removed the material limitations in sculpture creation, the discipline of sculpture has not diminished but rather has flourished significantly as it has expanded its creative toolkit to 3D technologies and digital software and its reach to 3D virtual space (Yang 2022).

Jonathan Openshaw (2015, p. 7), author of *Postdigital Artisans: Craftsmanship with a New Aesthetic in Fashion, Art, Design and Architecture*, highlights this hybridisation by stating that '[*a*] JPEG of a sculpture and the physical sculpture are not the same thing, but they are related [...] [*T*]he [...] object they constitute is neither physical nor digital, but an amalgamation of both'. The 'post-digital', according to Openshaw (2015, p. 5), is defined as a 'world that has been reformulated by the digital moment, and where a digital mindset is inextricably entangled with our existence'. Post-digital thus defines our existence as more than human; we are greatly developed and aided by these scientific and technological advancements. Digital craftspeople make and engage with forms, both physically and digitally, transcending the physical limitations of our bodies to become virtual extensions in another world (Brudar & Perić 2021). 3D digital technology thus becomes a tool-advancement of our human bodily boundaries, just as a saw provides your arm with a serrated extension, so a keyboard and a mouse extend your hands into a digital workspace.

■ Conclusion

In conclusion, I again refer to the foreword, wherein AI insightfully noted that working between the digital and physical means of production is a nuanced and important approach, as it emphasises 'the need for artists to be open to new possibilities while still valuing and preserving traditional techniques'. This chapter attempts to highlight select similarities between the introductions of new technologies in Western art history with that of the current discourse on digital art and craftsmanship and its utilisation in contemporary art within the international and local contexts. In review, a common thread is evident in how these technological developments filter into the respective industries and how each reacts and adapts. Although it is argued that anything can be art, art is evidently resistant to its associations with the limitations of the crafts and is seemingly slow to react to rapid advancements in science and technology. Craft, on the other hand, supported by critical contemporary discourse on digital craftsmanship, embraces new technology while benefitting financially from the art industry's disassociation with it. This is evident in how seamlessly the traditional craft of bronze casting has incorporated 3D technologies into its processes, allowing a pathway for artists to see the potential of incorporating the processes into their own artmaking.

Craftspeople in the digital age are seemingly more attuned to these changes in technology, both mechanical and digital because they are constantly working with the software and machines. And as contemporary craftsmanship is closely tied to industry, the competitive global market has allowed South African foundries to develop with international advancements in technologies, which in turn provides our local artists with the facilities to compete with what other artists are fabricating globally.

Sennett's critique of CAD rests on the notion that the digital craftsperson does not spend hours rigorously perfecting the design as the software solves most of the perceived problems virtually. Thus, the designer does not successfully comprehend the physical issues that come about in the fabrication of the design. In other words, the critique focuses on the notion that CAD can separate the head from the hand. Stroud's study builds upon this view laid by Sennett, which places focus on the psychological benefits of the artist physically working on their artworks and the engaged reflexive nuances of problem-solving through this process. Here, digital technology is again presented as the disruptor of this process, distancing the maker from their work. As a practicing sculptor working in clay, wax, bronze and resin, I agree with many of Stroud's findings and resonate strongly with her sentiments that one cannot be made fully 'aware of the difficulties, risks and thrills of […] casting one's own work in bronze' (2016, p. 96) as opposed to seeing it cast by others in a foundry setting.

However, as a practicing sculptor also working digitally, sculpting in free-form 3D modelling software, such as Zbrush, I equate many of the risks, difficulties and pleasures of engaged making in the digital workspace to that of the physical. Stroud does acknowledge in her conclusion that this perspective was not presented in her study and that 'the effect of digital making, where there is a computer interface between the sculptor and the material, may demand further study' (2016, p. 115). In this sense, I am drawn to Thijs Willem's advocation of digital craftsmanship as a truer analysis of the digital craftsperson's experience. He notes that 3D modelling and 3D printing, much like many contemporary forms of craftsmanship, 'combines digital and material forms of manufacture' (2018, p. 14). Therefore, by working across dimensional platforms, the practitioner is creating in a digital workspace while simultaneously thinking about the physical practicalities of the form, scale, composition and surface before they are made material. When you work in the digital with an informed understanding of the physical form, the tactile properties and processes in its creation and manipulation, your head and your hands become attuned to the sensitivities in the micro movements and the digital form on the screen feels solid behind the keyboard and mouse. The transmediation of the digital form to a physical 3D printed form holds a similar excitement to that of the transmediation of wax to bronze, especially if the 3D printed form is further transformed into bronze.

Ultimately, digital craftspeople and digital artisans in the 4IR are in the best position as creatives because, while their feet stay grounded in reality, they also have a virtual foot through the digital door.

Chapter 3

Digitally-enhanced learning: The adaptation of traditional visual portfolio development practices

Micaela Scholtz
Department of Visual Arts,
Faculty of Humanities, Nelson Mandela University,
Gqeberha, South Africa

Abstract

The coronavirus disease 2019 (COVID-19) pandemic brought about the disruption of traditional teaching practices and has enforced an unexpected, rapid merging of physical and digital learning modes. In graphic design education, in particular, the visual portfolio learning and teaching experience has become challenging because of the lack of immediate digital resources and instructions. When reflecting upon personal teaching experiences within the visual arts department at Nelson Mandela University, it is evident that an online learning platform that synchronises with current curricula and traditional learning offerings is needed.

Thus, I propose that Moodle becomes an assistant for on-demand information, offering students new and current knowledge, as well as practical objectives for achieving a professional product, such as creating

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a digital or visual portfolio. This Moodle assistant offers an innovative approach to portfolio development, a continuous digital curricular activity enhancing a student's reflective practice, and an awareness of industry expectations. Such a course, as proposed, is set to be methodological in its structure but interdisciplinary in scope. This will create a bridge between various visual art discipline streams, challenging traditional portfolio practices and utilising the learning opportunities afforded by technology.

It is argued that visual arts education should embrace this change and implement various digital pedagogical approaches that utilise the technological tools gained through the pandemic in support of learning. Utilising such technological learning devices affords the ability to renew dated methods and elucidate current teaching challenges, as well as support scholars in mastering simple yet critical skills such as visual portfolio-building.

■ Introduction

The COVID-19 pandemic brought about the disruption of traditional teaching practices, which included the immediate closure of educational institutions and has enforced an unexpected, rapid merging of physical and digital modes of learning to online modalities. In graphic design education, in particular, the visual portfolio teaching and learning experience has become challenging because of the lack of immediate digital resources and instructions. When considering the visual portfolio application at Nelson Mandela University, it is important to acknowledge that it is still thoroughly used as a tool for feedback and assessment, preferencing its physical format. According to Oza (2020), the scarcity of resources and sense of unpreparedness can be ascribed to the unawareness of the value of a digital visual portfolio within the visual arts and the broader humanities. The portfolio design process only applies to the graphic design stream; this needs to shift as all visual arts graduates set out on future endeavours, and various opportunities will require a digital, visual portfolio with which to apply or present skills at relevant opportunities. Thus, this paper outlines a proposed intervention of a Moodle assistant portfolio course that seeks to draw the various streams, such as graphic design, photography, fashion and textiles and fine art, together in an interdisciplinary manner within the visual arts.

The emergence of opportunities and the renewal of teaching and learning practices arose around the time of the COVID-19 crisis (Oza 2020). Technology, once deemed as a threat to the traditional forms of visual arts practice, has now, during the pandemic, seemingly helped to reinvent such programmes and offerings within the humanities (Oza 2020). Kaisara and

Bwalya (2021) note in the article titled, 'Investigating the e-learning challenges faced by students during COVID-19 in Namibia', that during the lockdown period, they were forced to embrace all online teaching has to offer and has since become an increasingly important tool for the accessibility of sources and programmes. Utilising and incorporating technological advances has resulted in the expansion of readily accessible knowledge, which previously was only shared during physical lectures; this has raised awareness of dated perceptions of the arts and technology while giving way to new modes of teaching and learning (Blaschke 2016).

Adapting portfolio development in graphic design education

During my first year of teaching graphic design at Nelson Mandela University in 2021, I noticed that because of different professional requirements and discipline streams in the institution, the development of a digital portfolio is often underemphasised, as it lacks materiality and consequently not fully embedded in practice. In addition to my observations, a conversation with graphic design students highlighted certain feelings regarding the portfolio structure currently in place; these students believe the specific direction is absent and a lack of clear, structured requirements, instructions and resources. As a result, I started searching for practical methods to improve on this as I believe that the portfolio is one of the most important aspects for a student to produce and take with them into the world of work after graduating.

I reflected upon my own learning and teaching experience within the faculty. I assessed how the delivery of the portfolio design project was structured then (2014–2019), compared to the current format (2020 onwards). The most evident shift was in the delivery of the portfolio project brief, the outdated production and output not encouraging a digital format, and the same set of portfolio requirements only applicable to graphic design students. A brief outline of the reflections includes:

- The portfolio submission process in the past included the culmination of physical, practical works created on display. Times have progressed, and the demand for digital portfolios from the industry is much greater. However, the portfolio process at Nelson Mandela University has since shifted, but the instructions and requirements have not been adapted to suit these modernised requisitions.
- The time allocated within which students are to produce a visual portfolio is limited (usually three weeks), resulting in a rushed, unconsidered production. Students need more time to reflect on the work produced and to develop and formulate the portfolio.

- A need for more consultation time with the pertinent lecturer or facilitator is evident when considering past productions and student claims.
- Students require full-time access to the portfolio information and guidelines, as well as current technological knowledge and expertise.
- The portfolio design process only applies to the graphic design stream; this needs to shift, as all visual arts graduates who set out to find work will require a digital visual portfolio to apply or present at relevant opportunities.

In response to such challenges, I identified a need for Moodle as an online learning platform that synchronises with current curricula and traditional learning offerings – a platform that embraces technological advances and hybrid teaching approaches, offering the constant renewal and development of content pertaining to the visual portfolio design process, accessible at any time, and it is necessary to ensure that the output is relevant and valuable to students.

Rationale for modernising portfolio development in graphic design education

The visual portfolio

One prominent impact of technology on the visual arts is seen in the production of a visual portfolio, and the result of it being digitally more impactful and logical in its purpose. The rise of online content-sharing platforms such as Instagram or Behance, and e-portfolios specifically, have further displaced the physical visual portfolio, as they now provide easy and instant access to a showcase of skills (Barnes et al. 2022). From a student perspective, a visual portfolio can be defined as a purposeful collection of works created over time, documenting a process and emphasising the student's abilities and development (Powel, as cited in Zupančič 2020). Additionally, the development of a visual portfolio can be interpreted as an alternative method of reporting, a multi-faceted tool which serves both the student and the educator (Tezci & Dikici 2006). It provides a set structure and unique lens with which to view each portfolio, as well as ascertain certain competencies and achievements (McDermott-Dalton 2021). It is an opportunity for the student to show their project successes and visual solutions while affording the educator an opportunity to evaluate such developments (Tezci & Dikici 2006).

When considering the visual portfolio beyond its assessment purposes, it is also employed as a tool for critical reflection and self-discovery, offering students an opportunity to personally map their learning journey, outlining the characteristics of self-regulated learners (McDermott-Dalton 2021).

Additionally, the accessibility and distribution of the visual portfolio are easier and more efficient in its digital format compared to the past, where the portfolio was delivered physically or by post to prospective employers. This proficiency is fundamental as prospective employers or future opportunities recognise the portfolio, deemed a visual narrative, as an extension of one's creative identity, experience and professional purpose (Barnes et al. 2022). Thus, visual portfolios should be regarded as valuable learning places, developing a myriad of skills, with specific importance placed on interactive connections and ownership (Ahonen 2004).

■ Interdisciplinary Studies module: Graphic design – A theoretical framework for modernising visual portfolios in the digital era

Oza (2020) states that the production and dissemination of data within the visual arts and the larger humanities have been altered by modernised digital tools, techniques and media, located in a constant state of transition, informing and renewing current teaching and learning activities. Mazé (as cited in Mareis & Paim 2021) aptly adds that now is a time for criticality in visual arts education; questioning what could be different should be identified, and aspirations and actions towards such a preferred state should be implemented. It is suggested that education and learning practices should encourage interdisciplinary expansion, especially within the realm of visual arts and professional practice, promoting collaborative learning and development (Ozkaynak & Ust 2012). Tomaž Zupančič (2020), affiliated to the University of Maribar, states that:

> Interdisciplinarity is an important goal for education. An individual's ability to integrate the knowledge, skills, modes of thought, point of view, and content of two or more disciplines is a tremendous achievement. (p. 20)

Expanding the realm of graphic design to encompass theories, approaches and practices adopted from other visual arts disciplines has been and remains a topic of debate (Abdulla, as cited in Mareis & Paim 2021). The complexity of the visual arts as a field resides partly in and arises from its diversity as a discipline and the multiple modes of engagement with subjects and information (Oza 2020). Combining different methodologies adopted from various visual art disciplines expands the borders between specialisations, enforcing a gradual shift towards more collective approaches (Abdulla, as cited in Mareis & Paim 2021). Abdulla (as cited in Mareis & Paim 2021) notes that abolishing the existing disciplinary boundaries enables the early adaptation to new challenges arising in the field of humanities and the world.

The Interdisciplinary Studies module purpose, established within the graphic design course in the Department of Visual Arts at Nelson Mandela University (2020), is set out as follows:

> This module will provide students with integrated knowledge of processes and systems relating to crafting and production of creative outputs. It is also intended to develop discipline specific technical and technological competency in the disciplines of Painting, Sculpture, Printmaking, Stained Glass, Ceramics, Graphic Design, Photography, Fashion and Textiles. An understanding and application of key terms, theories and principles in a business context should be fostered. The department strives towards the inclusion of various interdisciplinary pedagogical and artistic practices. (p. 6)

In this sense, it is critical to ensure that the curricula and the objectives set out by the Interdisciplinary Studies module align with current world affairs and provide students with content that is relevant to their contexts (Noel 2022). Additionally, by acknowledging the digital portfolio as a valid form of knowledge, a useful mode of documenting and reporting educational phenomena broadens the reach of interdisciplinarity and the Department of Visual Arts' offering (Zupančič 2020). A need exists within Nelson Mandela University for designers and other visual artists to be educated to encompass a broader knowledge of a variety of processes and methods to develop a more comprehensive expertise (Ozkaynak & Ust 2012). This brings about renewed thinking, bringing together specialisations within the visual arts practice, as opposed to the reinvention of established fundamentals (Abdulla, as cited in Mareis & Paim 2021). Imagining an educational programme that is not exclusively led by scientific premises and dated frameworks but one that includes real scenarios and outputs, fostering the unique student voice and contribution (Barone 1995).

Research methodologies employed to explore new avenues in modernising visual portfolios in the online learning and teaching era

Outlined below is the research methodology for the proposed intervention, identified as most appropriate for a research study of this nature, attempting to answer the question: How can the visual portfolio design process be better embedded and function in the visual arts practice at Nelson Mandela University?

Employing an interpretivist approach and supported by literature, personal and professional experience, as well as active engagement in the design industry, this case study reflects upon students' understanding of learning materials and their own creative practices, leading towards portfolio production. It is suggested that a qualitative research design be employed, as Zainal (2007) explains that such an approach within case studies leads to detailed descriptions of data in real-life situations while it is most effective in elaborating and explaining such complexities. The research is based on a theoretical outlook and instruments reflections or observations. The sampling strategy is purposive and is primarily located within the Department of Visual Arts at Nelson Mandela University, where the researcher lectures. The case study method enables data to be examined on a micro-level, most often conducted within the context of its use (Zainal 2007). Schoch (2019) suggests that the data analysis process comprises the following phases: describing what has been discovered; interpreting its underlying meaning and value; drawing conclusions as to what this means; and determining its significance to the research. Once the data has been collected through multiple sources, it is validated through the method of triangulation. Thick descriptions will be applied, ensuring that the data are validated and that feedback takes the form of rich, thick, and detailed descriptions.

Once the research study commences, ethical clearance will be required as interviews will be conducted with staff members of the Department of Visual Arts at Nelson Mandela University, and questionnaires will be distributed among students to discern what their apparent needs are in terms of the visual portfolio project and output. Research can only commence once ethical clearance has been applied for, is granted by the Ethics Committee and is performed under strict guidelines in accordance with the Code of Ethics of Nelson Mandela University.

■ Report of literature

The following example case studies have been consulted to broaden the scope of this research, support the current speculative research stance, and partially inform the final research output.

In the example case study, titled, 'e-Portfolios, course design, and student learning: A case study of a faculty learning community', researchers aspired to uncover the varying perceptions of faculty members participating in a faculty learning community (FLC), determining how it contributed towards learning specific skills, particularly towards the pedagogical use of e-portfolios (Bose & Lowenthal 2018). Additionally, Bose and Lowenthal (2018) were also interested in the opinions of faculty members on how e-portfolios could impact student learning. Two groups were distinguished in the apparent faculty. One group was employing programmes where the use of e-portfolios is mandatory, specifically concerning the assessment space, while the other group merely tested the e-portfolio approach before considering its final adoption to the programme (Bose & Lowenthal 2018). The FLC was designed to consider the needs and approaches of both such groups within the faculty (Bose & Lowenthal 2018). It was established that Digication, an e-portfolio subscription platform that allows students, in this case, to create and organise content like images, writing and subjects into a virtual portfolio using layout templates provided (Digication 2018), would be utilised. The created portfolio ultimately results in a website-like production that shows students' personal information, experiences, skills and work. While allowing users such as educators, fellow students, employers and other entities to access and view the portfolio created, this particular faculty proposed to use the platform as a tool with which to assess and showcase student learning (Bose & Lowenthal 2018). The formulated FLC set out to equip educators on how to productively use and include the development of e-portfolios within teaching and learning activities, emphasising the utility thereof as a pedagogic tool (Bose & Lowenthal 2018). They provided workshops and training on the effective use and application of the Digication platform, demonstrating how to implement the tools and templates for a customised e-portfolio (Bose & Lowenthal 2018). Throughout this process, the e-portfolio functions were highlighted. These included the use for assessment, peer reviews, personal reflections, constructive feedback, experiential learning and job applications (Bose & Lowenthal 2018). This prospect encouraged educators to review their overall course objectives and rethink learning approaches, activities and assessment plans (Bose & Lowenthal 2018). The findings of this study suggest that educators experienced a greater desire to employ innovative teaching methods, such as actioning the development of e-portfolios. The limitations and benefits based on faculty feedback are provided in Table 3.1.

TABLE 3.1: Limitation and benefits of a faculty learning committee.

Limitations established by the FLC study	Benefits established by the FLC study
The FLC in this case study comprised a semester and has proven not to be long enough to produce an effective e-portfolio and identify lasting changes	Engagement with colleagues across disciplines brought about the opportunity for reflection, introspection, and a chance to re-evaluate their unique courses and their learning outcomes
This case study did not include any classroom observations or student feedback; only self-reported data was collected, limiting the overall findings and suggested course design	This approach, trialled in this study, encouraged learning through peer interaction while affording participants with timely and valuable support from facilitators
-	With the inclusion of new tools and methods, a positive impact and changes to course design were established
-	It provided a space in which faculty/participants can challenge and rethink the barriers of institutional silos and engage in peer instruction and problem-solving methods

Source: Summarised and adapted from Bose, D & Lowenthal, PR 2018, 'E-portfolios, course design, and student learning: A case study of a faculty learning community', *The Online Journal of New Horizons in Education*, vol. 8, no. 4, pp. 50–62, viewed. <https://www.researchgate.net/publication/350156818_E-Portfolios_course_design_and_student_learning_A_case_study_of_a_faculty_learning_community>.
Key: FLC, faculty learning community.

The results of this case study suggest that including the application of e-portfolios in course design and teaching approaches increases the facilitator's and students' engagement, confidence and knowledge of the apparent practice (Bose & Lowenthal 2018). Additionally, this study presented the benefits of using e-portfolios for assessment, enhanced teaching and learning exercises, and the value of integrating modern technologies (Bose & Lowenthal 2018). However, different in its scope, this example case study holds value in supporting what is outlined in the current study investigation and proposal, as it highlights the importance of applying newly adopted technological tools and outputs in traditional visual arts practices as suggested. One critique of the example study is that employing a generic, template-based tool, such as the subscription-based portfolio creation platform Digication, compromises the learning and practical experience of design or visual arts students by limiting their creative freedom and unique voice in e-portfolio production. McDermott-Dalton (2021) notes that the designer's personality and unique style are lost when using a generic, template-based e-portfolio tool. Another case study example, emphasising the creation of e-portfolios in an organic and somewhat intuitive manner, is outlined below.

The Australian e-Portfolio Project (AeP) undertaken in 2010 by Hallman and Creagh, examined the use and application of e-portfolios across the higher education (HE) sector. It was found that the use thereof was fragmented, and a need for discussion and collaboration across disciplines was identified (McDermott-Dalton 2021). McDermott-Dalton (2021) argues that HE should encourage and facilitate the adoption of e-portfolio processes as therein lies great benefits for early student development. Furthermore, it was suggested that an e-portfolio programme be constructed to include reflective and developmental approaches, encouraging 'a conversation with him/herself through the medium of the portfolio' (McDermott-Dalton 2021, p. 1210), resulting in a showcase portfolio displaying personal characteristics and integrity in design.

Aligned with the purpose of this study, the findings of AeP clearly encourage a reflective and personal approach to portfolio development. Such an approach requires additional content and guidelines beyond those of traditional portfolio requirements; this provides students with a deeper understanding of their own practice, with the relevant technology to support and articulate the value of their work. O'Sullivan (as cited in Mareis & Paim 2021) notes that it is crucial to ensure such support and learning connections can be sustained and ongoing.

The example case studies highlight their pedagogical approaches and findings when including the e-portfolio in the course curricula; however, what is not presented is the specific portfolio requirements and underlying principles.

Underlying portfolio principles

The team from DocFly (2021), a portable document format (PDF) editor programme, provides a basic framework as to what a digital portfolio process, in their opinion, should entail. Firstly, it is suggested that a target audience is defined, considering to whom the portfolio will be aimed (DocFly 2021). Then, inspiration should be sought, respecting one's personal style. Thereafter, the focus should be shifted to showcasing one's strength and selecting the appropriate work to reflect that. The next step in the process is to sketch a draft portfolio layout and write suitable titles and captions for each section. The final design and layout of the portfolio require a rigorous approach, ensuring that the necessary personal information is included, whereafter, the document should be scrutinised and proofread (DocFly 2021). Graphic designer Tiffany Eaton (2019) similarly provides a listed framework for the portfolio design; however, she approaches it as a considered whole rather than singular sections, which are presented as follows:

- **Context:** Here, the problem, its relevance, and its outcome are highlighted to provide background and context to the viewer.
- **Scope:** The scope refers to determining and documenting various deliverables and functions of included projects and the portfolio in its entirety. Here, the audience for whom the portfolio is designed is acknowledged.
- **Rationale:** This refers to written motivation work for individual projects or workpieces. A rationale or motivation includes descriptions of the process, obstacles and well-framed solutions.
- **Execution:** How your portfolio/work is perceived rests upon the way in which it is presented. The look/style of the portfolio must accurately reflect the insights, functions and scope of the work. This relates to how the work will be understood and a personal reflection of the designers' skills.
- **Impact:** The feeling of value emanated by the portfolio, or simply put, the impact the work makes on viewers, the feeling gained when the work is viewed.

When considering both structures, it is clear that the presentation of skills is crucial while developing a suitable rationale to guide the viewer, ultimately showcasing skills to make an impact. If such an approach is undertaken, led by the educational patterns established in the example case studies, the development of the following portfolio course assistant is the result.

Proposed course outline

The proposed portfolio course using Moodle as an assistant seeks to draw the various streams – such as photography, graphic design, fashion and textiles, as well as fine art – together in an interdisciplinary manner within the visual arts. This affords students the equal opportunity to produce a digital, visual portfolio that thrives in a competitive graduate labour market. The course aims to equip students with the necessary tools and understanding needed to present and 'package' their work in a memorable, impactful manner. It serves as a year-long guide that requires students to complete certain tasks through a logically structured approach. The basic – and at this stage rather broad – course outline can be seen in Figure 3.1. This illustration includes the core principles of the course, which was deemed most important and was identified in conversation with students as unclear within the portfolio development process and delivery.

This course, which is yet to be given a title, starts with an introductory section familiarising the students with the course – what it is about, what will be required of them and how it works. Here, they will receive a breakdown of the course structure and its sub-sections. From here the students move to Unit 1, titled 'Crafting your narrative'. In this section, the students learn how to communicate clearly and authentically about themselves and their work while being prompted to write an 'About me' section. However, before the writing can commence, they will be required to reflect upon and establish who they are as creative individuals, what their understanding is about themselves, where their interests lie, and what they can contribute to the creative sphere. Students are tasked to reflect and answer certain questions that, ultimately, assist them in constructing a clear, well-written and to-the-point creative biography.

Unit 2, titled 'Including your creative process', addresses the importance of the process followed in order to achieve an apparent solution or creative output and how to approach the vulnerable act of putting themselves 'out there'. Kleon (2014) notes that the artist/designer has traditionally been conditioned to believe that the creative process is something that should be hidden and kept to oneself. This is not true, as context or process is crucial for viewers to understand a particular brief or the overall scope of a project. Where necessary and relevant, students are encouraged to share aspects of their unique processes followed.

The next unit, which functions synchronously with Unit 2, is Unit 3, titled 'Gather and analyse project inventory'. Here, students are to gather all the work they have produced throughout the relevant period (second and/or third year) and critically reflect thereon. Critically reflecting and asking important questions regarding what one has already created fosters a strong and healthy relationship through the self towards one's work (Pickens 2021). Fry (2021) adds that engaging in critical reflection provides clarity and that one should think deeply about the overall creative direction into which one strives to move. Does the work that has been produced

Source: The author created the course structure illustration based on the method established in Noel (2022). Permission to reproduce this artwork in this book was provided by the author in 2024. All rights to the original artwork are owned by Micaela Scholtz. Copyright © 2022 Micaela Scholtz.

FIGURE 3.1: Portfolio course structure planning.

emphasise or add to that direction/vision? Here, students are guided to select and present projects suited to their values and overall vision as established in Unit 1.

The next course of action in constructing the portfolio is the assembly and layout. This leads to Unit 4, titled ‘Assembling your portfolio’. In this section, the students are guided to carefully consider what they present, how they present it, and in which order. They are introduced to the basic use of design software, which is beneficial and relevant to any visual arts stream. Kleon (2014) notes that a good story structure is one that is neat, structured, and encompasses a logical flow. Each action, each bit of text and media the students are crafting and sharing are all part of their unique narrative, which they are constructing through this portfolio (Kleon 2014). This unit ensures that the portfolio is professionally put together while reading as a coherent narrative of the students’ journey.

Lastly, the students reach Unit 5, which is titled ‘Review and reflect’. Once students have constructed their portfolios and are nearing finality, they must share them with their peers and have them reviewed. Students from within the School of Visual Arts, completing the same Interdisciplinary Studies module from any stream, are required to share input and constructive critique. This method of informal assessment provides the student with an outsider perspective of the portfolio and the work included. During this stage, the student is to reflect on their own portfolio as well. Students are urged to be as objective as possible and to really look at what they can improve or what needs to change. In ensuring fulsome, equal feedback students are provided with set guidelines when assessing their peers’ portfolios. Additionally, in this unit, the packaging and exporting of the portfolio are addressed.

Students move through each of the units as per the dates set out according to the teaching schedule and address the mentioned topics in detail. The students are supplied with information, guides, resources and activities which they are required to use and complete progressively. This course encourages the voice of the learner by providing freedom in terms of what students choose to present and articulate through the portfolio but provides them with a framework from which to construct it. The various steps (units) build towards a final digital portfolio that can be utilised in various future endeavours among all disciplines.

It was felt that the overall design and style of the course had to reflect the students of the Department of Visual Arts and Nelson Mandela University. This involved the inclusion of student work, such as the images produced for the course banner, and its construction. The initial design can be seen in Figure 3.2 and Figure 3.3, noting that the course has not been designed in its finality and is merely in the prototype phase. Oza (2020)

Source: The course banner design consisted of a collaborative design effort between third-year graphic design students (2022), the Learning Experience Design (LXD) team and the researcher. Permission to reproduce this artwork in this book was provided by PA Binsbergen in 2024. All rights to the original artwork are owned by PA Binsbergen. Copyright © 2024 PA Binsbergen.

FIGURE 3.2: Moodle e-portfolio course banner on the landing page.

Source: The course prototype design constructed by the Learning Experience Design (LXD) team based on the researchers' course structure and content development. Permission to reproduce this artwork in this book was provided by PA Binsbergen in 2024. All rights to the original artwork are owned by PA Binsbergen. Copyright © 2024 PA Binsbergen.

FIGURE 3.3: Prototype of the Moodle e-portfolio course landing page.

notes that work within the field of digital humanities is necessarily collaborative and that its prosperity relies on involving multiple skills, disciplines and areas of expertise. The proposed course is a collaborative effort between myself, as a trained graphic designer and lecturer, and the Nelson Mandela University Learning Experience Design (LXD) studio. This approach affords institutional diversity in terms of our offering and sustains the multiple modes of engagement with digital technology (Oza 2020).

The proposed course is curriculum-focused and has applied basic design and problem-solving strategies, such as identifying knowledge gaps and opportunities, as well as the implementation of modernised processes and evaluations, to construct its framework and expand on the existing Interdisciplinary Studies module. In addition, the course can be viewed as a blueprint for the innovative integration of technology with the current visual arts curricula and teaching practices, specifically pertaining to interdisciplinarity. Noel (2022) notes that education methodologies, in this case pertaining to art and design, should embrace 21st-century skills and resources. Thus, it is important to acknowledge that the proposed course is continuously evolving, fostering fluidity between theory and practice, as well as evolving technological advances.

Conclusion

In conclusion, digital portfolios should be regarded as complex educational tools that require careful and considered integration into course curricula (Cooper, as cited in Zupančič 2020). Their development and application foster constructive learning, dialogue and collaboration between students and lecturers, with students thus performing an active role in visual arts education (Zupančič 2020). There is an aim to redefine the portfolio project as a thought-driven process rather than it being object-focused (O'Sullivan, as cited in Mareis & Paim 2021). Tezci and Dikici (2006) note that it is important for educational practices to support and nurture the development of creative thinking, offering activities, methods and techniques that foster a collaborative learning environment that is both inclusive and sustainable.

Alan Moore (2019), author of *DO/DESIGN Why beauty is key to everything*, notes that 'as we collectively face real and significant challenges, we should not adopt a state that seeks incremental change: we must create and design better things. It is about recognising the opportunities for creating the new and having the courage and the conviction to blend new and old tools, processes, and language together to evolve fresh, novel, and meaningful ways of making stuff. It demands innovation and transformation of all the existing organisations' (p. 63). In response to this, it can, and should, be acknowledged that the proposed course is not a new model or a first of its kind, but rather an improvement of existing teaching models and structures – reimagined, encouraging a better design of already established practices. It is argued that visual arts education should embrace this change and implement a variety of digital pedagogical approaches that utilise these technological tools gained through the pandemic in support of learning. Utilising such technological learning devices affords the ability to renew dated methods and elucidate current teaching challenges, as well as support scholars in the mastery of simple yet critical skills such as visual portfolio-building.

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Chapter 4

Authentic learning in the digital era: How running a digital news site equips students with 21st-century skills

André Gouws[a,b]
[a]Department of Languages and Cultural Sciences,
Faculty of Humanities, Akademia,
Pretoria, South Africa
[b]School of Communication Studies,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa

Marenet Jordaan
Department of Journalism,
Faculty of Arts and Social Sciences, Stellenbosch University,
Stellenbosch, South Africa

■ Abstract

Digitalisation means that journalism educators need to respond to changes in the field of journalism and in their understanding of journalism to remain relevant in their teaching. The same technological advancements that have led to the current state of flux in journalism offer tremendous opportunities for educators. Using technology, the authors of this chapter have created

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an authentic teaching model at two South African universities, namely Stellenbosch University (SUN) and North-West University (NWU), that imitates industry. This authentic newsroom encourages journalistic learning in a realistic setting, allowing students some control over and ownership of what they are learning. Students become active participants in the ever-changing digital news environment, which provides them with the technological skills to become competent journalists and competence to graduate as adults who have been prepared for the world of digital work. In this chapter, the authors argue, through a review of the literature and a reflection on their authentic newsroom, that theory and practice in journalism education can be reconciled through a teaching and learning model that embraces authentic learning. An authentic learning model teaches students practical skills and competence to become responsible adults and full participants in the digital economy.

Introduction

Journalism is undergoing significant changes. This may sound like a well-worn cliché, but it is not something that scholars and educators should shy away from. The digitalisation of news and the proliferation of social media, with the accompanying entry of many new actors in the journalism field, have had profound effects on legacy media – traditional newspapers, magazines and broadcasters – around the world (Kruger 2022). There is increasing evidence that legacy media are losing the attention of audiences at seemingly the fastest rate ever (Moneyweb 2021; Newman et al. 2022). Audiences are now finding their news online and not necessarily from the websites of legacy media outlets, which has undermined legacy media's business model (Kruger 2022), leading to declining career opportunities for journalism graduates. A 2022 Reuters Institute study showed that 89% of the South African population find their news online, of which 68% do it on social media (Newman et al. 2022). The rising popularity of social media has led to the rise of peripheral journalistic actors, for example, Facebook groups, security companies and even influencers who now sometimes appear to create news (Ginosar, Zimmerman & Tal 2022; Hendrickx 2022; Hermida & Young 2019; Mabweazara & Mare 2021). Journalists also appear to have become like influencers (see Coddington & Lewis 2020; Peters et al. 2022; Tandoc 2019). Universities such as Rhodes University in South Africa, Columbia University in the United States of America (USA), and various others have prepared extensive recent reports examining the challenges facing journalism (Jacobson 2021; Rhodes University 2022). These challenges include questions about the very institution of journalism (Reese 2022). Some scholars talk of an existential predicament facing journalism when journalism moves *beyond* journalism, away from the confines of traditional journalistic practice (Hermida 2019). Journalism is now happening outside the traditional institution of journalism. News is now created by a wide variety of new actors (Hermida 2019), which has led to a questioning of journalistic roles and identities (Deuze & Witschge 2018; Mellado & Hermida 2022; Mututwa & Mare 2022; Reese 2019). Amid these questions, the digitalisation of news and the ease of creating and distributing information have also led to an exponential rise in fake news, disinformation and misinformation (Friesem 2019; Jankowski 2018). In South Africa, the Gupta–Zuma saga is a good example. Fake news and disinformation proliferated online during the Zuma era, including social media posts, Wikipedia edits and online bots, all orchestrated by the British communications firm Bell Pottinger (Kruger 2022).

Against this somewhat pessimistic background, which has become a source of concern for many journalism scholars and practitioners, it is quite clear that academics need to adapt not only their understanding of journalism but also their teaching to remain relevant and offer their graduates a sense of hope for the future (Garcia-Galera, Martinez-Nicolas & Del-Hoyo-Hurtado 2021). The changing field of journalism presents many challenges to journalism educators, students and professionals alike (see Guo & Volz 2019; Hanusch 2022; Splendore & Brambilla 2021). For scholars and educators, the same technological advancements that have led to the current state of flux in journalism (Deuze & Witschge 2018; Splendore & Brambilla 2021), in fact, offer tremendous opportunities. Technology can be used to encourage journalistic learning in a way where students can have some control over and ownership of what they are learning (Garcia-Galera et al. 2021). Giving journalism students ownership and a say in what they are learning could be an efficient way to make them not only masters of the subject field but also 'powerful agents of change' who are in control of their learning (Burgos 2020, p. xxx). By embracing technology, students will become active participants in the constantly changing digital environment, understand the changes, learn to adapt and not be left behind.

This chapter reflects on our authentic teaching model – an immersive digital newsroom. In this newsroom, students create real news stories for real publication in the real world. The word 'real' is purposively repeated three times. The real journalism that senior journalism students practise at SUN and NWU stands at the core of our authentic teaching and learning philosophy. This is not an entirely new model. Work-integrated learning models have, in fact, been at the heart of journalism education for many decades (Valencia-Forrester 2020). In the days of printed newspapers and magazines, most journalism schools had projects where students created printed versions of newspapers and magazines (Motsaathebe 2011; Rabe 2018; Tomaselli 2002).

Sometimes, these publications were for broader public consumption, sometimes for the eyes of the lecturer only. With all the challenges it has brought for legacy media, the internet has also given academics the opportunity to create their own digital newsrooms relatively easily.

In this digital newsroom mode, lecturers facilitate learning by immersing students in a real digital newsroom. The authors of this chapter have both been involved in authentic learning projects at their respective universities (SUN and NWU), where journalism students participate in real-life, online news production as part of their curricula. These projects are constantly being adapted to remain relevant in the fast-changing digital news environment. The projects were, for instance, adapted to become virtual newsrooms (just as had happened in real newsrooms across the country) while coronavirus disease 2019 (COVID-19) restrictions were in place. Because the authentic learning models at SUN and NWU share many similarities (Gouws was involved in setting up both projects), this chapter is a shared reflection of experiences. MatieMedia (at SUN) has been running since 2017, while threestreamsmedia (at NWU) has been running since 2020. Our reflection flows from our experiences since 2017.

The research question addressed in this chapter is as follows: How do adaptive authentic learning projects at SUN and NWU, which share many similarities, teach students 21st-century skills?

Literature review: What is journalism, and how can it be taught?

Questions about what journalism is and how it should be taught abound (Anusharani & Benda 2020; Garcia-Galera et al. 2021; Kruger 2022). The problems facing legacy media, already mentioned earlier, have inevitably led to a perception that there are fewer opportunities for journalists. However, the reality is that the digital environment has opened up many more opportunities (Morrish 2019). These new opportunities include entrepreneurial opportunities (Caplan, Kanigel & Tsakarestou 2020), which can be as simple as running a YouTube channel, blogging and using social media (Bor 2014), public service journalism, and what Kruger (2022, p. 28) calls ‘accidental journalism’ (i.e. people in other careers who drift into doing journalistic work without even realising it).

The debate about issues facing journalism and the meaning of journalism in the digital era is ongoing. For example, Reese (2022, p. 254) argues strongly for preserving the institutional authority of journalism, which he sees as ‘fact-based accountability journalism’. Reese (2022, p. 254) is concerned about scholars who treat journalism in ways that are ‘hopelessly outmoded in an age of digital plenty’. Scholars such as Ryfe (2019, p. 206) argue that ‘there has never been a time in which more news is produced than today, yet not since the 19th century has so little of it been produced by journalists’.

Scholars such as Deuze (2019), Deuze and Witschge (2018), Ryfe (2019), Swart et al. (2022), and others have argued for new ways of understanding and practising journalism, not necessarily within the institutionalised structures of traditional news media. While the debate about journalism’s role in the 21st century is essential, it is not the purpose of this chapter to question the meaning or relevance of journalism in the 21st century. Journalism scholars agree that journalists have traditionally contributed to political and everyday life by providing a normative framework for society (Hanitzsch & Örnebring 2019). This contribution of journalism to society, however it may be defined and practised, is certain to continue. Steensen and Ahva (2019) propose an all-encompassing definition of journalism that shows how important journalism still is in society:

> Journalism covers and shapes all aspects of society, from politics to fashion, from business to everyday life. It influences, articulates, and produces culture. It is the first draft of history, and it is where history can be found. Journalism is language, rhetoric, genres, and discourse. It is legitimized and limited by law. It is in industry, civil society, and the state. It is labor, it is management; it is commercial, nonprofit and idealistic. Journalism is technology. It is media and communication. It is local and global. It is about ethics. Journalism is epistemic, as it produces knowledge about the world. In other words, journalism is so multifaceted that it has been studied from a variety of disciplines and perspectives, including, but not limited to, sociology, political science, cultural studies, history, language studies, philosophy, economics, management, business, science and technology studies, and communication. (p. 38)

The authors of this chapter see journalism as part and parcel of society, politics and daily life. In a digital environment where almost everyone can be producers of news and information (Bruns 2010; Ginosar et al. 2022; Hermida & Young 2019; Kananovich & Perreault 2021; Mututwa & Mare 2022; Swart et al. 2022; Tandoc 2019), journalism students and journalists carry an increased responsibility to create and distribute news responsibly and ethically. Our teaching and learning approach will prepare students successfully for their role in the digital society.

The debate between theory and practice

The debate about how to teach journalism is contentious and has been ongoing for decades (Anusharani & Benda 2020). The changes in the field of journalism have led to much debate about how educators should respond. Some scholars have argued that educators often still reinforce previously held norms (Wall 2015) instead of adapting and changing their teaching practices.

Educators and the media industry often have different ideas about how journalism students should be trained (Wall 2015). The debate between theory and practice is highly prevalent in journalism education, and there is often a clear dualism between theory and practice, with these two components 'expressed as independent and, occasionally, mutually exclusive entities' (Solkin 2022, p. 2). Employers and editors usually prefer practice-based education, while academics sometimes lean towards more theory-based education (Josephi 2019). Journalists themselves also sometimes question the theoretical training they receive. For example, some journalists elsewhere in Africa believe that their theoretical training does not relate to the practice of journalism in Africa. A study in Ethiopia found that journalists felt their education did not reflect local practices and political conditions (Gessesse 2020). Motsaathebe (2011) has argued that journalism education in Africa should respond to local contexts and graduates should be prepared to work in Africa, while Shaw (2017, p. 49) has also called for a 'bottom-up cultural approach' to journalism education in Africa.

In the 1990s and 2000s, the debate at academic institutions centred on education that focused on reflecting on journalistic work, which the industry did not find helpful (Josephi 2019). In the digital age, journalism training has become more skills-focused, with the media industry seemingly accepting that journalism schools are training future journalists to be digitally skilled and to uphold professional standards (Josephi 2019). There has been some integration of theory and practice in journalism education (Josephi 2019).

Journalism schools in South Africa have mostly been industry-centred, with the aim of producing journalists for the mass media world (Garman & Van der Merwe 2017). Curricula are often based on the 'correct' way of writing news stories, as elsewhere in the world (Mensing 2010, p. 512). Many journalism schools in South Africa were founded by or received significant funding and help from mass media organisations. This includes the School of Communication at the former Potchefstroom University for Christian Higher Education (now the Potchefstroom campus of NWU), founded in 1950 as the first journalism school in South Africa and sponsored by the publishing house Perskor (Garman & Van der Merwe 2017), and the Department of Journalism at SUN, which was founded in 1978 by a former newspaper editor from Nasionale Pers (now the media conglomerate Naspers) (Rabe 2018). Nevertheless, more than a decade ago, Mensing (2010, p. 513) argued that the industry-centred approach of many journalism schools 'artificially separate theory from practice'.

In the South African context, as elsewhere in the world, there is growing acceptance that fewer opportunities for journalism students in industry

(Kruger 2022) means that journalism schools should reflect on their training and adapt. There appears to be an abundance of journalism graduates in South Africa, which means many of them need to look for career opportunities outside the field of journalism (Nordenstreng 2017). Journalism schools must address the changing employment situation and provide their students with skills that would be generally useful in the digital world (Josephi 2019). Furthermore, the deinstitutionalisation of journalism – in other words, the blurring of boundaries between professional journalists and other producers of news and information (Josephi 2019) – should also be addressed. This means that journalism schools should prepare students not only to become journalists within traditional journalism institutions. Students should be prepared for, among others, entrepreneurial opportunities (Caplan et al. 2020; Josephi 2019) to become independent thinkers (Dube 2017) and to use new technology and the opportunities technology brings in innovative ways (Jjuuko & Njuguna 2019; Josephi 2019). We agree that an approach to journalism education that looks further than the traditional institutions of journalism would offer students more opportunities and turn them into competent adults. As Mensing (2010) has argued, the traditional industry-centred pattern in journalism education to teach students to become professional journalists within traditional newsrooms, with less of a focus on creating critical and independent thinkers, does students a disservice.

Journalism schools in the BRICS (Brazil, Russia, India, China and South Africa) countries, including South Africa, sometimes cover other communication branches and prepare students for work in the digital information field, where many opportunities still abound (Nordenstreng 2017). One foreign example also highlights this change towards a more creative outlook in the field of journalism. An Australian study found a blurring between the descriptions ‘journalist’ and ‘writer’, with many freelance journalists becoming increasingly creative in the digital space (Josephi & O’Donnell 2023). Josephi (2019) suggests that scholars should examine the effects of deinstitutionalisation on journalists’ work further to help academics identify and develop skills and knowledge that would serve students best in their future careers.

We believe that our authentic teaching and learning model takes an approach that is relevant in the African context because a bottom-up approach is followed (Shaw 2017) by handing some power to students to take charge of their learning. The model helps us develop a wide variety of practical and life skills in our students, which will be useful to them in traditional journalistic institutions and the wider digital world relevant to the African context, where they do their authentic learning in a real-life environment.

Authentic learning

The authentic learning model discussed in this chapter flows from a long history of work-integrated learning (WIL) and practice learning in journalism training (Valencia-Forrester 2020). There are, however, some differences between WIL and authentic learning. Work-integrated learning usually refers to the involvement of media publications or institutions or real media work that is *external* to the university environment (see Makhadi & Diederichs 2021; Valencia-Forrester 2020). Work-integrated learning can also be learning where students complete capstone projects or participate in short-term online simulations within the academic environment (Valencia-Forrester 2022). On the other hand, authentic learning, according to France et al. (2019, p. 13), 'requires students to engage in realistic tasks that provide complex activities and that are necessarily collaborative in some form'. Authentic learning should be within settings similar to the real working environment, with similar outcomes as expected in real newsrooms (St Clair 2015). Learning should involve real-world tasks (Thomason 2018). Such authentic learning allows students to experience the actual challenges and unpredictability of newsroom work (St Clair 2015). Authentic learning projects are usually housed *within* the university. Authentic learning goes beyond teaching students practical skills; it teaches them competence. Rychen and Salganik (2003) explain that competence means adults in modern society should be flexible, adaptable and mobile to help them fulfil different roles throughout their lives.

There are few examples of authentic learning models in journalism teaching at universities in South Africa, but there are many examples of WIL in journalism teaching. These examples include Rhodes University, where students used to assist in the running of the local newspaper *Grocott's Mail* (Gess 2009) and SUN, where students still complete internships at media institutions. The Tshwane University of Technology (TUT) runs a WIL programme where students are placed in the workplace for six months, which students and employers have received very well (Makhadi & Diederichs 2021).

There are interesting examples of authentic learning projects involving student newsrooms elsewhere in Africa. For example, several higher education institutions (HEIs) in Malawi run radio stations where students work as radio journalists. In contrast, the University of Dar es Salaam runs a television station across the country with the help of students (Kruger 2022).

Authentic learning projects, apart from teaching students to become competent and adaptable adults (Rychen & Salganik 2003), also teach them necessary and useful practical skills. These skills include analytical thinking, problem-solving, decision-making, digital skills, teamwork, conflict management and stress management (Ornellas, Falkner & Edman Stalbrandt 2019). Also, as Kruger (2022) points out, digital journalism is best taught by doing digital journalism.

The authentic learning environment should include some or all of the following elements (Herrington, Reeves & Oliver 2014, pp. 403–404):

- Authentic contexts that reflect how the knowledge will be used in real life.
- Authentic tasks with real-world relevance.
- Access to expert performances and modelling of processes.
- Multiple roles and perspectives to help students examine the field of study from various perspectives.
- Collaborative construction of knowledge and reflection, as would happen in real-world environments.
- Articulation, which helps students strengthen their understanding and reasoning.
- Coaching and scaffolding, because students cannot be left entirely to their own devices – they need guidance.
- Authentic assessment, where students are provided with the opportunity to complete their performance in a way that is tied to the authentic learning environment.

Both WIL and authentic learning projects serve as a bridge between the academic and professional worlds, which is one of the chief aims of any type of authentic learning or WIL (Makhadi & Diederichs 2021). Authentic learning has been shown to prepare students better for the transformation from university to the workplace (Ornellas et al. 2019).

As we have shown in this section, the fluid nature of journalism and the reality that many students may never enter traditional newsrooms call for a teaching approach that does not rely on skills alone but one that teaches students to become competent individuals who can participate fully in the digital economy as critical thinkers. We, therefore, employ critical self-reflection in this chapter to evaluate our programmes in the context of theory on what journalism schools should do, as discussed in this section.

Critical self-reflection as a methodological approach

Critical self-reflection is a way to not only think about the curricula but also to identify possible ways to improve the curricula (Jordaan 2018). Some argue that reflective practice is very popular in education and over-used (Hébert 2015). That is why reflective practice should serve a clear purpose;

it is not merely ‘to think about things’ (Jordaan 2018, p. 826) but should be a practice that helps educators evaluate and adjust their work to remain relevant in a fast-changing world (Hébert). Hébert describes critical reflection as focused, careful and methodological, citing Dewey (1933).

The authors of this study base their reflection on Donald Schön’s concept of reflection-in-action (Schön 1983). Reflection-in-action is a concept that allows the practitioner to not only think about the teaching model but to adapt and change the model in the best way possible to integrate theory and practice in the teaching and learning model. Schön’s framework for practitioner reflection suggests three steps for reflecting on a learning process:

- **Before:** Reflection on what practitioners think might happen.
- **During:** Reflection on how the process is taking place.
- **After:** Reflection on insights, learning and changes.

Applying Schön’s model to the reflection in this study means that we should reflect on our authentic teaching model before implementation while the model is in use and afterwards. As the model is a continuing one, our reflection is ongoing. Insights gained while the model is in use are evaluated and improved, or changes are implemented continuously. We have been employing reflection-in-action since we commenced with our authentic learning models, constantly evaluating our model as we progress through the years. As Hébert (2015) points out, in Schön’s reflection-in-action model, practitioners often think about what they are doing while doing it intuitively. But reflecting while doing also requires explicitly turning thinking into reflection (Hébert 2015):

> Privileged knowledge, on Schön’s model, exists in the experiential realm of the individual subject, rather than in the abstract field of rational justification. Schön’s practitioners need not construct a plan of action according to a delineated set of data. Rather, their knowledge already exists in their knowing in action. (p. 365)

The authors of this chapter are both experienced journalists and academics. Our reflections, therefore, are based on our academic knowledge and our deep, personal insights into the field of journalism gained through experience. The reflection in this chapter is thus rooted in Schön’s ‘process of knowledge production’ (Hébert 2015), with a clear end goal to improve journalism education. As Jordaan (2018, p. 827) points out, critical self-reflection in journalism teaching should ‘involve concerted efforts to improve what happens in the lecture hall’. The goal of reflection is to guide the practitioner towards further steps to reach the goal in the best way possible (Hébert 2015). Our goal with the authentic teaching and learning model was to find a teaching and learning model that best reflects the needs of the student and the changing journalistic environment.

Ethical concerns identified in this study relate to possible personal bias in our reflection, which we have addressed by ensuring a substantial scientific grounding for our study. Our reflection is based on Schön's scientific reflection-in-action model. We have been guided by the Research Ethics Committee: Social, Behavioural and Education Research (REC: SBE) policy at SUN. Our reflection is exempt from ethical clearance.

The reflection in this chapter is based on the authors' experiences before and while using the teaching and learning model at SUN since 2017 and at NWU in Potchefstroom since 2020. Both authentic learning models are still in use, which means the reflection process is ongoing. Our reflection is based on our general observations of students through the years. In this reflection, we do not identify students; it is based on our wider observations that helped us make some generalisations.

■ Context and background of the study

The digital newsrooms at SUN and NWU discussed in this chapter are run and managed by the students. Students work as real digital journalists as part of their curriculum. Few similar digital-only newsrooms form an integral part of the curriculum in South Africa. As far as we could ascertain, NWU, SUN, Durban University of Technology (DUT) and the University of the Witwatersrand (Wits) are the only universities that currently run real-life digital newsrooms as part of their curriculum.

The authentic learning models at SUN and NWU are fully integrated into the curriculum. Students work as real journalists while completing their studies. They produce real journalistic work for publication on news websites. These websites are live news sites read by the public. The work students do on these sites is assessed. Therefore, students achieve their goals by being digital journalists in the real world. Students produce stories for their specific audiences, including peers, university staff and residents of the surrounding areas, as well as much wider audiences. This correlates to an extent with global developments, for example, in the USA, where many student news websites now provide only local news in areas where legacy media outlets have left (Marcus 2022).

Our student websites have tens of thousands of readers. On threestreamsmedia – which has between 10 and 12 student journalists per year – the annual average number of page views over the last three years (2019–2022) was 25,000 per year, and the average number of unique visitors was 15,000 per year. MatieMedia has much higher figures and a bigger newsroom. There are, on average, 25 student journalists per year. The site had an average of 160,000 annual page views over the last six years (2016–2022), and the average number of unique visitors was 103,000.

Most of these readers are from South Africa, but there are also significant numbers in the USA and several European countries.

Students receive clear rubrics and instructions within the respective learning management systems (LMSs) for their assignments. However, all the work is done outside the LMS, using WordPress as the publication platform and Google Drive as the news flow environment. Google Drive is used as the news content management system (CMS) and is used in such a way that it simulates the workflow in a real digital newsroom CMS.

Reflections on authentic learning in action

Before introducing the authentic learning model, we reflected on what we would like our students to learn, and we identified certain skills in the literature and from our own experience. Initially, the authentic teaching and learning model aimed to ensure that students graduate as skilled journalists who could seamlessly integrate into the workplace, as has been the case with WIL models in the past (Makhadi & Diederichs 2021). Some of the skills we identified included media literacy and critical thinking (Swart 2021), autonomous learning (Du Toit-Brits 2021), workplace and technological skills (Kruger 2022), analytical thinking, problem-solving, decision-making, conflict management and stress management (Ornellas et al. 2019) and adaptability (Guo & Volz 2019). While our initial aim was to allow students to become active participants in the constantly changing digital journalistic environment and not be left behind, we did not identify general digital and life competence in the digital economy (Rychen & Salganik 2003) as a possible skill that students would learn. This was identified later. Through the years, it became clear that our authentic learning model allowed students to complete their studies as highly competent adults, with students who graduated showing resilience and adaptation in various career fields in the digital environment.

In this section, we reflect on the various skills we identified before introducing the authentic learning model, how our aims were achieved or not, as well as the changes and improvements we made through the years.

Autonomous learning

One aim of the real-life newsroom was to allow students to become autonomous learners who would take charge of their own learning (Du Toit-Brits 2021), which is a popular model in higher education that allows students to take more ownership of their studies. In our newsrooms, students are responsible for setting up and managing the news team, editing the work, quality control, creating digital stories and the publication of news stories. They learn to become journalists by being real journalists on their own but under the supervision and guidance of the lecturers, which is required to make authentic learning effective (Herrington et al. 2014). The authentic learning environment teaches students to take responsibility for what they are doing because they are doing it by themselves. Research shows that 21st-century students want to learn in new ways, feel a sense of ownership and achievement, and be fully engaged while learning (Du Toit-Brits 2021). We found that an authentic newsroom offers students such an opportunity, as other studies have also found.

In a Doctor of Philosophy (PhD) thesis submitted to the University of Buffalo in Buffalo, State of New York, Koshiol (2022) shows that an autonomous student newsroom at a Catholic high school allowed students to become autonomous learners. Students could decide on the news they wanted to produce by themselves. Students (in the Koshiol study, students were high school learners who took journalism as a subject) developed a sense of ownership, which led to a completely different experience than their learning in regular classrooms. This has been our experience as well. Once the newsroom model had been explained to students, they took ownership and quickly developed a sense of pride in ‘their’ publication. Natural leaders emerged to drive the newsroom processes. Students suggested changes and new ideas to improve the websites, including improving the design functionality and adding new thematic sections to the website, such as a discussion programme on the MatieMedia site and an environmental section on the threestreamsmedia site. Students learnt to work together in teams, motivated one another, and shared their knowledge and skills. Our initial aims with the authentic newsroom were met and exceeded. We realised that students could run their newsrooms independently and with pride with the correct guidance. It seems clear to us that autonomy in the higher education classroom should be encouraged.

Workplace skills

Our students operate as real journalists in the authentic learning environment. We set out to help students improve employability by learning real and useful skills (Josephi 2019). Through contributing to these digital publications, students build extensive portfolios that they can use when they want to enter the world of work. Students learn digital journalism production skills that they will use in the workplace. Over the years, reflecting on our outcomes constantly made us realise that we needed to adapt the curricula to remain relevant continually. New technologies emerge all the time; the field of journalism is changing constantly (see Garcia-Galera et al. 2021; Kruger 2022). We adapt to new technology when necessary. For example, video editing apps are constantly evolving, and new multimedia tools become available (such as Google’s news tools).

These changes are introduced to the curriculum where relevant and useful. Core journalistic skills that encourage credible, ethical, fact-based reporting (Reed et al. 2020) remain important.

Various studies have examined the successes of WIL and practice-based learning in teaching students workplace skills. Fulton et al. (2021) examined the embedding of authentic journalism assessments within the curriculum. The assessments usually involved placing students within the industry for short periods or publishing student work on a dedicated national student website in Australia called The Junction. Their study found that students appreciated the authentic assessment model.

Another successful authentic learning model example is the UniPollWatch student project in Australia, albeit focusing on a specific event. More than 1,000 students from universities across Australia worked together to cover the federal election in 2016 on a dedicated pop-up website created for these students. This project allowed students to get a taste of the workplace while informing the public about the elections (Dodd et al. 2021). Students were mentored during the project and published their work in the real world, but they were not assessed. The benefits of this project are mainly related to gaining workplace experience (Dodd et al. 2021).

We found that our authentic newsrooms carry all the benefits of the WIL examples discussed here, with the additional benefit that an authentic newsroom runs throughout the year or semester, which provides students with more practice and a greater sense of authentic work. Our model is not a one-off, pop-up model. Students get many opportunities to learn new skills as they adapt and adapt their learning as the year or semester progresses.

Technological skills

As Zelizer (2019) argues, defining journalism solely in conjunction with its technologies does not produce a comprehensive picture of journalism. There have always been technologies in journalism. The printing press made printing cheaper, leading to mass media's emergence. But journalism is about more than its technologies. Zelizer sees digital technologies merely as the architecture upon which journalism is built. We would concur with Zelizer when she argues that journalism is what gives technology its shape and purpose, not the other way around. Technology helps to create opportunities for students to engage with the real world of journalism (Thomason 2018). An understanding of technology and how to use it is crucial. Our digital newsrooms are technology-driven, representing the current industry practice. Journalists no longer just write stories; they produce videos, sound clips, podcasts, take pictures, create interactive graphics, participate in social media discussions, livestream events and more (Larrondo Ureta, Peña Fernández & Fernandes Teixeira 2021). The media industry expects graduates to have some understanding and knowledge of these skills. Matsiola et al. (2019) write that journalists are faced with continuing demands to incorporate technological tools in their work, whether they work for print, broadcasting (radio and television), or online media; therefore, there is a clear need to integrate these technologies into journalism curricula. This is particularly true in the mobile journalism environment. Many journalists now gather information and create their stories on smartphones (Lee 2021), which means journalism has become a mobile profession (Bui & Moran 2019). This calls for specific skills such as video editing, using social media platforms and using various mobile apps (Lee 2021). Our students learn and use all these skills in their authentic newsroom.

Social media use is another skill that has become particularly important in the context of mobile journalism (Lee 2021). Journalists need to not only share news on social media; often, they need to participate in discussions. This is fundamentally different from the work of a journalist just a decade or so ago. Audiences used to write letters to the editor. Audiences now expect engagement with journalists on social media. To do this, journalists need to understand current affairs, understand different viewpoints, and set some boundaries (Swart 2021). In our digital newsrooms, students first learn how to do this, and then they must do it in practice. MatieMedia has both a social media policy and a code of conduct; threestreamsmedia has a code of conduct that guides students in all they do. These codes of conduct have been developed by students themselves over time and are constantly changing. Students developed these codes of conduct with the knowledge gained in media theory modules. Therefore, developing the codes of conduct helps students integrate theories about media ethics and practice. This successful integration of theory and practice shows that the division between theory and practice that has been discussed in academic literature (see Josephi 2019; Solkin 2022) can be overcome.

Integrating various aspects of the field of journalism was an unexpected success of our model. Journalism teaching in the past, and to an extent still, teaches students different aspects of journalism separately. For example, there were (and are) writing modules, radio broadcasting modules, online journalism modules and television broadcasting modules. This method of teaching journalism in silos has been challenged, with scholars such as Njuguna (2020) calling for an approach that integrates various technologies in a multimedia newsroom. The ability to create stories for different platforms and in different formats has become crucial. In our digital newsrooms, students do this – they make videos, podcasts and interactive graphics, take photographs, write stories and interact with audiences.

Much of this is done with their mobile phones, which are technological tools in digital journalism that our students learn to use. We realised that the authentic newsroom provided a space for students to become proficient in many different technological aspects of journalism simultaneously.

Critical thinking and problem-solving

Our experience has shown that students evaluate and think about the news differently when they become active producers of news. Their work as journalists teaches them to reflect critically on their work, as Bosco and Ferns (2014) suggested. The practical work by students also helps them to integrate theory and practice. When students identify news stories, they need to apply all their theoretical knowledge of journalism to evaluate the story ideas, identify visuals, consider the consequences of the story, identify sources, and consider newsworthiness, audience reception and factual correctness. We recognise that students do this in a responsible way because when students create digital media for public consumption, they think about it differently. They realise their work is not for the eyes of the lecturer only, which makes them interact with content and digital material in a much more reflective and evaluative way.

Student critical thinking was expressed in various ways. When Russian state broadcasters were prohibited in many countries around the world because of the Russo–Ukrainian War (2022–), many student journalists at threestreamsmedia questioned the ban. The belief in freedom of the press overrode concerns about propaganda. This correlates with the South African National Editor's Forum (SANEF) official statements, which encouraged media freedom despite the war (Seleka 2022). As students were working as journalists themselves, they supported media freedom. In Stellenbosch, during a specific news event in 2018, when a young child in the town took his own life, MatieMedia journalists expressed disgust with the national media's reporting (De Wee 2018). They did not cover the story on the MatieMedia site. Video coverage of the incident was unnecessarily graphic and detailed in national media and did not show an understanding of ethical guidelines in the South African Press Code. MatieMedia journalists, through their knowledge of ethical news reporting and their own practical work, were able to reflect on the flaws in the national media coverage. MatieMedia also has an ombudsman who handles complaints and, by extension, teaches students to negotiate ethical conundrums.

As the UniPollWatch project in Australia (discussed earlier) shows, participation in real digital newsrooms also provides students with a deeper understanding of their field; in the UniPollWatch project, it was politics (Dodd et al. 2021), but these understandings develop in whichever topic students create journalism. Their deep research and exploration of topics to create proper news stories necessarily provide them with a better understanding of these topics. We believe the development of critical and analytical thinking is one of the greatest successes of our authentic learning model. The separation between theory and practice that Mensing (2010) identified as a shortcoming in industry-centred journalism education disappears to an extent in our model. As practising journalists in digital newsrooms, our students realise that they need to use their theoretical knowledge to do their practical work – to be real journalists.

News and media literacy

Fake news, disinformation and misinformation are real challenges in the 21st century, and they affect the teaching of journalism (Friesem 2019). The prevalence of disinformation, misinformation and fake news has emphasised the need for improving information and media literacy. Scholars agree that media literacy must be a core component of journalism teaching (Luttrell et al. 2020). Reed et al. (2020) recommend that to restore trust in journalism, students should be taught to detect fake news, misinformation and disinformation, learn how to evaluate and process information, and how to evaluate evidence and provide this evidence to their audiences. We concur that there is a need to educate students on how to be responsible users and distributors of information, specifically focusing on news literacy. News literacy is about identifying truthful news, evaluating the information and using it correctly (Swart 2021). In a world suffering from information overload, identifying the real news among all the other information and disinformation is becoming increasingly difficult because even real news is now often produced by non-professional sources. It has been shown that students often judge news based on their perception of the platform's trustworthiness. For example, many see Facebook as untrustworthy, which means students regularly cross-check news with other sources. Others simply believe everything they read (Swart 2021). Teaching students media and news literacy is a demanding and challenging task. We found that when working in a digital newsroom, the immense responsibility of creating and distributing truthful news for public consumption necessarily encourages news literacy. The responsibility that students feel to publish truthful news flows from the sense of ownership they have when they run these news websites. Students learn very quickly to check and double-check sources to cross-refer to other news channels to ensure their information is credible.

We believe the digital newsroom is a very successful environment for encouraging students to become news and information literate. Digital newsrooms not only teach students how to think about news and information critically but also how to use technology to help them evaluate the truthfulness of news. This includes Google image search and fact-checking websites, which they use in practice when creating their digital news packages. Our websites are credible because our students know the importance of their work. They realise they are not writing for the eyes of the lecturer only; they are writing for public consumption, which makes them take their work seriously (as discussed in Section 5.1). We recommend adapting similar teaching models to emphasise and encourage the teaching of news and information literacy.

Adaptability

Adaptability is one of the key 21st-century workplace skills (Guo & Volz 2019), as technology is constantly changing. The emergence of remote working environments has brought additional challenges.

We believe that our graduates must be able to adapt to a changing work environment. Our authentic learning environment teaches them to do that. In the authentic newsroom, students are encouraged to constantly evaluate their journalistic roles and adapt their practices as required to maintain the relevance of their news-making and to account for new technologies. As discussed earlier, they learn various technological skills, which change as these tools change. We observed that while working as journalists, students see that there is a need to adapt constantly. For example, there was a time when graphics interchange formats (GIFs) were popular as journalistic tools. Students learnt how to create GIFs. This is no longer the case. Graphics interchange formats have lost popularity and appeal. Video storytelling has now become popular. Students now focus more on video stories and use more video stories. Students also learnt how to adapt to the virtual newsroom situation during COVID-19 restrictions. Many newsrooms in South Africa are now virtual on a permanent basis. Our students are ready and able to work in virtual newsrooms; they have done it.

In a study (Jordaan & Groenewald 2021) about students' experiences of so-called emergency remote teaching and learning – which included moving the authentic learning newsroom online – students were found to be highly adaptable. The findings illustrate, among other things, that students had to adapt to engaging with sources on multiple online platforms and adapt to working alone – but still in a team – from their respective homes scattered across the country. These skills are very useful in the remote working environment. Emergency remote teaching and learning has ended, but we believe there remains a need to teach students remote work skills. We need to consider introducing a virtual newsroom aspect to our newsrooms more permanently.

Entrepreneurial thinking

Journalism schools in South Africa have always been industry-centred, with the aim of producing journalists for the mass media world (Garman & Van der Merwe 2017). It seems clear that an over-reliance on this model does not fully consider the realities of the new journalism environment. New opportunities in journalism and entrepreneurial journalism (Caplan et al. 2020) now require journalists to have additional skills.

According to Kruger (2022), journalists must know how to operate in an entrepreneurial, freelance world. They need skills such as 'pitching, negotiation, financial planning and project management, as well as less tangible skills, such as being able to manage a personal reputation across multiple platforms and projects' and 21st-century skills such as coding, analytics and understanding the audience (Kruger 2022, p. 31). Caplan et al. (2020) argue that journalism schools should foster an entrepreneurial mindset and inform students of journalistic entrepreneurial opportunities. Some of these opportunities can be as simple as creating journalistic products like infographics or long-form journalism, running a YouTube channel, and even becoming a journalism influencer.

Our students learn how to pitch news stories to their editors and lecturers. They learn how to negotiate with one another when planning news coverage. They learn how to manage their newsroom profiles across many platforms, and they manage the entire authentic newsroom by themselves. They learn how to run their news website (with supervision) independently. They learn some basic coding skills, and they learn how to read audience analytics, which is increasingly important (Lee 2021). The autonomy that students develop, combined with secondary entrepreneurial skills, provides them with a framework and the confidence to move into entrepreneurial pursuits, as some of our former students have indeed done. Managing and running their digital newsrooms gives our students the confidence to take the plunge and do something new because they feel they have managed and run a project themselves. We believe the focus on entrepreneurial thinking in our teaching model should become even more robust, as this would help open many new opportunities for our students.

Competence

While life and work competence (Rychen & Salganik 2003) was not something we had set out to achieve through our authentic learning model, upon reflection, we realised that our teaching method turned our students into competent adults. The practical journalism skills they learnt, the critical and analytical thinking they developed, and the autonomy they developed all contributed to making them competent adults. We believe their experience in an authentic working environment with all its challenges turns them into well-rounded individuals who can face life and career challenges in the modern digital economy. Their experience in the newsroom helps them become confident, experiment with new ideas, and take charge of their destinies.

Realising that our model not only teaches our students useful skills but also helps them integrate theory and practice, we decided to replicate the authentic learning model's success at NWU's honours level in other modules. The same authentic learning model was therefore introduced to third-year students, who have now also been immersed in the online newsroom since 2021, as part of their curriculum. Honours students who completed the module in the first semester also mentored the third-year students in the second semester. This shows the success of the model in not only developing life skills but also allowing students to share and transfer their skills and knowledge to peers.

Reflecting on challenges

Despite the successes of our model, there have been challenges. Initial set-up takes technological know-how. It was and is a constant learning experience. Site protection and attacks by hackers were unpleasant surprises that we had to address quickly. Running the newsroom costs money. It is necessary to pay an annual fee for the website domains, and it is necessary to pay an annual fee for the domain hosts. Lecturers need skills and knowledge of WordPress or other publishing platforms to create and maintain the sites. Lecturers need design knowledge to help students design the site. In both the MatieMedia and threestreamsmedia examples, the students who founded the sites were involved with the design of the site with the help of lecturers.

In both examples, we negotiated with relevant institutional departments at our universities before the news websites were founded. Issues such as brand identity and freedom of the press arose. We liaised closely with the corporate communication departments at our universities. It was necessary to explain that we were creating real news platforms, not mouthpieces for the university, that would distribute marketing material about the university. At SUN, the feeling was that the site should maintain some of the SUN brand identity, while at NWU, the site was allowed to create its own identity. Both sites are run as independent, real news websites, not dependent on university policies, such as ethical clearance. As these are journalistic sites, they follow the South African Press Code's guidelines in terms of ethics and journalistic practice. These are important issues that must be addressed with relevant authorities before commencing with similar projects at other universities.

Conclusion

While it was not our intention at the outset, we have found the authentic digital newsroom environments we created are very effective substitutes for WIL at a time when shrinking newsrooms and financial constraints at legacy media outlets have led to fewer opportunities for students to be placed in workplaces (Kruger 2022; Valencia-Forrester 2022). Our model does not rely on workplace placement openings. The classroom is the digital newsroom, which is modelled on the workplace. Unlike the WIL approach, which is usually temporary and needs the workplace to assist with the assessment of the student (Bosco & Ferns 2014), our authentic newsroom does not rely on external employers.

Because of the relative ease of implementing authentic digital newsrooms, we found that the successes far outweighed the challenges. We achieved most of our aims when we commenced with these projects. Our initial reflection on what we wanted to achieve focused mostly on practical skills, which we feel we have achieved in almost all instances. We also did not initially expect to turn our students into competent adults. Our reflection-in-action showed that we also achieved the goal of teaching students competence – they graduated as highly competent individuals who could negotiate the challenges of the digital work environment well. This was evident in the feedback from industry professionals and students once students entered the workplace, either as interns or full-time employees.

The transfer of skills by honours students to third-year students, as implemented at NWU, was an additional success that we had not expected at the outset. We found that our students are able and ready to enter the world of formal journalistic work in the digital environment seamlessly. However, they can also use their skills in various other fields of work because they have become accustomed to the digital sphere's opportunities.

We believe our model shows that journalism need not be taught in silos, based on traditional understandings of journalism with an aim to produce graduates for the journalism industry only. Kruger (2022) has argued that a broader understanding of journalism:

> [*M*]akes visible the different ways and places where journalism is produced. New kinds of potential students can then be identified, as well as some new (and many old) subjects that need to be taught. These suggest a need for some new modes of teaching. (p. 36)

We believe we follow such a new mode of teaching that remains relevant in the context of changing understandings of journalism.

Chapter 5

Harnessing digital communication technology to mobilise health awareness

Adedamola T Akinlade
Division of Society and Social Change,
Department of Sociology,
College of Humanities, School of Social Sciences,
University of KwaZulu-Natal,
Durban, South Africa

Eliza M Govender
Culture, Communication and Media Studies,
School of Applied Human Sciences Centre for Communication,
Media and Society (CCMS),
University of KwaZulu-Natal,
Durban, South Africa

Elvis Madondo
Department of Public Relations and Communication,
Faculty of Management Sciences,
Durban University of Technology,
Durban, South Africa

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Abstract[15]

Given the growing prominence and affordances of digital media in the communication space, it becomes significant for users of digital technologies to be up-to-date with the ever-dynamic concepts, acquaintances and practices related to the new media. The terms 'digital media' or 'new media' are often interchangeably used when referring to 'media or communication technology'. Hence, for a consistent approach to this study, the term 'digital communication technologies' (DCTs) was maintained to concentrate on digital media's communicative characteristics. The purpose of this paper is to examine, traverse and identify with the digital media technology in communication space as a divergent platform of knowledge exploration, unload pertinent aspects of affordances it contributes to the world of communication in modern society, construe inherent concepts in social media, social networking sites, internet and other aspects of the DCTs. Also, the paper explores students' insights into how digital media platforms can advance the promotion of human immunodeficiency virus (HIV) prevention strategies, such as the uptake of oral pre-exposure prophylaxis (PrEP), a significant public-health approach to taking charge of their own health and well-being. Undoubtedly, in the current digital space, people are empowered to increase awareness and control over several dynamics affecting their health. A qualitative and semi-structured survey approach was utilised to draw conclusions on how the public harnessed the affordances and influence of digital media technologies for health communication. The results show the participative and connectivity opportunities DCTs allow to enhance communication success, particularly towards health communication.

Introduction

The increasing HIV infection rate among young people in the sub-Saharan region of Africa has been of great concern in recent years. A previous report by World Health Organization (WHO) reports that approximately 6.8 million individuals aged between 15 and 49 years old in South Africa are

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[15] This chapter has elements of Fred Kakooza's Doctor of Philosophy (PhD) thesis, 'The potential and contribution of Facebook in HIV/AIDS prevention among young people in Uganda', awarded in fulfilment of the requirements for a PhD at the University of KwaZulu-Natal, South Africa, with Prof. Ruth Teer-Tomaselli as supervisor), <https://researchspace.ukzn.ac.za/handle/10413/18549>.

This chapter represents a substantial reworking (more than 50%) of: Akinlade, T, 2022, Doctor of Philosophy (PhD) in Culture, Communication and Media Studies, thesis entitled 'Exploring the use of social media for the effective introduction of Oral Pre-exposure among 18–24 years male and female students at the University of KwaZulu-Natal Howard College Campus, Durban', Centre for Communication and Media Society (CCMS), Faculty of Applied Human Sciences at the University of KwaZulu-Natal (UKZN), with Associate Professor Eliza M Govender as supervisor.

living with HIV, which represents 19% of the HIV encumbrance globally (WHO 2015). In a more recent report, the estimated overall HIV prevalence rate is approximately 13.7% among the South African population. The total number of people living with human immunodeficiency virus (PLWHIV) was estimated at approximately 8.2 million in 2021. For adults aged 15–49 years, an estimated 19.5% of the population is HIV positive (National Department of Health [NDoH] 2021; Simbayi et al. 2019; Statistics South Africa [StatsSA] 2021). Different HIV prevention options have been introduced to address the various socio-cultural dynamics that make individuals stand at high risk of the virus. Adolescent girls and young women (AGYW), in particular, are at the most risk of infection, and there is a need to explore how new innovations in HIV prevention, such as oral PrEP, can advance the HIV prevention agenda, but more specifically with an investigation into the utilisation of digital media as a medium of communication.

The emergence of technological advancement through the use of digital media has transformed how information are being shared. The way we now communicate with each other (Kaplan & Haenlein 2009) in today's modern society and health care communication has definitely been affected by this development around the Information Revolution (Kreps 2011). As far as the broad spectrum of utilisation of digital media platforms continues, studies involving the utilisation of digital media for health communication purposes have similarly advanced in scope (Moorhead et al. 2013).

Situating the study in health communication and digital media

Conceptualising health communication within digital media

Digital health humanities is gaining traction and fast evolving as a pivotal research area that integrates critical analysis with digital platforms to explore research questions on the nexus between health-related issues and digital media technology in the health care sector. As a method that draws relevance from the expanse of digital humanities and health humanities, it employs digital space to investigate health humanities research, focusing on digital media as an object of investigation and analysis within the health care domain. By exploring the social and practical features of digital health technologies, this approach accentuates engagement with the study participants investigated. The subject of health communication revolves around key procedures underlying revolutions in the areas of information, knowledge, norms, attitudes and openness of culture to innovative thoughts, ideas and desires for different behaviours, which could be enabled by audio-visual, verbal and text materials directed towards a people, societies or an entire country (Piotrow et al. 1997). In reality, these various message set-ups, such as audio-visual, verbal and written, have shaped our collective perception of the understandings of disease, sicknesses, well-being and health care, thereby influencing our health care beliefs, health care behaviours, health care practices and policy-making (Ahmed & Bates 2013). As a concept, health communication sets a conversational agenda within society for messages to be readily understood, debated, accepted and applied by the intended audience, and as such, can be used as a foundation to implement interventions, programmes or campaigns (Rensburg & Krige 2011), to contribute to social and behavioural change.

Health communication campaigns through mass media are known to have worked through both indirect and direct paths (Hornik & Yanovitzky 2003) in order to bring about change in the health behaviour of general populations. According to Wakefield, Loken and Hornik (2010), over the last few decades, health communication campaigns have utilised various mass media through platforms like television or radio. However, then also, campaigns were flown in out-of-home media on street architectures such as wall drapes on skyscrapers, billboards, gantries, roadside lampposts, bus branding and posters, and similarly in print media, for instance, newspapers, magazines, flyers and newsletter, in an attempt to influence various health behaviours among the mass population in the society. Such platforms have extended the conversation on several health-related issues like HIV prevention, cancer screening and prevention, tuberculosis screening, tobacco use and heart-disease prevention, and alcohol and illicit drug use, among others (Wakefield et al. 2010).

Health communication campaign messages promoted through these platforms can address barriers to social and behavioural change, assist the most vulnerable individuals to embrace healthy behavioural choices and promote new behaviour through tailored messages shaped for the immediate audiences' needs (Latimer et al. 2005). However, considerable effective messaging and measurable results are hard to ascertain or quantify in traditional media. In reiterating the limitation of mass media, Zhao (2020) postulated that even the most carefully crafted communication campaign messages become ineffective because they do not fully reach and engage the target audience. This inference signifies that marginal success is achieved through the use of traditional media. Due to this drawback, health communication practitioners have explored digital media platforms for effective public health promotion and awareness.

Arguably, communication is pivotal to the effective delivery of public health. Through communication technology and digital media, the door is open for extensive opportunities to address critical development of public health issues societies face (Fayoyin 2016).

Health messages through digital media engagement

The nature of health communication is changing globally as more people rely on the digital platform for health information (Gallant et al. 2011). Digital media stimulates a form of participatory culture that is concerned with the 'spreadability' (Jenkins, Ford & Green 2013) of creative content generation. Digital media demonstrates a need to engage in pervasive forms of media circulation or to share content. This context explains why the pervasive sharing of content produced intersects with the concept of 'spreadability' (Jenkins et al. 2013). Consequently, health promotion specialists have been swift to spot digital media potentials to reach broad audiences in social marketing campaigns, facilitate and empower consumers or users in their health and health care-related interactions (Thackeray et al. 2008), and their impact on several sectors, including health care, education and community development (Gasser et al. 2020).

Challenges in managing health information on digital media

Although various literature reported that digital media have considerable potential for health promotion and education, health-related activities on digital media must be appropriately planned. Otherwise, digital media may not always achieve the desired results in a health context (Korda & Itani 2013). If health professionals and organisations use digital media to promote health, appropriate monitoring and evaluation indicators should also be provided (Neiger et al. 2012). Digital media can facilitate health communication and interactions in many circumstances (Norman 2012), yet health professionals and organisations seem to be limited in their use of the platform to distribute information only to audiences, thereby restricting engagement. Another challenge identified is the reluctance of health professionals or organisations to engage intensely with the public on the platform. This gap may endanger medical ethics by some non-specialist users, patients' privacy and negative patient comments (Raymond, Paré & Maillet 2017). Digital media can provide opportunities to facilitate health knowledge management among young people.

Use of digital media for pre-exposure prophylaxis uptake

Given young people's high risk of HIV infection (Landry et al. 2013), the broad use of digital devices, and the limitations of traditional HIV interventions to reach at-risk individuals, digital media may be the most effective platform for engaging this population group (Sullivan & Grey 2013). Similarly, Patel et al. (2017) reiterated that using digital media like Instagram, Facebook, Twitter and online dating sites is globally common among young people, thereby serving as an avenue that offers an effective opportunity for health promoters to facilitate PrEP adoption among young people. From the African perspective, the HIV and acquired immunodeficiency syndrome (AIDS) epidemic has profoundly impacted the sub-Saharan region of Africa, and new media has demonstrated great potential in supporting issues of public health and HIV surveillance (Van Heerden & Young 2020) in order to determine the viability of disbursing these technologies as intervention and surveillance tools. Mehta and Pandit (2018) identified that the persistent cumulative sources of digital data pertinent to health, low-cost storage and new data analysis procedures will provide an opportunity to improve human health and well-being.

Theoretical framework

Theory of participatory culture to the promotion of pre-exposure prophylaxis

The framework is based on Henry Jenkins' (1992) notion of participatory culture. Considering the relevance of this study, principally as it affects young people and their use of digital media, the theory of participatory culture was preferred as a framework to structure, navigate and explain this study. Jenkins (1992) defined fans as active participants in contrast to mere spectators and, thus, labelled this group of participants as 'fans' who are active and engaged analytically and creatively. In reality, over the years, the theory of participatory culture has advanced to the level of integrating the perspectives of diverse players, deploying the production and distribution of media to serve their shared and mutual interests (Jenkins & Kelley 2013). Furthermore, Jenkins (2006) suggests that participatory culture plays a fundamental part in the acts of reception (which demonstrates how media content is being received and consumed by networked groups) and, for the most part, has a considerable influence on the roles played by networked groups in defining and shaping media production, and circulation as currently observed in today's digital world (Jenkins & Kelley 2013). The theory of participatory culture stemmed from traditions in which media-driven contents contributed by members are brought into the spaces that are allowed for the exchange of ideas (Halverson et al. 2016). Thus, Halverson and his colleagues suggested that participatory culture comes alive as a result of access to virtual worlds like digital media. In line with this concept of participatory culture, Jenkins described the four essential functions that define the operation of any participatory culture, namely, *affiliations*, *expressions*, *collaborative problem-solving* and *circulations* (Jenkins 2012).

The four constructs of participatory culture

The *construct of affiliations* in participatory culture refers to the association, both formal and informal settings, through online communities. This form of participatory culture comprises membership in one or multiple social media platforms such as Facebook, Instagram, WhatsApp, Snapchat and X [formerly known as Twitter], among others.

The *construct of expressions* describes the *production* side of participatory culture. Members of online communities engage in a series of conceiving, demonstrating and sharing ideas through a range of products (Halverson 2012). Over time, as members familiarise themselves more with the culture, they then start to communicate like fellow members, deliberate on others' work, and eventually produce content as full members.

The next construct is collaborative problem-solving, the *knowledge-building* part of participatory culture. This construct plays out when team members work together formally or informally to complete tasks and advance new knowledge through engagement within these online communities.

Lastly, the *circulations construct* in participatory culture discusses the social media users' act of sharing content with other individuals in the same network communities. This concept is closely related to what Jenkins, Ito and Boyd (2018) called spreadable media. In this, Jenkins et al. (2018) maintained that new media methods, such as new media, have entirely transformed the approach to the consumption and distribution of media content, such as linking, sharing, and liking media content in the media landscape. Jenkins et al. (2018) further contend that the age of digital communication not only encourages but has advanced the course of self-publishing. Consequently, it interrupted and replaced the eras of customary corporate control over media content production and its dissemination.

Methodology

Research design

This study explored the qualitative research approach, traversing multiple realities based on participants' expressions. The research design engaged is centred on the social constructivism paradigm, which emphasises the importance of culture and context in understanding what occurs in society and constructing knowledge based on this understanding (Derry 1999). Basically, social constructionism is of the view that as human beings, we cannot really claim to know what universal true or false is, what is right or wrong, good or bad, but that we are only limited to the accounts about true, false, right, wrong, good or bad. Social constructionism is concerned with understanding how they relate to their world. This means that all individuals have a role to play in the social construction of their own realities or plurality of realities. In any qualitative research, the objective is to 'engage in investigation that probes for depth in understanding a phenomenon rather than examining just the features on the surface' (Johnson 1995, p. 4), and social constructivism is the paradigm that elicits or facilitates such a goal. In other words, the approach used transcended dwelling on the face level of a phenomenon or inquiry but rather was to probe deeply and get immersed in the investigated issues that require 'thick descriptive' findings, clarification and meaning as generated by participants and their social settings.

The research design also allowed for investigating data that are assembled from answering questions of personal or social meaning to reveal the perceptions of these young people on the phenomenon of PrEP, as it would be able to capture real-life experiences and realities, which are distinguishable from one participant to the other within the participatory settings on the digital space. The choice of the qualitative approach was further guided by the nature of the study research questions, which mandated an in-depth inquiry that could only be realised through qualitative data collection techniques. The qualitative research approach used is comprehensive and inclusive and is associated with data collection methods such as 'interviews' and unobtrusive measures' (Struwig & Stead 2015, p. 127). The approach also allowed the researchers to engage in coherent and logical processes to answer the research question (Brink, Van de Walt & Van Rensburg 2014). To further align with Burns and Grove's (2003, p. 195) postulation that a research design is 'a blueprint for conducting research with full control over elements capable of inhibiting the validity of the findings', the study followed a compass of thought-out scientific steps which guide through appropriate mechanisms and direction that assures the accomplishment of research objectives.

Study location and sample population

The sample population consisted of full-time male and female undergraduate students at the Howard College campus, University of KwaZulu-Natal (UKZN) between the ages of 18–24-years-old. The field of study or discipline, race, religion or sexual orientation were not included as inclusion criteria or bore no significance for sampling purposes. In addition, there were no specific psychographic profiling preferences. The justification for the population study was more inclusive of location KwaZulu-Natal (KZN) and age because young people are the highest risk group for HIV infection in South Africa (Human Sciences Research Council [HSRC] 2018). The sampling procedure adopted both purposive sampling and snowball sampling. The snowball sampling technique was added as the second technique to reinforce the proposed purposive sampling. The reason for the inclusion of this approach was that the participants (students) were unavailable, and it was hard to locate them due to the closure of the university campus following the coronavirus disease 2019 (COVID-19) pandemic. Data were collected virtually from participants during the COVID-19 lockdown period, as it was difficult to access and engage with them physically on a one-to-one basis.

Study population

Qualitative research experts maintain that there is no straightforward answer to the enquiry around ‘how many’ and that sample size is contingent on several factors associated with epistemological, methodological and functional issues (Baker & Edwards 2012). Additionally, Morse (2000) underscores that the more useable data collected from study participants, the fewer participants are required. Further, Morse (2000) calls on researchers to consider parameters such as the scope of the study, the nature of the topic (such as the accessibility and intricacies), the data quality and the study design. This position reinforces that the sample size in qualitative methodology may be small, yet it supports the depth of the phenomenon analysis, which is considered fundamental to this study method of enquiry. The determination of the sample size was based on pragmatic reflections. This relates to the availability constraints and the effort to access certain study populations to justify the determination of its sample size. Over 50 participants were reached out to. However, less than 50 responded, as this occurred due to the stringent lockdown measures implemented during the COVID-19 pandemic, and students were at home away from campus due to social distancing directives. The total number of female participants was 12, which indicates 60% of the total number of participants that engaged in the interviews, while male participants were eight, which indicates 60% of the total number of participants that engaged in the interviews. In contrast, there were eight male participants, representing 40% of the sample. Based on the anonymisation issue regarding this study, participants' identities were protected, and this was by using pseudonyms for each participant rather than their real names, while other details that could give a hint to their identities were kept out of the public sphere as part of the confidentiality clause.

Data collection method

The data collection method used was online interviews, which explore the participants' responses targeted through semi-structured questions in recorded form. The interviews were specifically useful for uncovering the account behind the participants' experiences and pursuing in-depth information about the subject matter. The interview guide used open-ended questions as an instrument for collecting data. Online interviews using the Zoom platform created new opportunities to conduct remotely using digital platforms. The data collection process allowed for using a conventional research method in new digital spaces. The online interviews ranged from 30 to 45 minutes, and some network challenges emerged, but the full data collection process was still completed. A gatekeeper's letter was obtained from the appropriate authorities, the Registrar and ethical clearance to commence the interviews was also secured from the Humanities and Social Sciences Research Ethics Committee (HSSREC) of UKZN.

Data analysis

After the interview sessions, the audio recordings were transcribed into a textual format. These transcripts were analysed using a thematic analysis. According to Braun and Clarke (2006), *thematic analysis* has developed into a commonly held qualitative data analysis practice. This analysis describes the particular method of processing and analysing the data collected. Thematic analysis is a technique that involves a process of working with raw data generated to identify, analyse and interpret key ideas or themes (Braun & Clarke 2006; Matthews & Ross 2010). This process allowed the researchers to assemble what Braun & Clarke (2006, p. 97) refer to as 'thick descriptions' of participants' perspectives that were later thematised to explore research questions, which generated a critical and robust interpretation of participants' utilisation of digital platforms to understand more about HIV and PrEP.

Findings

The findings highlight six significant themes identified as dominant issues when using digital media for communicating about PrEP. They are discussed in more detail in the following sub-sections.

Young people’s activeness/presence on digital media

Young people’s access to digital devices such as smartphones, tablets and laptops, as well as internet availability, are drivers of their active engagements on social media. In terms of utilisation of digital technology by young individuals, findings confirm that participants are connected on digital media platforms but also have multiple accounts with which they engage various networks in the online communities. Participant 1 said that:

> ‘Yes … I am active on social media, on platforms like Uum. Instagram a lot, uuum … I go unto YouTube […] I don’t know if YouTube counts, but I do go on it, on Snapchat and WhatsApp […] every now and then on Facebook too.’ (Participant 1, 20 years old, August 2020, gender unspecified)

Young people’s presence and active participation are evident on various platforms, and there is a need to trace some of these online digital activities and platforms specifically for the use of health care communication campaigns. This suggests that more understanding of the digital media patterns of communication is required, but an in-depth understanding that specifically relates to places of health care information acquisition. In this light, health care campaign handlers and policymakers need to pay attention to this trend and attempt to harness and understand the potential of a digital platform for health issues, specifically for issues of HIV prevention among this key population. Probing a participant’s preference for a particular platform, Participant 6 explained that:

> ‘I feel like with my generation of people, we are more involved on Instagram, and I feel like Instagram is easier to use, and like … How do I explain this … OK, the ages of people that use Instagram are much younger, unlike Facebook common with older people … Hope that makes sense?’ (Participant 6, 20 years old, August 2020, gender unspecified)

With their desires for online connections, young people demonstrated their online presence and participation through their current use of digital media. Another account from Participant 2 recounted that:

> ‘Yes, I am on social media platforms like … WhatsApp, Facebook, Instagram; those are the ones I am mostly active on.’ (Participant 2, 23 years old, September 2020, gender unspecified)

The need for social connection is in line with the concept of participatory culture as articulated by Gee (2006) that social interaction is cultivated around interests based on the concept of an *affinity space*, which was described as a community where individuals who share similar interests converge to play, learn and exchange information.

The study further found that the participatory nature of digital media seamlessly allows young people to interact with each other through an information interchange. In assessing how young people's presence on social networks can be sustained for continuous social engagement, this study suggests the need to recognise the universal adoption of mobile phones and other devices, which Ippoliti and L'Engle (2017) termed as 'essential commodities' in the day-to-day lives of these young people.

Reasons for the active use of social media

Young people have multiple digital platform accounts that are being utilised for diverse purposes. The findings reveal that young people appreciate variety. They like to test new things (Zullig, Teoli & Valois 2011) and possibly want to be everywhere simultaneously (Ledbetter et al. 2011). Studies show that they access loads of content online (Carr 2010), which alone polarises their concentration (Reeves 2002), opening up new opportunities worth exploring. This enthusiasm is what keeps them ever engaged in online spaces to satisfy their curiosity. Young people desire to be updated on content on different digital media platforms for different gratifications, such as current affairs, news, documentaries and entertainment, among others. Most study participants consented to these facts. Participant 7 commented:

> 'Well, different apps-platforms for different things … Right! My Twitter mostly is to get current on what is happening in the world, because it is easier to like follow anybody from around the world. With Facebook, not so much because you have to be a friend of someone to follow, but with Twitter, it is easy to follow […] in all; I learn so much on Twitter actually.' (Participant 7, 24 years old, August 2020, gender unspecified)

Further comments were raised using social media for connection-socialisation, and for learning-share educational materials, as well as for follow-up on study instructions (academic purposes). On this, Participant 8 indicated that:

> 'On Instagram, I look out for current events, you know […] like something happening so as to keep me updated; for WhatsApp, it is to connect with people speaking to me. I also use WhatsApp for online learning through group connections where our lecture modules are being discussed.' (Participant 8, 19 years old, August 2020, gender unspecified)

Also, on the use of social media for academic purposes (Parry & Young 2010) and for inspiration (Littlejohn, Foss & Oetzel 2017), Participant 5 explained:

> ‘I am always on WhatsApp group which we use for learning and studying. On Instagram, I follow a lot of people, some of them whom are like my mentors. They come up with initiatives that inspire me. On Facebook, I watch inspiration[al] videos because I have an NGO. I also use Facebook as a platform to advertise my NGO activities, and also to explore other important information.’ (Participant 5, 21 years, August 2020, gender unspecified)

Young people benefit extensively from their engagement in digital media. As such, the observation suggests that the potential of participatory culture on digital platforms could act as a positive health promotion resource (Hunter et al. 2019), for instance, in the case of HIV prevention through PrEP intervention.

Social engagement as a driver to address a knowledge gap

Findings showed the ardent desire to create and receive health information and updates and that participants who are multiple account holders on different new media platforms are open to the idea of sharing health care information or are part of certain online health communities, though the level of their activeness in this health community was not particularly focused on. However, a handful of the study participants disclosed that they had not received personal health information on digital media. Based on participants’ willingness to receive health information and updates. However, a handful number of the study participants disclosed that they have not been receiving personal health information on social media but are open to the idea. Participant 14 indicated that:

> ‘No … I do not receive any health information or updates, at least none that I can recall, but I will be willing to receive such, be a part content creation and see how I can share with others for collective awareness.’ (Participant 14, 24 years, August 2020, gender unspecified)

The construct of collaborations and construct of circulations in the participatory culture on digital media are being supported, and also reiterate how people on the same social network communities work together to take up tasks and advance new knowledge through engagement with each other in the online communities (Jenkins 2012). For instance, the participatory conduct of young people on digital media platforms ensures that vast amounts of health-related material can reach more young people through the process of suggesting, recommending, and circulating content such as HIV prevention and PrEP awareness.

From the participants' context, information sharing in today's world can be viewed as progressive. This is an indication that young people participate extensively on digital media platforms purely to engage with others by receiving new information and sharing knowledge with their network connections. The idea of sharing knowledge with their network is consistent with what Jenkins and Kelley (2013) refer to in the theory of participatory culture as a construct of expressions and a construct of circulations in the use of digital media by young people. Given the need for young people's engagement on digital media, more proactive measures are needed to engage in discussion on HIV prevention towards PrEP awareness and uptake.

Digital media advances strategic communication on health issues

The majority of the participants consistently supported various strategies to create more awareness for PrEP on digital media. The understanding of how study participants interpret content creation largely revealed their concerns for diverse interactive approaches to content creation on digital media platforms that can effortlessly attract the attention and retention of young people on the online platforms using the following: Captioning photographs, development of PrEP app, creating PrEP Facebook page, creating a podcast of episodic series, introducing hashtags as metadata tags prefaced by a hash symbol '#', such as the famous ones: #Bringbackourgirls, #Icantbreathe and #Questionandplatform. Some participants in this study consistently support various strategies to create more awareness for PrEP on social media. Participant 16 reacted that:

> 'Yea … all those kind of things, you know like creating WhatsApp groups or Facebook page … I knew about this-PrEP as HIV prevention, but then, I do not know anything about … like its side effects and other things. You can teach us many things and involve us in the group through different content creation, you also ask people to join the campaign, to like the page, share the link … something like that could help.' (Participant 16, 24 years old, August 2020, gender unspecified)

Based on study observations, all study participants are zealous about creating content around health care-related information on social media. The tendency was demonstrated in Participant 17's comments:

> 'Social media support people in developing content like photos, videos and texts. This process may help posting related information about PrEP among contacts on different networks.' (Participant 17, 19 years old, August 2020, gender unspecified)

The way content is presumed by participants in order to influence their understanding and participation is underpinned by participatory practices, which arguably can be attributed to the interactive functionalities digital media offers. Findings emphasise that digital media platforms are a dynamic sphere where young people's social, emotional and physical needs can change rapidly, specifically because of the platforms' influence and their content creation flexibility.

Digital platforms offer collaborative participation for strategic partnership

Participants believed in active social media influencers or bloggers on digital platforms. Their impression is that these individuals are trendsetters and creative when it comes to content creation, and as such, they pull the crowd with a touch of influence on young people, generally in the digital space. Participants believed that a deliberate attempt by health care professionals and promoters engaging these popular celebrities in a digital circle for sponsorship regarding health care-related campaigns such as HIV prevention and the intervention of PrEP uptake would be an opportunity to explore. Participants think these influencers can easily increase the effectiveness of campaign awareness as they come up with the content on PrEP, intended to reach out to the real target-young people. The findings also presented that from a strategic communication perspective, digital platform influencers can act as collaboration partners with whom health professionals can form an alliance for the integration of producing organic content and narratives around HIV prevention and PrEP uptake.

Participants supported a deliberate step to sponsor individuals, whether they are influencers or celebrities known in the social media circle, to contribute to the development of effective content on PrEP. Participant 11 stated:

> 'I think on Instagram, Facebook or even on YouTube; there could be sponsored videos and other content. This is easy because connecting with social media influential individuals on their online handles, can create a ring of discussions […] may start a conversation for instance on the issue related to HIV and PrEP, while others are allowed to join and make cases and contributions.' (Participant 11, 22 years old, August 2020, gender unspecified)

The popularity of these influencers hinges on a range of considerable reputations which are honed due to consistency (Borchers 2019) but may not automatically be related to invincible potential. Nevertheless, this study acknowledges the credibility influencers/celebrities/bloggers have among their followers and their wide-ranging reach in attracting and inspiring particular young people.

Sense of obligation to circulate information about pre-exposure prophylaxis

Most of the participants were aware of HIV infection but did not know much about the existence or the effectiveness of PrEP intervention as the latest biomedical technology for HIV prevention. The main concern is that HIV infection has been a huge health problem for years, and a solution like PrEP, not so known to many people, remains implausible. The responsiveness that is given to this problem is perceived as commendable. However, in the instance of PrEP being available to prevent further new cases of HIV infection, participants think that more efforts are required to get the information out there to the public at all costs.

Participant 18 explained how online users engage with content and the confidence derived from such practice:

> 'I think as content on PrEP is created, people could be reached to press the "like button" of the content page, and in addition to this, to also make comments. The flexibility offered in this interactive attitude gives an air and assurance of doing something fulfilling. So habitually, when more people receive posts like this on social media and know that they could receive likes and comments from their networks, they are always interested in repeating the sharing and posting process […] This could further expose people to more information and comments on PrEP matter, to take action in staying away from HIV infection.' (Participant 18, 19 years old, August 2020, gender unspecified)

Findings indicate that the existence of digital media platforms makes it possible for young people to connect with others by sharing experiences, particularly exchanging health-related information for better ways of managing health challenges among their contemporaries online. Young peoples' online behaviour and even their determination to create and further share content with their networks of the online community, as expressed in this study, are in line with the construct of expressions-creating contents and construct of circulations-disseminating information or contents to a wide range of social network contacts as highlighted in the participatory culture approach.

Discussion

The data collected in this chapter reverberate the comprehensible prospect of digital media platforms for effective health promotion communication. Theoretically, the findings reveal how the four constructs of the participatory culture fully help to address young people's participatory practices on digital media, consolidating the notion that participatory culture opens up robust engagement on digital media. Consequently, the key influence of the participatory culture theory and what it means to young people in the context of Jenkins (1992) is that the concept of participatory culture stands as an opposing concept to the consumer culture, which signifies that individuals such as young people in this modern age of information and communication technology, no longer act merely as a consumer of news or information, but function simultaneously as contributors or content creators, an idea that was in time past accorded to traditional media. However, the study explained the application of the theory's constructs in the following segments.

Construct of affiliations

Fundamentally, digital media in our contemporary world has largely revolutionised how individuals communicate about every subject, including health, and how promoters reach out to audiences in their campaign promotions and for expected behaviour (Kaplan 2018). However, social media popularity allows for quick and economically enhanced visibility of media campaigns. Digital media use is extending the reach of media messages, particularly now that a whole number of individuals, including young people, are active on multiple platforms, as demonstrated in the study findings. In line with the construct of affiliations, which trends on the need to belong or identify with online communities for social engagement and interaction (Jenkins & Kelley 2013), a vast impetus has been noticed among young people, especially in how they connect on digital media networks. Their need for identity in the online community is a phenomenon that opens up more avenues for curiosity and investigations by scholars whose interests align with this population group. From the study findings, digital media caters to social relations based on its network structure, where individuals can rely on their online networks for social support.

Construct of expressions

In recent times, digital media has simplified the emergence of new ways of creating, sharing and organising knowledge (Gee & Esteban-Guitart 2019). Many of these digital practices revolve around popular youth culture and take the form of expressions in online communities. These expressions are demonstrated in activities such as creating videos, content development or developing new shared knowledge (Jenkins 2009). This development was further substantiated in the study findings, revealing that one of the reasons for the mounting popularity of digital media is the participatory opportunity to receive, create, and share messages or content, in addition to its flexibility and ease of use by users. This makes digital media an important phenomenal platform that young people frequently use for social interaction, among other things. Ever since the rise of digital media usage in the most recent times, people, particularly young people, have been seeking to obtain information or as an additional information source to traditional media (Martín-García, López-Martin & Arguedas-Sanz 2020).

The participatory communication culture suggests that awareness of PrEP uptake for HIV prevention, for example, may be enhanced through participation as a means to an end – a continuing approach aimed at building self-confidence and empowering young people and their online communities. For this reason, young people's desire to express themselves as they create content indicates their sense of belongingness and enthusiasm to remain active on digital media.

Construct of collaborations

Young people, particularly university students in the current digital age, are now more impressively exposed to various developing technologies and their features (Lim et al. 2014) because the world of new technology provides them with unique opportunities for cross-cultural interactions, learning and self-exploration in the participatory space on social media (Yu et al. 2010). As a result, the adoption of digital platforms is swiftly rising in all sectors, including health care communication and public health care settings. Given the broad popularity of diverse digital media platforms among young people, it has become indispensable to understand and accept such platforms, to develop future health plans and strategies and to deploy current interventions on HIV prevention and PrEP uptake on these new technologies.

The study findings established that participatory culture on digital media might translate into successful participation aimed at securing the endorsement of health issues by other stakeholders such as influencers, bloggers and brand ambassadors whom these young people follow online (Schiavo 2013, p. 134) to advance a given health cause. Such endorsements from these online stakeholders could be in the form of their real-life experiences through role modelling.

Construct of circulations

This construct discusses the digital media users' sharing of information and content with other individuals in the same network communities. The concept closely connects to what Jenkins et al. (2018) call 'spreadable media'. Jenkins et al. (2018) sustained that new media methods, such as new media, have completely changed the method of consumption and distribution of media content in the media landscape. This development, underscored by Jenkins and his contemporaries, reveals that the era of the digital media revolution does not only inspire but has advanced the course of self-publishing and, consequently, has interrupted and supplanted the ages of traditional corporate control of media content creation and circulation (Jenkins et al. 2018). In this modern media environment, individuals can be content producers and consumers simultaneously – a uniqueness among others that previous traditional media settings never afforded.

■ Conclusion

The motivation for conducting this study was to harness the potential of digital media in addressing the high level of prevalence and infection rates of HIV and AIDS among young people, particularly in university settings and students. This study also explored the opportunities for young peoples' participation and utilisation of digital space to facilitate their desire for action, specifically with PrEP uptake. In essence, addressing HIV prevention is vital, and more so, the process of sharing relevant information through a digital platform. The study established that health care professionals must rise to build on the prospects of young peoples' digital presence and activeness by designing HIV prevention programmes and building strategic health care awareness campaigns around PrEP for increased uptake among the at-risk population, particularly young people.

Chapter 6

Digital curation: Encouraging disciplinary digressions and diversions

Nina Liebenberg
Department of Fine Arts,
Faculty of Humanities, University of Cape Town,
Cape Town, South Africa

Abstract[16]

Data generated by current research provide exciting new dimensions to existing archives, enabling the transformation of these historical materials. The digital space provides a platform in which this shapeshifting can manifest. This chapter explores these possibilities by using the methodology of an object study conducted on an archival holding of the University of Cape Town (UCT) – a small medicine chest housed in the Manuscripts and Archives (M&A) Department as part of a larger collection of papers called the BC666 Floyd Family Papers. Because this little chest exhibits characteristics that fall outside those privileged by the library's categorisation systems and search engines, it has been rendered somewhat invisible in the institution. This chapter uses the chest as a

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[16] This chapter represents more than 50% reworking of the author's Doctor of Philosophy (PhD) thesis, 'The virus and the vaccine: Curatorship and the disciplinary outsider', submitted for a PhD at the Michaelis School of Fine Art, University of Cape Town, with Associate Prof. Fritha Langerman and Prof. Pippa Skotnes as co-supervisors, http://hdl.handle.net/11427/36770.

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prompt and a provocation to consider where else in the institution knowledge has similarly been rendered invisible by the taxonomic systems utilised in its various departments, and it explores the role of digital curation (and platforms such as Omeka S) in expanding the limitations of disciplinary frameworks.

Digital curation: Encouraging disciplinary digressions and diversions

A small medicine chest is housed in the M&A Department of UCT. Roughly 15 cm in height and depth and 20 cm in width, it is made of metal and painted black, with the words ‘Trade Mark’, ‘Tabloid’ and ‘Brand’ printed under the keyhole on its front. The case is fitted with a brown leather strap and metal clasps, suggesting easy portability and containment. Opening it reveals two layers, the top one filled with an assortment of bottles, paper packages and instruments. At the same time, the bottom one is more regimented and contains sixteen compartments filled with glass bottles of roughly the same size. Labels read ‘Chlorate of Potash’, ‘Quinine and Cinnamon’ and ‘Opium’, to name a few, and each lists a breakdown of the compounds and directions for use. The chest also contains a ‘Tabloid’ guide, which states on its cover page: ‘A brief medical guide for explorers, missionaries, travellers, colonists, planters and others’ and lists the different medicine cases manufactured by Burroughs Wellcome & Co. and their applicability to different journeys and destinations, as well as common ailments and their treatments. At the back of the box, inside the lid, an oval copper crest reads ‘Burroughs Wellcome & Co, London’ and on the front, just above the keyhole, ‘BC666’ is written on a small sticker in black ink.

This little medicine chest entered the university library on 23 November 1978 as part of a larger collection of documents called the BC666 Floyd Family Papers. It belonged to a British dentist, Walter Floyd, who moved to Cape Town at the start of the 20th century and bought it from a shop in Loop Street for a hunting trip he undertook in 1913 to (then) Northern Rhodesia.

Because this little chest exhibits characteristics that fall outside those privileged by the library’s categorisation systems and its search engines (which are text and audio-visual based), it has been rendered somewhat invisible in the institution. One cannot find it unless you know it is there.

Overview

In any university, limitations are exercised on the objects and subjects studied by its academic communities – an effect of undergraduate curricula, discipline-specific taxonomies and research processes. The University of

Cape Town is no different. Divided into six faculties of more than 70 different departments of varying sizes, researchers, lecturers and students engage in their different fields of study. In the biological sciences, students study living organisms – plants, animals and insects – and formulate theories about their development and adaptations over time, while the health sciences study the workings of the human body (as can be seen in Figure 6.1 depicting the workshop and storage space in the Division of Clinical Anatomy and Biological Anthropology), the diseases that target it and the ways they can be treated. Materials gathered in the geological sciences consider the age of the Earth and its physical and chemical constitution, while those objects and documents consulted as part of archaeology and historical studies enable the study of archives of the past and the human communities associated with them. Machines in the Engineering faculty are used to manufacture and process materials according to formulae devised in the Departments of Mathematics, Physics and Chemistry, and in departments such as Philosophy and Psychology, ideas are generated (separately) about the very nature of knowledge, reality and existence.

Source: Photograph *Seeing* by Nina Liebenberg (2021), available at <https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/item/27662>, provided for reproduction in this publication by the author in 2024. All rights to the original artwork are owned by Nina Liebenberg. Copyright © 2021 Nina Liebenberg.

FIGURE 6.1: A photograph of the workshop and storage space for educational models displayed in the Falmouth Building of the Division of Clinical Anatomy and Biological Anthropology at the University of Cape Town, South Africa.

These are, of course, highly simplified descriptions when considering the scope of research that each of these departments oversees, but for the purposes of this chapter, this broad overview serves to establish that in each of these different sections of the university, academic communities train professionals and hone skills that augment (and at times contest) a body of knowledge particular to their discipline about the world around us. To enter any one of them is to experience the world through its community's views – views that are shaped by what the sociologist Eviatar Zerubavel terms their 'attentional subculture'. These subcultures form part of a broader category of 'attentional communities' – those that have their own distinctive traditions, habits and biases to which they pay attention – and are vividly exemplified by profession-specific attentional traditions (Zerubavel 2015):

> Every profession [...] has a distinctive sense of relevance and therefore also distinctive concerns. Depending on their profession, one person is thus likely to notice details to which another person is blind. Podiatrists notice feet, chiropractors notice posture and spinal alignment, orthodontists notice jaw alignment, dancers notice leg alignment and so on. Furthermore, professions often vary in the overall style of attending they implicitly and sometimes even explicitly promote. Consider, for example, the way surgeons, while operating, usually focus their attention only on a very small part of the patient's body selectively displayed through a hole in the surgical drape covering it, thereby mentally reducing his or her entire body to that 'visually cut out' part, that specific piece of body below the operating lighting. [...] The contrast between such a pronouncedly decontextualized style of attending and the one prevalent among both landscape and anti-aircraft defence system designers, for instance, could hardly be starker. Nor, for that matter, could the somewhat analogous contrast between mathematicians and social workers' respective levels of context awareness. (pp. 56–57)

Universities are fertile grounds for studying the attentional subcultures particular to the disciplines to which these professions belong. Students share common formative experiences in its lecture halls (Miller & Boix-Mansilla 2004):

> [*T*]aking certain classes, doing similar kinds of apprentice work (in the field, the lab, or the wider world) and appreciating a common canon of works by 'founding members' of the discipline. (p. 5)[17]

Learning the ropes and the rules of practice in these departments also requires a series of encounters with the objects involved in the practice – research materials, tools, furniture, text and symbols, and the categories that apply to all of these (Bowker & Star 1999). As Zerubavel observes, a large part of becoming professionally socialised is acquiring the ability to

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[17] This characterisation is the conventional and conservative disciplinary study but has recently been contested. More integrated and complex approaches have developed, including intra-, cross-, multi-, inter- and trans-disciplinary studies. See, for instance, Alvargonzalez (2011) and Klein (2013, 2017).

notice what is considered relevant by the discipline and learning how to ignore what is deemed irrelevant.[18] Borrowing from anthropology, sociologists Bowker and Star use the term 'naturalisation' to describe this process of focusing only on details relevant to a particular community and becoming blind to anything outside its scope (Bowker & Star 1999).

As they play out in the different departments of the university, these processes cultivate disciplinary 'insiders' – those trained in the various attentional traditions of their respective academic communities and naturalised to its biases, habits, norms and conventions.[19] Over time, these processes can occlude the contextual and artefactual nature of these

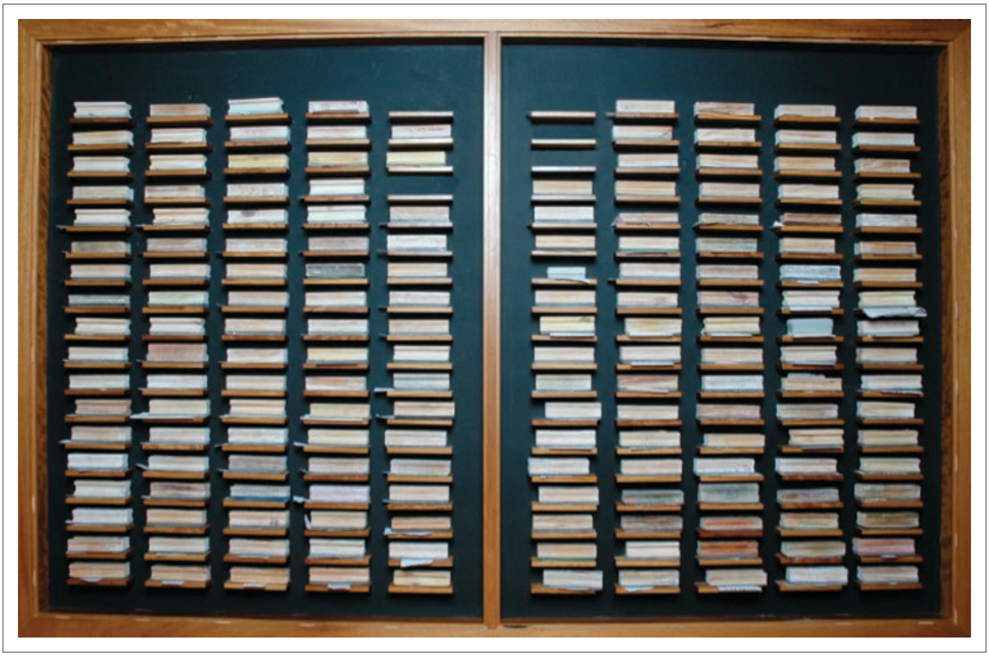

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FIGURE 6.2: A photograph of the sculpture of chalkboard dusters taken from 175 lecture theatres of the University of Cape Town, with each duster being replaced by a new one displayed during the *Curiosity CLXXV* exhibition and included on p. 171 in the *Curiosity CLXXV* Catalogue, LLAREC Series in Visual History, Hiddingh Hall, University of Cape Town, 2004.

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[18] Zerubavel calls this 'sociomental' control (2015).

[19] According to Peter Weingart, Professor of Sociology and Science Policy at the University of Bielefeld, the development of disciplines from their emergence in the modern sense in the 1800s included the marked development of a more hermetic dispensation due to 'the shift from occasions arising externally for the collection of experience and data, to problems for research generated "within" the disciplines themselves' (Weingart 2010). Respective groups also started exercising judgment and control about what they deemed relevant to their academic fields, and their language became more specialised and removed from that of the disciplinary outsider (Weingart 2010).

disciplines and, in many cases, obscure the often-biased foundations and prejudices that have informed their development. Scientific disciplines' historical foundations were, for example, founded in the West, and, as such, the particularities of this now-naturalised origin still influence how we understand what we study in these fields. The next section briefly discusses three disciplinary objects found in different UCT departments. It illustrates how the insider methods of its communities have rendered aspects of knowledge invisible, in many instances, because of these naturalisations that have occurred over time.

Disciplinary objects collections

The University of Cape Town's Bolus herbarium houses an array of specimens, each of these documenting the plant diversity of a particular geographic area, and are (Frank 2016):

> [*U*]sed as a reference for identification, as a source of information about plant species (such as the habitats where they occur, when they flower and what chemicals they contain), as a validation or documentation of scientific observations, and as a source of DNA that facilitates our understanding of the evolution of plants and the processes by which new plant species arise. (n.p.)

It does this through familiar insider markers – the pressed specimen, the colour and measuring scale attached to the documentation, the Latin name scribbled in ink, the place of collection, the date and the herbarium barcode.

For outsiders to this discipline, these signal the insider's authority and provide barriers that distance them from those trained in the discipline. Nevertheless, because of its materiality, specimens provide affordances that can extend beyond the disciplinary ways of knowing and can conjure up images, smells, memories, and feelings from personal associations of similar material encountered in outside contexts. A historical perspective on a specimen (see Figure 6.3) might, for instance, focus on the provenance scribbled on the label (as shown in Figure 6.4) and serve as a prompt to explore further the colonial history of botanical expeditions that informed how these specimens were taxonomised and understood in the first place.[20]

Elsewhere, in the Department of Geological Sciences, a rock categorised as a kimberlite offers information about plate tectonics, the structure, age, and past climates of the Earth to its undergraduate students but not, for instance, about its role in South African history. When considered from an outside perspective, these rocks are representatives of how gold and diamond mining have served as a force of exploitation in the country,

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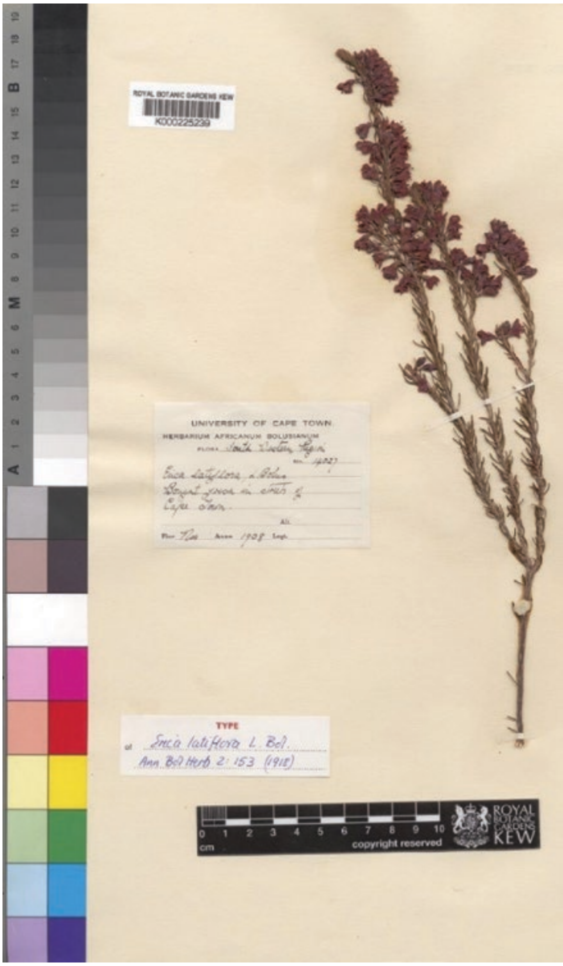
[20] For more on the social and political histories of botany in the Cape, see Van Sittert (2000, 2002, 2010), Boehi (2013), Boehi and Xaba (2021) and the work of Khan (2021).



Source: Photograph of the *Erica latiflora L. Bolus*, a Bolus herbarium specimen collected by the Royal Botanic Gardens Kew (1908), no. 14027, available at <https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:328981-1/images>, provided for reproduction in this publication by the author in 2024, with applicable permissions.

FIGURE 6.3: A photograph of a Bolus herbarium specimen, Royal Botanic Gardens Kew, 1908.

leading to such devastating events as the Marikana Massacre.[21] In UCT, they also speak to the funds that enabled UCT to develop into a fully-fledged university (1880–1900) since most of it came from government and private sources to train skilled personnel to work in the country's emerging diamond and gold-mining industries.[22]

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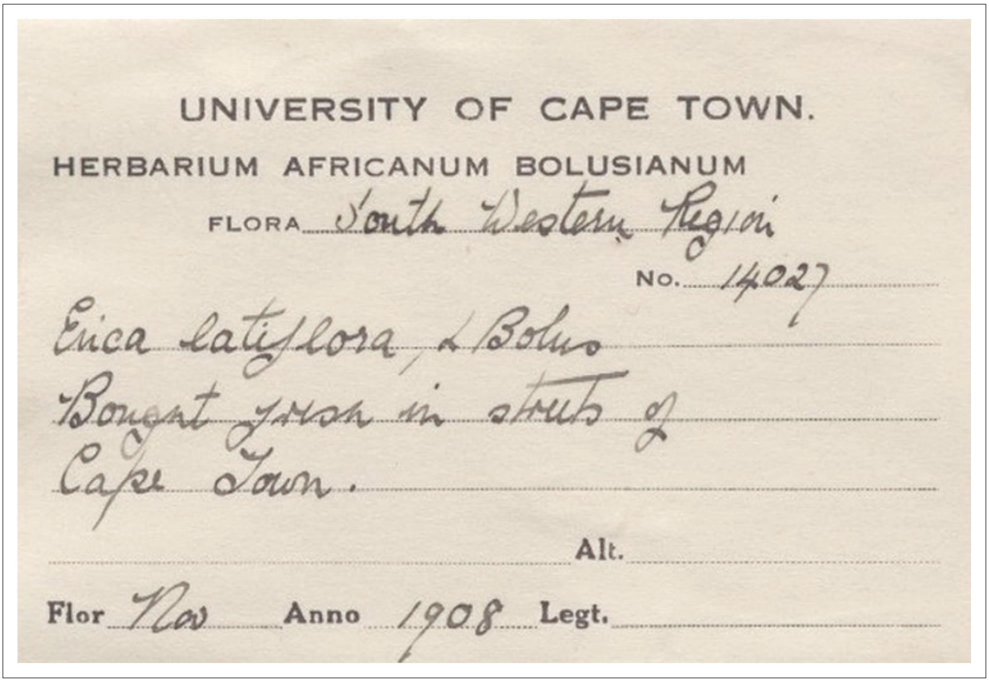
[21] The Marikana Massacre occurred when the South African Police Service opened fire on striking miners at the Lonmin platinum mine at Marikana near Rustenburg in the North West province, South Africa, on 16 August 2012, killing 34 miners.

[22] See <https://www.uct.ac.za/main/about/history>.



UNIVERSITY OF CAPE TOWN.
HERBARIUM AFRICANUM BOLUSIANUM
FLORA South Western Region
No. 14027
Erica latiflora, L Bolus
Bought fresh in streets of
Cape Town.
Alt.
Flor Nov Anno 1908 Legt.

Source: Photograph of the *Erica latiflora L. Bolus*, a *Bolus herbarium* specimen record collected by the Royal Botanic Gardens Kew (1908), no. 14027, available at <https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:328981-1/images>, provided for reproduction in this publication by the author in 2024.

FIGURE 6.4: Detail of a Bolus herbarium specimen record, Royal Botanic Gardens Kew, 1908.

Perhaps one of the most powerful moments of oversight can be found on the university's Health Sciences campus. Located as part of a collection of educational anatomical models used by students as part of teaching programmes and research that include medicine, physiology, biokinetics, forensics and audiology to provide answers to medical and scientific queries, an object – a chart with ten blocks of chromatic colour on either side of a central panel, the colours ranging from black to very light beige (shown in Figure 6.5) – is unassuming in appearance and largely invisible to insiders using the collection. It offers, however, a surprising glimpse into the history of the collection and the limitations placed on the larger collection by its practitioners.

Sturken and Cartwright describe Von Luschan's chart in the following manner (Liebenberg 2021):

> Created by Felix von Luschan, an Austrian doctor, anthropologist, explorer, archaeologist and ethnographer in the early 20th century, the chart, known as the Von Luschan chromatic scale, was used to classify skin colour, featuring as a tool in race studies and anthropometry of the time. Forgotten by its current department staff and students, its presence draws attention to the role of medicine and science in the apartheid agenda and to the larger racist scientific practices of measuring and classifying human physical differences in the 19th and 20th centuries to produce a 'typology of race'. (p. 122)

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FIGURE 6.5: A photograph of Felix von Luschan's chromatic scale displayed during the *Curiosity CLXXV* exhibition and included on p. 79 in the *Curiosity CLXXV* Catalogue, LLAREC Series in Visual History, Hiddingh Hall, University of Cape Town, 2004.

In UCT and its anatomy collection, the Von Luschan scale is a historical curiosity and all but invisible to its insiders, as it does not serve the needs of the current curricula. It is, however, part of the inheritance of the collection and of every science and medical student.

■ The blindspot

Since 2015, I have been obsessed with a very specific blind spot located in UCT's M&A Department – the medicine chest described at the start of this chapter (refer also to Figure 6.6).

Considering what can be gauged from studying an object from an outsider perspective, as illustrated by subjecting a Bolus specimen and the Von Luschan colour chart to a historical perspective, as opposed to a medical or botanical one, I was curious about what would be revealed if I amplified

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FIGURE 6.6: The blind spot.

the chest's visibility through subjecting it to an intensive interdisciplinary object-study. I presented it to a wide range of disciplinary experts – a process, I argued, that would allow the chest to be figured according to each expert's particular 'attentional subculture' and promote a proliferation of interpretations of this single object.

The findings were wide-ranging: A historical enquiry into the chest revealed, among many other interesting facts, that it was manufactured between 1890 and 1940, and it was one of many similar chests that accompanied eminent explorers such as Stanley, Scott and Shackleton on their travels (BWC 1925). A firm favourite among missionaries, army generals and news correspondents alike, it was also seen as a tool to combat 'tropicality' (Johnson 2008). In South Africa, in particular, these chests represented the advent of biomedicine and the subsequent suppression and outlawing of local indigenous medical and spiritual practice (Paarl in Bishop 2010). Since the chests claimed to combat the various diseases and dangers the 'tropics' posed to the European imperialist, they were one of the key technologies that supplied both the means and the motivation to pursue aggressive colonisation and push further and deeper into Africa – acquiring land and resources (Headrick 1981). In addition to its history, a botanical enquiry revealed the chest to be a lacuna of local botanical remedies. All its contents were sourced elsewhere (Johnson 2008), surprising when one considers that the Cape flora offered a plenitude of medicinal resources (Laidler & Gelfand 1971).

In addition to revealing aspects about the chest itself, its intersection with different departments also highlighted overlaps between the chest and the disciplinary objects housed as part of those departments, such as the three instruments used in Venda healing rituals situated in the South African College of Music's Kirby collection of indigenous instruments (see Figure 6.7). Interestingly, the social and medicinal function these instruments

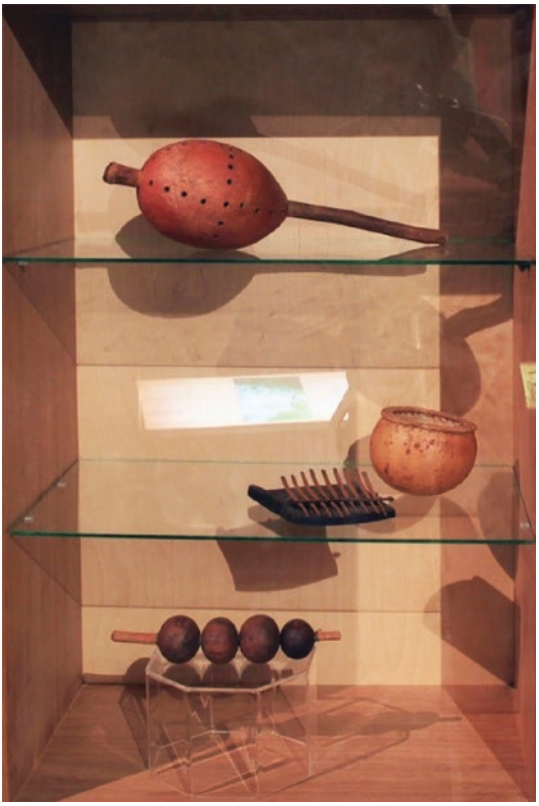

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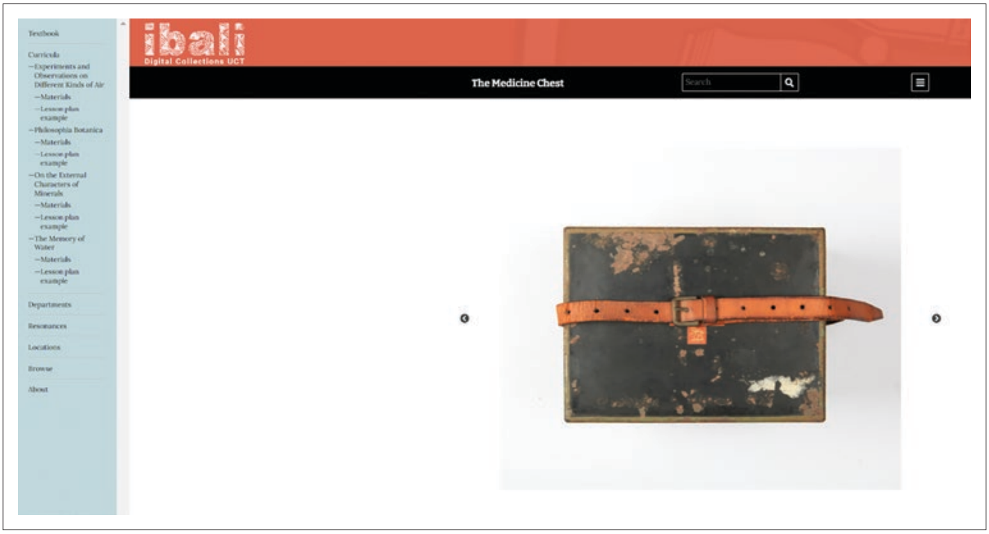
FIGURE 6.7: A photograph of Venḓa healing instruments displayed in the South African College of Music (SACM) Kirby Collection of Musical Instruments, 2018.

perform within their communities is usually disregarded in this host department, where their general worth resides in the comparison they offer for the Western musical canon.

This object-study was realised curatorially as both an exhibition staged in the Iziko South African Museum and a website or digital curation. For the latter, I returned to the library and its search engines, co-opting these tools to now *amplify* the chest's visibility in the library and in the larger institution using a new platform that was introduced in 2021 as part of the library's drive to nurture an open access space where digital collections can be created, curated, published and showcased.

Omeka S as a curatorial tool

The website, titled *The Medicine Chest* (Figure 6.8), is part of the digital library's showcase of UCT called 'Ibali' (isiXhosa for 'story').[23] Its main architecture is the open-source software Omeka S – a web publishing platform for GLAMs (Galleries | Libraries | Archives | Museums), designed to create relationships between objects in collections and describe them



Source: Permission to reproduce this artwork in this book was sought and obtained Nina Liebenberg in 2024. This page is available at <https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/page/departments>.

FIGURE 6.8: A screenshot of the Medicine Chest home page with an activated menu on the left-hand side, Ibali Digital Collections, University of Cape Town.

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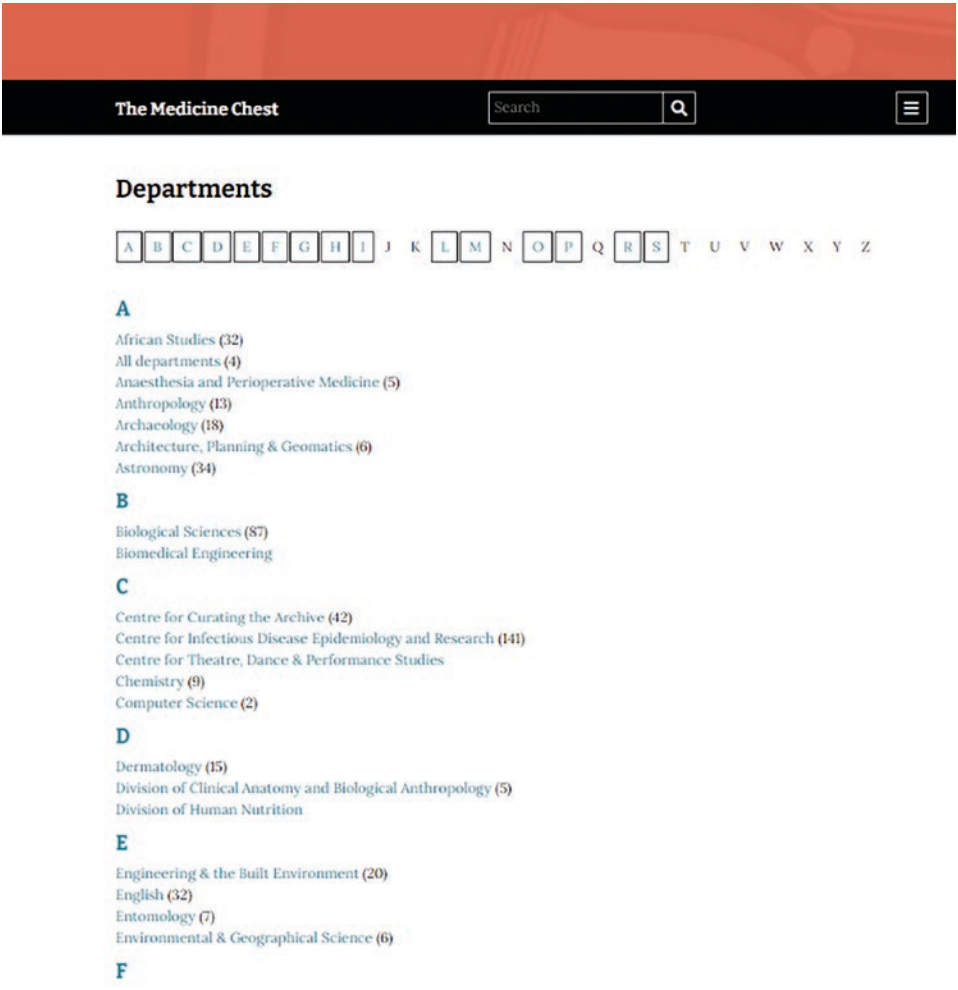
[23] Ibali is a highly collaborative and flexible, future-thinking online repository space. Since its launch, several diverse collections have already been showcased on Ibali – including a library of open-access resources focusing on climate change, transcriptions of the early South African Black Press, and an archive on an active theatrical research project. See https://ibali.uct.ac.za/s/ibali/page/welcome.

through linked open data resources on the internet. Omeka S has a growing user community because of its open-source characteristics. This community engages in the development of additional modules that add extra functionality to the main software architecture. Modules include the ability to create timelines and maps, do batch imports, annotate and much more.

One of Omeka S's many affordances is its ability to allow the use of both traditional metadata fields (Dublin Core and schema.org, for instance)



Departments

A
African Studies (32)
All departments (4)
Anaesthesia and Perioperative Medicine (5)
Anthropology (13)
Archaeology (18)
Architecture, Planning & Geomatics (6)
Astronomy (34)

B
Biological Sciences (87)
Biomedical Engineering

C
Centre for Curating the Archive (42)
Centre for Infectious Disease Epidemiology and Research (141)
Centre for Theatre, Dance & Performance Studies
Chemistry (9)
Computer Science (2)

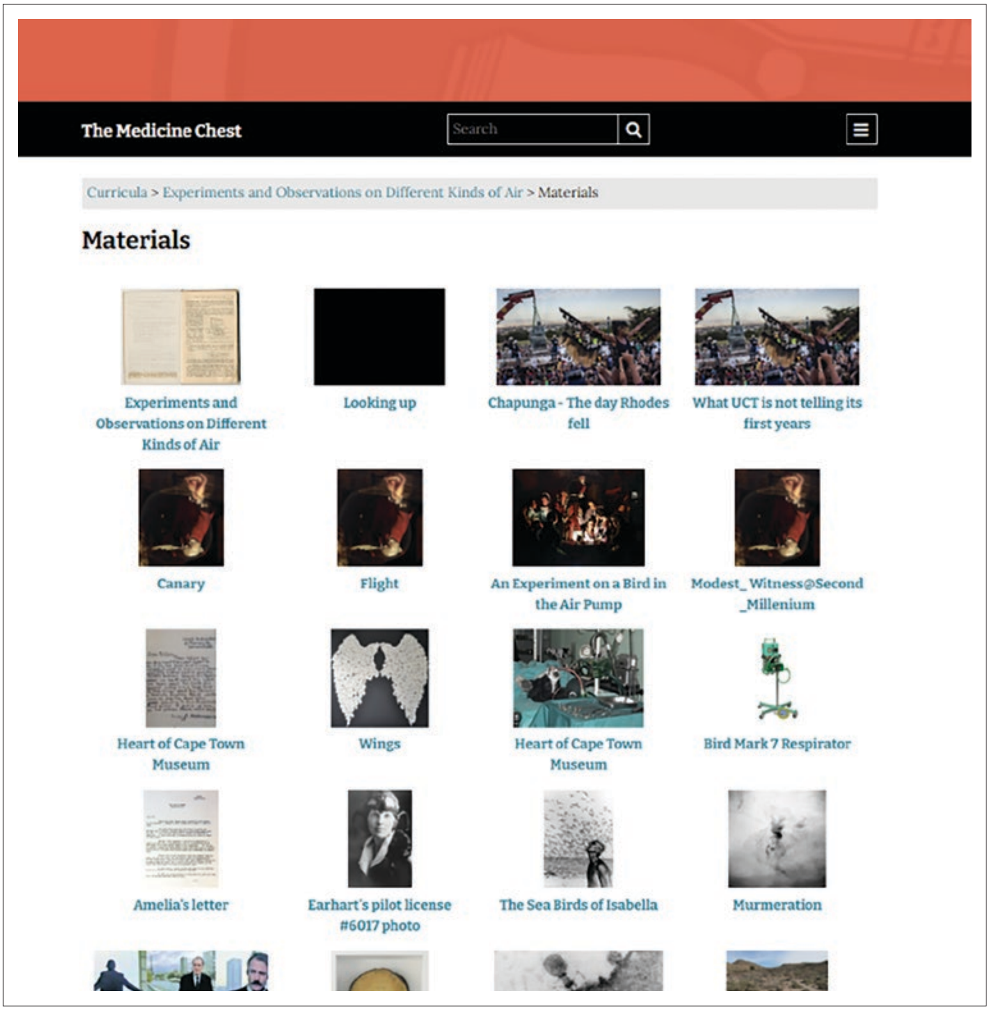
D
Dermatology (15)
Division of Clinical Anatomy and Biological Anthropology (5)
Division of Human Nutrition

E
Engineering & the Built Environment (20)
English (32)
Entomology (7)
Environmental & Geographical Science (6)

F

Source: Permission to reproduce this artwork in this book was sought and obtained from Nina Niebenberg in 2024. This page is available at <https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/page/departments>.

FIGURE 6.9: A screenshot of the University of Cape Town departments list relevant to the object study conducted on the 'Tabloid' medicine chest, Ibali Digital Collections, University of Cape Town.

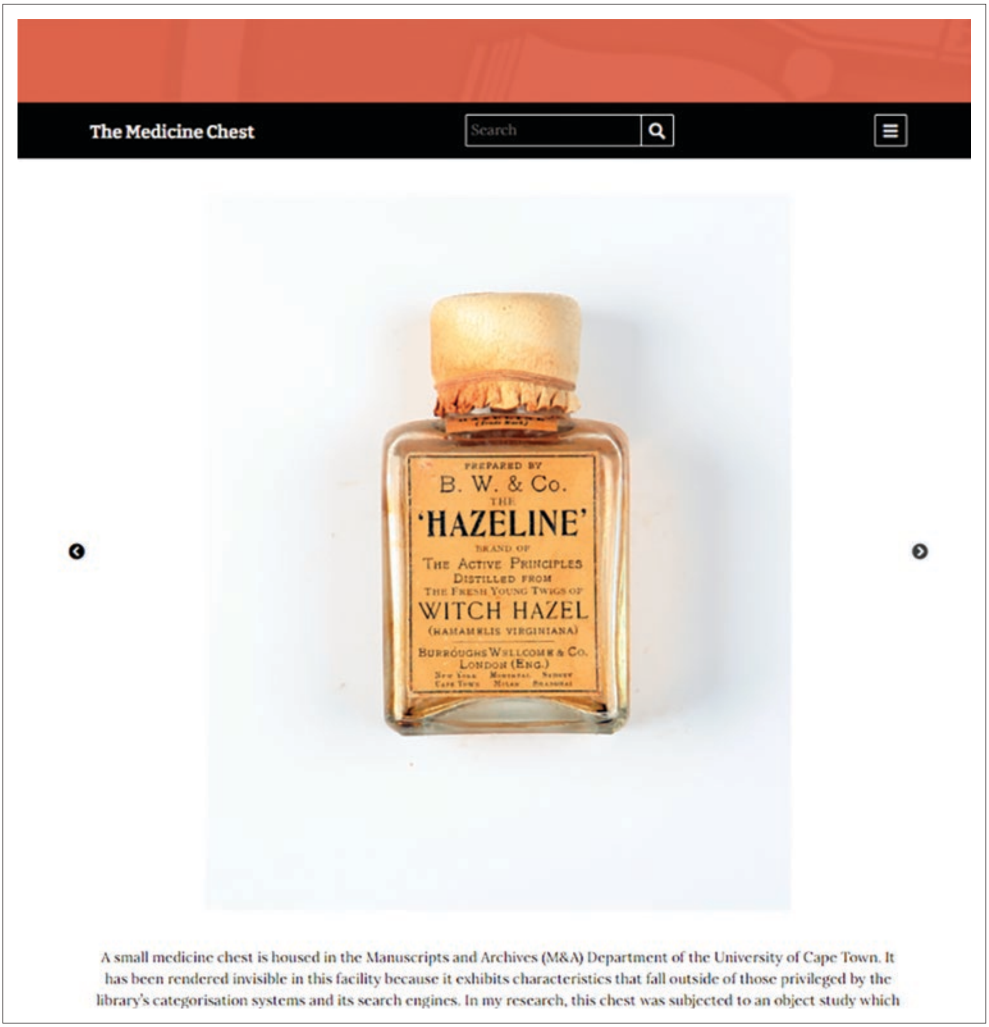


Source: Permission to reproduce this artwork in this book was sought and obtained from Nina Liebenberg in 2024. This page is available at <https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/page/materials-the-memory-of-water>.

FIGURE 6.10: A screenshot of the list of 'materials' forming part of an interdisciplinary curriculum inspired by the 'Tabloid' medicine chest, Ibali Digital Collections, University of Cape Town.

as well as adaptations and expansions on these entries (in the form of renaming or annotations, for example). In the case of the medicine chest, Omeka S was used to highlight the presence of the chest in the library and to address and subvert the taxonomies that rendered it invisible in the first instance by incorporating the range of novel metadata generated by the chest's intersections with the disciplines it was exposed to during this research. This was done by structuring the website in the following manner:

A range of components are listed in the menu. Consisting of a large selection of items (video clips, photos, text and audio files) gathered during

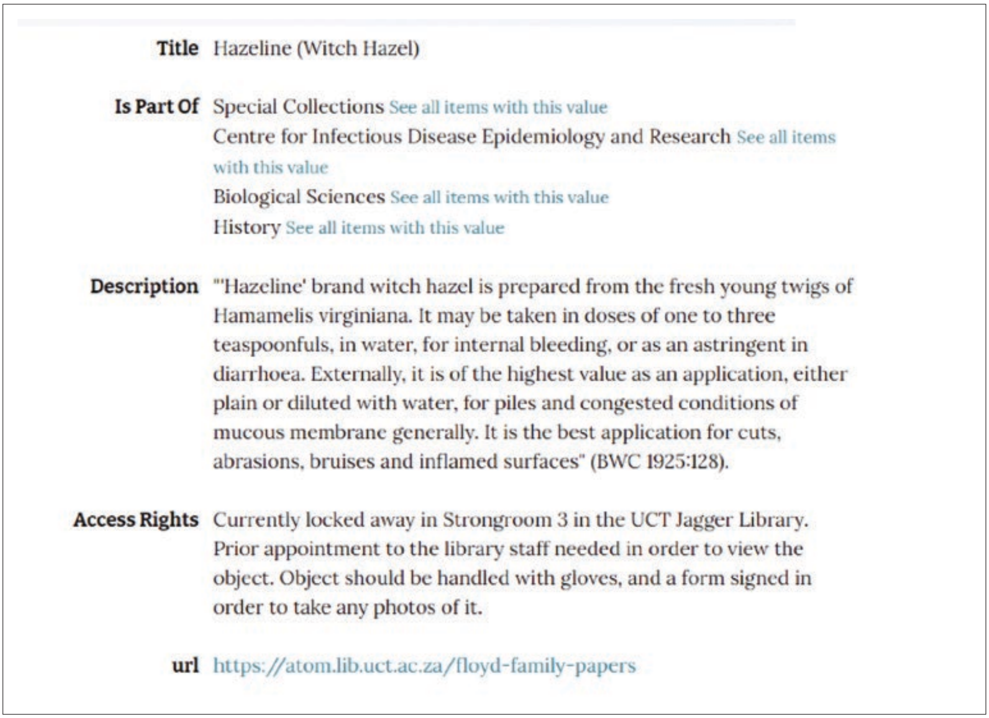


A small medicine chest is housed in the Manuscripts and Archives (M&A) Department of the University of Cape Town. It has been rendered invisible in this facility because it exhibits characteristics that fall outside of those privileged by the library's categorisation systems and its search engines. In my research, this chest was subjected to an object study which

Source: Screenshot of in the University of Cape Town Special Collections (BC666), available at <https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/item/18202>, provided for reproduction in this publication by the author in 2024, with applicable permissions. All rights to the original artwork are owned by Burroughs Wellcome & Co. Copyright © 1925 Burroughs Wellcome & Co.

FIGURE 6.11: A screenshot of a bottle of Hazeline found in the 'Tabloid' medicine chest, Ibali Digital Collections, University of Cape Town.

my research, each item is described using the metadata fields traditionally applied in library archiving. However, these categories are expanded by including non-traditional data that trouble disciplinary boundaries. In addition to title, description and source, each item is supplied with a list of 'Resonances' – words or phrases that represent disciplinary intersections, interdisciplinary connections and, at times, my own subjectivity. These terms form part of each item entry but are also part of a searchable list in the menu ('Resonances'), highlighting the relevance of certain entries by



Title Hazeline (Witch Hazel)

Is Part Of Special Collections See all items with this value
Centre for Infectious Disease Epidemiology and Research See all items with this value
Biological Sciences See all items with this value
History See all items with this value

Description "'Hazeline' brand witch hazel is prepared from the fresh young twigs of Hamamelis virginiana. It may be taken in doses of one to three teaspoonfuls, in water, for internal bleeding, or as an astringent in diarrhoea. Externally, it is of the highest value as an application, either plain or diluted with water, for piles and congested conditions of mucous membrane generally. It is the best application for cuts, abrasions, bruises and inflamed surfaces" (BWC 1925:128).

Access Rights Currently locked away in Strongroom 3 in the UCT Jagger Library. Prior appointment to the library staff needed in order to view the object. Object should be handled with gloves, and a form signed in order to take any photos of it.

url https://atom.lib.uct.ac.za/floyd-family-papers

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FIGURE 6.12: A screenshot of the item page section outlining the Hazeline in the 'Tabloid' medicine chest, Ibali Digital Collections, University of Cape Town.

listing the number of times they apply to an item.[24] Clicking on any one of these will showcase the group of items to which it applies – a process that further complicates the definitive categorisation of any one item. Each item is also categorised according to the university department they belong to ('Is Part Of') and is identified on a map of the institution (refer to Figure 6.9 and Figure 6.10).

This allocation refers to the department from which the item was sourced but also to those to which it might apply in an interdisciplinary sense. Again, these allocations are searchable as separate lists in the menu – the first lists the 'Departments' (see Figure 6.9), and the second shows the maps ('Locations') that situate each item in the relevant building (or buildings) on the UCT campus.[25]

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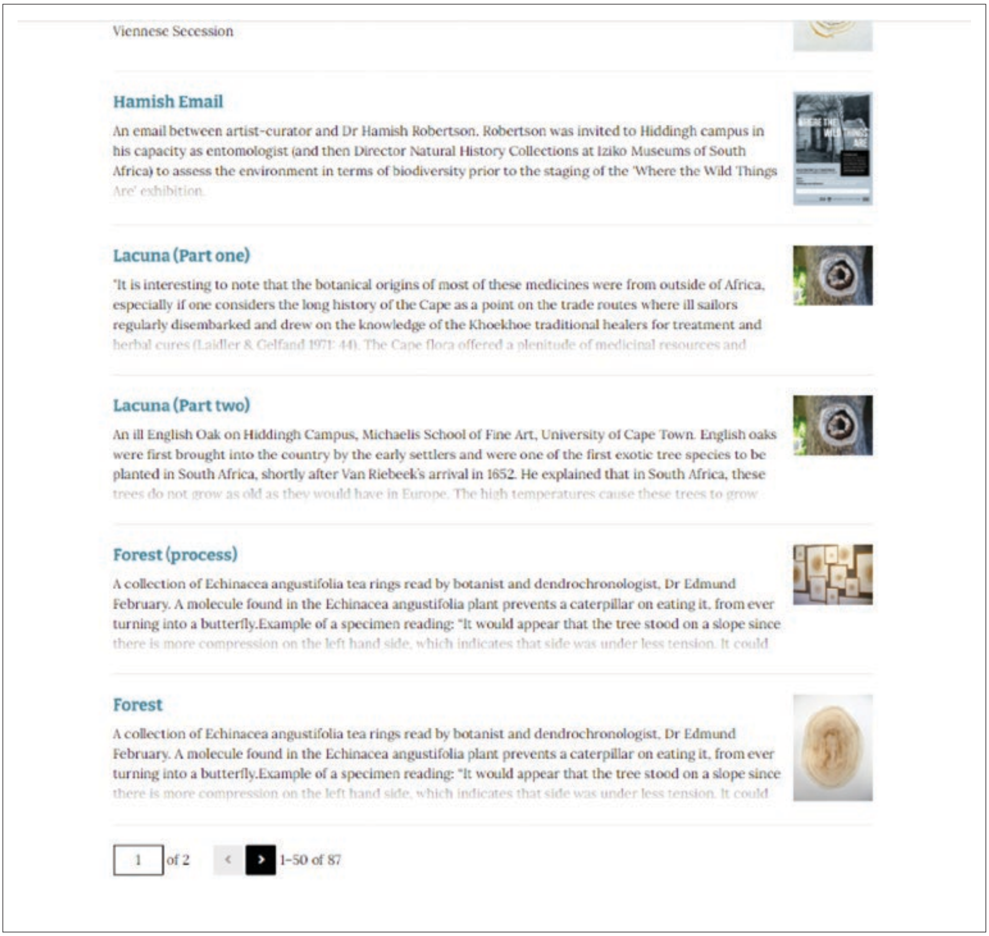
[24] See https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/page/welcome.

[25] See https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/page/map



Viennese Secession

Hamish Email

An email between artist-curator and Dr Hamish Robertson. Robertson was invited to Hiddingh campus in his capacity as entomologist (and then Director Natural History Collections at Iziko Museums of South Africa) to assess the environment in terms of biodiversity prior to the staging of the 'Where the Wild Things Are' exhibition.

Lacuna (Part one)

'It is interesting to note that the botanical origins of most of these medicines were from outside of Africa, especially if one considers the long history of the Cape as a point on the trade routes where ill sailors regularly disembarked and drew on the knowledge of the Khoekhoe traditional healers for treatment and herbal cures (Laidler & Gelfand 1971: 44). The Cape flora offered a plenitude of medicinal resources and

Lacuna (Part two)

An ill English Oak on Hiddingh Campus, Michaelis School of Fine Art, University of Cape Town. English oaks were first brought into the country by the early settlers and were one of the first exotic tree species to be planted in South Africa, shortly after Van Riebeek's arrival in 1652. He explained that in South Africa, these trees do not grow as old as they would have in Europe. The high temperatures cause these trees to grow

Forest (process)

A collection of Echinacea angustifolia tea rings read by botanist and dendrochronologist, Dr Edmund February. A molecule found in the Echinacea angustifolia plant prevents a caterpillar on eating it, from ever turning into a butterfly.Example of a specimen reading: "It would appear that the tree stood on a slope since there is more compression on the left hand side, which indicates that side was under less tension. It could

Forest

A collection of Echinacea angustifolia tea rings read by botanist and dendrochronologist, Dr Edmund February. A molecule found in the Echinacea angustifolia plant prevents a caterpillar on eating it, from ever turning into a butterfly.Example of a specimen reading: "It would appear that the tree stood on a slope since there is more compression on the left hand side, which indicates that side was under less tension. It could

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FIGURE 6.13: A screenshot of a small selection of items from the complete collection comprising of a total of 87 items relevant to the Department of Biological Sciences, Ibali Digital Collections, University of Cape Town.

Items can be browsed as a collection ('Browse') or as materials that form part of four new interdisciplinary curricula ('Materials'). Borrowing their titles from scientific publications, most of the 18th century, the 'Materials' and 'Lesson plans examples' listed under each curriculum subvert the very process of taxonomy initiated during this period, supplying the visitor with a wide range of tools with which to understand and explore each item on the site and its infinite connections.

As a possible way to demonstrate this – I will take you through one of an infinite number of pathways you can traverse to navigate the site.

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FIGURE 6.14: A photograph of a sick English oak tree on the University of Cape Town's Fine Arts campus, 2021.

If you scroll through the homepage carousel and click on one of the items that form part of the chest, the bottle of witchhazel (see Figure 6.11), for instance, you will be taken to its item page and its subsequent metadata (Figure 6.12).

Because it is made from the twigs of a tree, I listed as its department ('Is Part Of') not only Special Collections but the department of Biological Sciences, UCT's Centre for Infectious Disease Epidemiology and Research, as well as the Department of History as relevant ones. Clicking on Biological Sciences will list all the applicable items encountered in this research that fall or could fall under the disciplines practised in this department (see Figure 6.13).

Choosing the item, 'Lacuna', for instance, will take you to an image of a sick English oak tree that stands on the Michaelis School of Fine Art grounds.

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FIGURE 6.15: A photograph of a protea sourced from the Adderley Street Flower Market in Cape Town, 2021.

English oaks were first brought into the country in the 17th century and because of the high temperatures, these trees do not grow as old as they would have in Europe. The high temperatures cause these trees to grow faster than their species back home, and because of this, their centres start rotting over an extended period, as seen in Figure 6.14. The centre part of the wood – the heart – is affected by this occurrence and hollowed out over time.[26]

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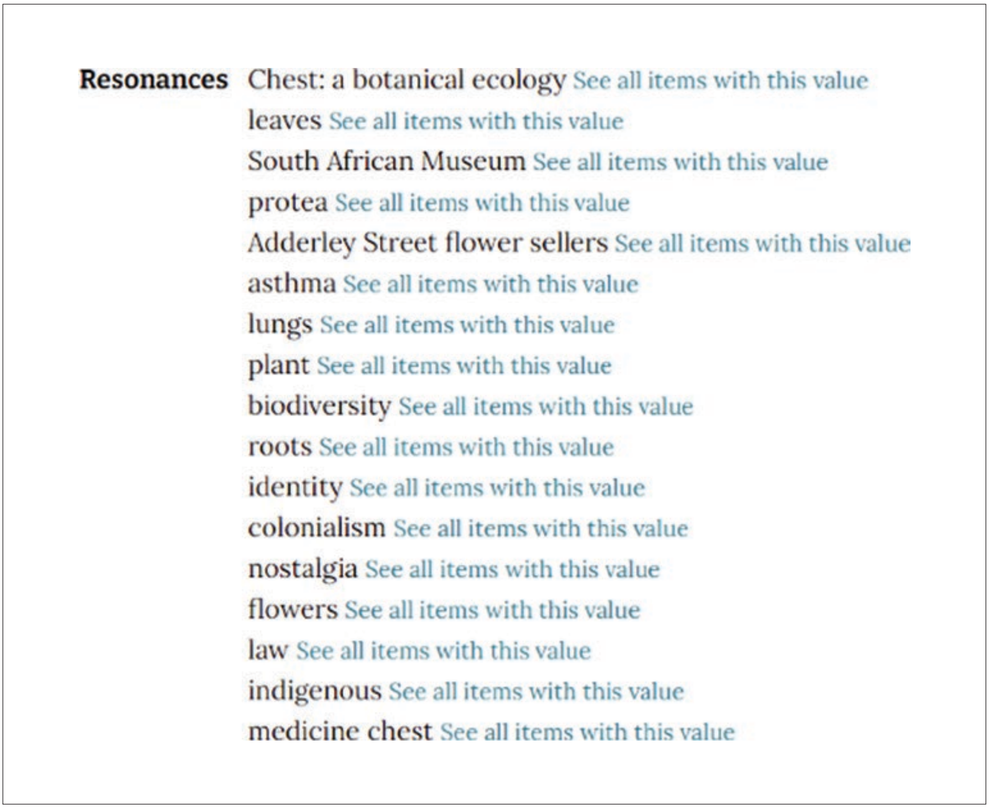
[26] To learn more about this tree, I invited UCT dendrochronologist, ecologist and botanist Prof. Edmund February to the Hiddingh campus in 2018 to share his views on the tree and its condition.



Resonances Chest: a botanical ecology See all items with this value
leaves See all items with this value
South African Museum See all items with this value
protea See all items with this value
Adderley Street flower sellers See all items with this value
asthma See all items with this value
lungs See all items with this value
plant See all items with this value
biodiversity See all items with this value
roots See all items with this value
identity See all items with this value
colonialism See all items with this value
nostalgia See all items with this value
flowers See all items with this value
law See all items with this value
indigenous See all items with this value
medicine chest See all items with this value

Source: Permission to reproduce this artwork in this book was sought and obtained from Nina Liebenberg in 2024. This page is available at <https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/item?site_id=29&property%5B0%5D%5Bjoiner%5D=or&property%5B0%5D%5Bproperty%5D=dcterms%3AisPartOf&property%5B0%5D%5Btype%5D=eq&property%5B0%5D%5Btext%5D=Biological%20Sciences>.

FIGURE 6.16: A screenshot of the resonance list for proteas, Ibali Digital Collections, University of Cape Town.

If you scroll down and choose one of the resonances listed below this entry, say, ‘leaves’, the site will draw up all items that list ‘leave’ as a keyword.

Clicking on the protea (Figure 6.15) in the list will take you to a protea I sourced from the Adderley Street flower sellers. Soraya Naidoo, one of the sellers, shared with me that she sometimes cooks the leaves of this plant and drinks it as a broth for asthma.

Clicking on ‘Adderley Street flower sellers’ in the resonances for this item entry (Figure 6.16) will give you a list of items that all relate to them in some way or another.

"Bought fresh in streets of Cape Town"

UNIVERSITY OF CAPE TOWN.
HERBARIUM AFRICANUM BOLUSIANUM
FLORA South Western Region
No. 14027
Erica latiflora, L Bolus
Bought fresh in streets of
Cape Town.
Alt.
Flor Nov Anno 1908 Legt.

Title "Bought fresh in streets of Cape Town"

Is Part Of Biological Sciences See all items with this value
African Studies See all items with this value
Gender Studies See all items with this value
History See all items with this value

Description "The flower sellers trading in Trafalgar Place and along Adderley Street have been doing so since at least the mid-1880s but became viewed as threats to the local flora by the European settlers at about the same time the medicine chest was first introduced to the city at the beginning of the 20th century. The settlers initially preferred to cultivate plants imported from their home countries to indigenous

Source: Photograph in the Royal Botanic Gardens Kew collected by the Royal Botanic Gardens Kew (1908), no. 14027, available at <https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:328981-1/images> / and <https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/item/18671>, provided for reproduction in this publication by the author in 2024.

FIGURE 6.17: Website detail of a *Bolus herbarium* specimen record, Royal Botanic Gardens Kew, 1908.

This specific item (Figure 6.17) from the list, a specimen from our own Bolus herbarium that now sits in the Kew Gardens Herbarium in the UK, shows its initial provenance from the Adderley Street Flower Market when it was bought, 'fresh off the street in Cape Town' in 1908 (Boehi 2013).

And one can continue with this process *ad infinitum*.[27]

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[27] To start this journey, visit: https://ibali.uct.ac.za/s/LBNNIN001-medicinechest/page/landing-page.

Conclusion

In the case of this object study, the digital platform Omeka S allowed me to highlight the chest's presence in the library and address and subvert the taxonomies that rendered it invisible in the first instance. The platform also provides the means to visualise the various disciplinary intersections that occurred during this research and demonstrate the object's newfound applicability to these different fields of research. This was done through using its various mapping and 'connectivity' tools (such as the 'Is Part of' function) as well as metadata fields dedicated to words or phrases ('Resonances') that represent disciplinary intersections, interdisciplinary connections and my own subjectivity. Omeka S's affordances, therefore, enabled me to foreground the deeply interdisciplinary drive of my enquiry, and it provided a practical example of curation's (both as a digital and physical practice) ability to surface institutional blind spots and address them through exhibition-making (again, both in the real and digital space). This curatorial focus, along with the manner in which Omeka S encourages users to rethink metadata fields and disciplinary taxonomies, offers exciting possibilities for future projects. It equips researchers and students with the means to combat the generation of digital clones – those virtual entries of the material counterparts that continue to propagate the same old problematic categorisations and range of metadata used when these collections were first accessioned. By offering the user the option to use both internationally recognised metadata standards (Dublin Core and schema.org, for instance) as well as customised ontologies, it provides the means for data generated by current research students to be incorporated and showcased, and for this metadata to provide exciting new dimensions to existing archives, able to transform these historical materials and their disciplines. As shown in this example of an object study of a medicine chest, Omeka S becomes a tool with which an institution can address its history through a re-engagement with its collections (now framed through new research perspectives). It enables these materials to be walked out of their storerooms and into public service once again.[28]

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[28] Many of the findings noted for Omeka S have been discussed and drawn up in collaboration with Sanjin Muftic, Debra Pryor, Carolyn Hamilton and Vanessa Chen for a report submitted to the UCT Deputy Vice-Chancellor in March 2023. The report outlines the findings of the *re-source* initiative launched in 2022 – a digital curation programme supported by the Five Hundred Year Archive (FHYA) digital team in Historical Studies and UCT Libraries' Digital Library Services (DLS).

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Many ideas and sections of text presented in this paper were drawn from my PhD dissertation, *The virus and the vaccine: Curatorship and the disciplinary outsider*. I remain grateful to my supervisors, Associate Prof. Fritha Langerman and Prof. Pippa Skotnes, for their enduring patience, their powerful insights, and their generosity throughout this research. In addition, I want to extend my heartfelt gratitude to Dr Sanjin Muftic for his generous assistance in helping me forge digital connections in Omeka S (and for his many insights into its potential) and to Prof. Carolyn Hamilton and Debra Pryor for making me excited about metadata.

Chapter 7

A strategic integrated communication framework for child protection organisations in South Africa: The role of digital media

Anette Degenaar
School of Communication,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa

Lynnette M Fourie
Focus Area Social Transformation, School of Communication,
Faculty of Humanities, North-West University,
Potchefstroom, South Africa

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Abstract[29]

In the field of Digital Humanities (DH), digitalisation's effects extend to encompass the non-profit sector, with a particular focus on the child protection (CP) sector in South Africa. Digital media has transformed communication by providing new opportunities for real-time, personalised and cost-effective interaction. However, it also poses potential challenges that can negatively affect child protection organisations (CPOs) in South Africa. This article explores the need to balance the benefits of digital media against the risks of statutory confidentiality breaches and sharing unverified information. The study included focus group discussions and semi-structured interviews with communication practitioners, managers and social workers from four registered national CPOs, along with external media and law experts. The findings reveal that CPOs need to develop effective communication strategies to mitigate potential risks associated with digital media. Child protection organisations should recognise the importance of leveraging technology to enhance communication strategies and build stronger stakeholder relationships. By effectively utilising digital media, CPOs can achieve their communication goals while being mindful of potential risks and promoting responsible reporting practices. To mitigate the dangers associated with social media, an essential component of digital media, organisations should prioritise the child's best interests and use the guidelines of a strategic integrated communication (SIC) framework, adapted for the non-profit sector by Degenaar (2021), to create effective strategies. Proper digital media management is crucial for CPOs to ensure the protection of the children they serve. Ultimately, incorporating digital media can enhance the CP sector's work, but it requires careful consideration and management of the potential risks involved.

Introduction and background

Child protection organisations in South Africa face significant sustainability challenges because of issues such as insufficient funding and an increasing demand for social services (see Tomlinson, Kleintjes & Lake 2022). Communication plays an important part in the sustainability of the CPO,

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[29] This chapter represents a substantial reworking (more than 50%) of: Degenaar, A., 2021, Doctor of Philosophy in Communication thesis, entitled 'A strategic integrated communication framework for the Child Protection Organisation in South Africa' with Prof. LM Fourie as promoter and Prof. L Holtzhausen as co-promoter, North-West University, viewed 08 May 2024, at
https://dspace.nwu.ac.za/bitstream/handle/10394/37807/DEGENAAR_A.pdf?sequence=4&isAllowed=y

especially in terms of establishing awareness, brand awareness and fundraising. While digitalisation in the field of communication has ushered in numerous advantages, it has also brought about its fair share of challenges for the CPO. It is therefore important to study the impact of digitalisation on the non-profit sector, and especially the South African CP sector, within the context of DH.

This article posits that the utilisation of a SIC framework adapted by Degenaar (2021) for the non-profit sector can be advantageous for CPOs in addressing communication challenges in their environment. Implicit in this framework is that the CPO should embrace technology and, by implication, digital communication. While there are obvious advantages to using digital communication, given the specific CPO environment, there are some challenges. Against this background, the research question addressed in the chapter is: To what extent does digital media in the context of SIC enhance or disrupt communication in the CP sector?

To answer this question, this chapter will briefly discuss the adapted SIC framework and indicate the role that digital media can play in SIC. Data was obtained from semi-structured interviews and focus groups with communication practitioners, managers and social workers within the CP sector, as well as the media and law experts in the context of SIC in South Africa.

■ Literature review

Strategic integrated communication has been extensively studied in the context of the for-profit sector (Duncan 2020; Kganyago 2022; Niemann 2005; Smith 2013; Werder et al. 2018). The study by Niemann (2005), in which she developed an implementation model for SIC in the South African for-profit sector, was taken as a point of departure.

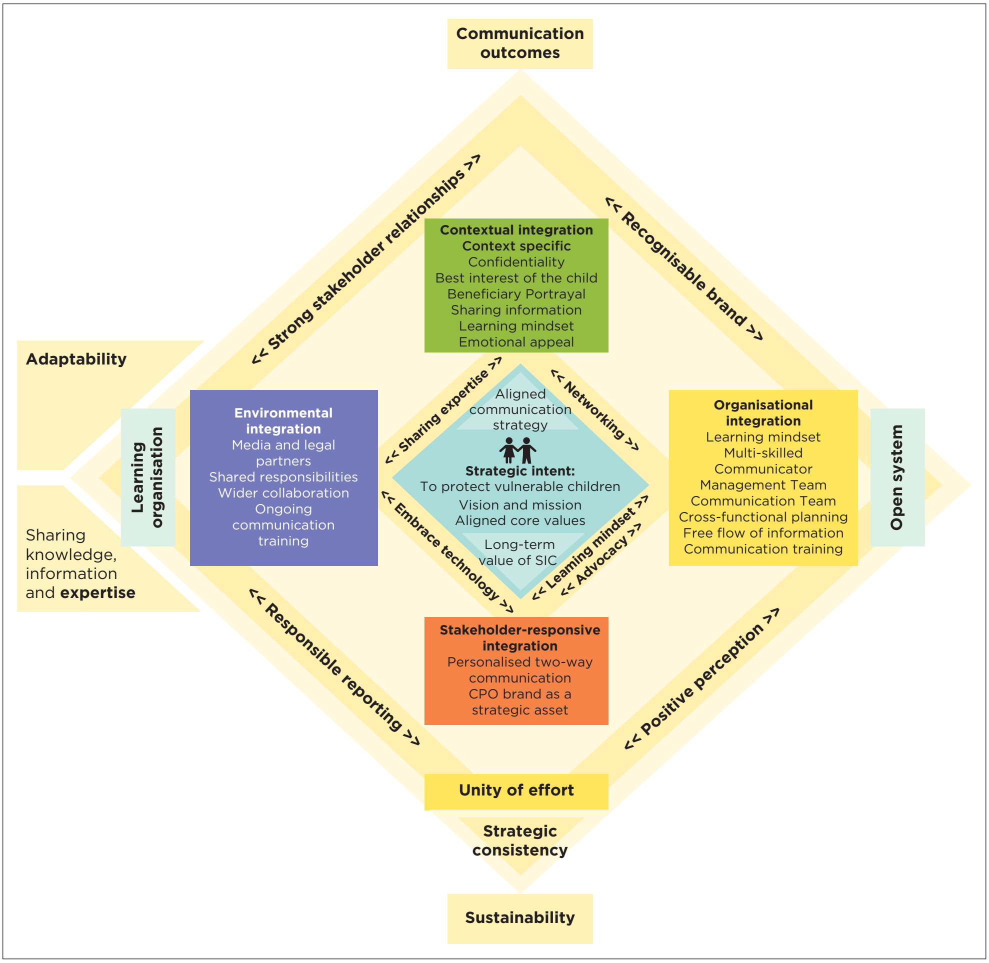
Degenaar (2021) adapted Niemann's SIC framework to specifically meet the explicit requirements of the CPOs in South Africa. An important assumption in the adapted framework is that digital communication should play an important role in the CPO sector.

Regarding the use of digital communication, Schutte (2009) examined SIC in South African non-profit organisation (NPO) websites, and Swart (2018) focused on social media brand communication in NPOs in South Africa. However, none of these studies have explored the potential role of digital media in the context of SIC in the CPO sector.

Brief outline: Strategic integrated communication framework for child protection organisations in South Africa

Two underlying principles of a strategic integrated communication framework

The framework is based on two principles that characterise all communication, namely, to achieve strategic intent as part of being a learning organisation (see Figure 7.1).



Source: Reproduced graphic originally published in Degenaar (2021), published with permission from Anette Degenaar.
Key: SIC, strategic integrated communication; CPO, child protection organisation.

FIGURE 7.1: A strategic integrated communication framework for child protection organisations in South Africa.

Strategic intent, informed by the vision and mission, is the driver of all communication efforts (Angelopulo 2013; Hamel & Prahalad 2005). In the case of the CPO, this means that the overall aim of all communication is to protect vulnerable children. To achieve this, there needs to be an aligned communication strategy with a sharpened focus on the long-term value of SIC.

It is argued that embracing technology is one of the driving forces to achieve the strategic intent. To enable the CPO to achieve its strategic intent implies that digital media can play a role in *sharing expertise*, *networking* and *advocacy*, while embracing technology.

The second principle is that the CPO functions as an open system in an ever-changing and challenging environment and should be a *learning organisation*. Learning is facilitated through *sharing knowledge*, *information* and *expertise*.

There are four areas wherein communication should be integrated, informed by strategic intent and functioning as a learning organisation in an open system.

Contextual integration

In the case of the CPO sector, the first area of integration is the context in which communication functions. The CPO, as with other NPOs, faces general challenges of limited resources and communication professionals, which limits the communication function. However, the CPO also needs to deal with specific legal requirements and ethical considerations that limit the scope of communication. These include:

- Without the permission of a court, no person may publish information relating to the proceedings of a Children's Court which reveals or may reveal the name or identity of a child who is a party or a witness in the proceedings. Thus, children who form part of Children's Court proceedings may not be identified. This includes all children in alternative care, hence also temporary safe care and foster care placements (*Children's Act 38 of 2005*).
- The identity of the children may only be revealed when permission has been obtained from the presiding officer of the Children's Court (*Children's Act 38 of 2005*). Permission from the parents is not sufficient. The implementation of the Act further complicates the issue, for example, the various presiding officers at a Children's Court may interpret the confidentiality policies differently.

The term 'best interest of the child' means that in all matters (and thus also communication) concerning the care, protection and well-being of a child, their best interest is of paramount importance and should be applied (*Children's Act 38 of 2005*).

Further to this, the communication practitioner of the CPO must also understand and adhere to added restrictions placed on the communication function by the stipulations in terms of the *Criminal Procedure Act 51 of 1977*. The Act provides for various protective mechanisms to reduce trauma for child witnesses in Criminal Court proceedings. Children's Court proceedings aimed at the protection of the child may be initiated independently of, or in concurrence with, criminal justice processes (South African Law Commission 2002). Section 154(3) of the *Criminal Procedure Act* forbids the publication of any information that reveals the identity of an accused or witness under the age of eighteen years old.

This section of the *Criminal Procedure Act* was amended and became effective in December 2019 after a court dispute resolution. During the judgement, the Constitutional Court granted life-long anonymity to child victims. This means that their identity is protected even after they turn eighteen years old if they wish to keep it protected (Conradie, Hofmeyr & Gordon 2019).

Another important consideration is the ethical code of the South African Council for Social Service Professions (SACSSP), which emphasises social workers' primary obligation to render quality service in a professional and ethically correct manner, which protects the child's well-being (Denner, Viererbl & Koch 2019; Meleyal 2017; South African Council for Social Service Professions 2020).

Organisational integration

The basic assumption is that there should be integration between different departments within an organisation to be able to align a communication strategy. This would require unity of effort by all staff members of an organisation. For the CPO, a diverse communication team, including non-communication professionals like social workers or board members, supported by management and led by a multi-skilled communicator, are responsible for the communication.

While utilising non-communication professionals in communication teams can be beneficial, it also presents a potential danger. The accessibility of digital media has made it possible for anyone to assume the role of a public 'communicator', regardless of their limited expertise in the specialised field of communication.

Stakeholder-responsive integration

Stakeholder relationships are essential for a CPO to meet the growing demand for the sustainability of services. Two-way symmetrical communication is the traditional way to foster mutual benefit and trust between organisations and stakeholders (see Barker & Angelopulo 2013; Grunig 2013; Meintjes 2015; Niemann-Struweg 2015; Ristino 2013).

This is enhanced by personalised interaction, which makes individuals feel that their interests, behaviours and needs are considered (Denner et al. 2019; Karvonen 2010).

However, in the context of the CPO, it would be unrealistic to implement two-way symmetrical communication and personalised interaction fully. Challenges include the management of unrealistic expectations from diverse stakeholders ranging from donors to beneficiaries with limited resources. Instead, the adapted framework proposes stakeholder-responsive integration, facilitated by two-way personalised messages. Digital media is the ideal platform to facilitate stakeholder responsiveness.

The interactive nature of digital communication has revolutionised communication, allowing for instantaneous and cost-effective communication by connecting people through various digital platforms such as social media, websites and mobile apps (Bown 2016; DeYeso 2012; Freberg 2018, p. 259; Laidler-Kylander & Stenzel 2014, p. 19). Digital media can build and nurture stakeholder relationships but can also create unrealistic expectations of permanently connected stakeholders (Overton-De Klerk & Verwey 2013, p. 362).

For the CPO, this implies that stakeholders could feel that they are being heard and understood. Increased feedback opportunities promote the integration of stakeholder views and needs into organisational planning (Angelopulo 2013, p. 49). Feedback should include information on outcomes of donations, updates on initiatives, and positive responses to opinions, leading to a sense of belonging and trust.

Environmental integration

Environmental integration refers to external socio-cultural, economic and political factors that influence an organisation's communication function, all of which are subject to constant change (Niemann-Struweg 2015, p. 223; Rensburg & Cant 2009, p. 107). The CPO's relations with the media and legal sector are highly significant.

The media plays a powerful role in shaping public opinion and behaviour (Wachanga 2014, p. 219) and can also shape perceptions of CP services. With its easy access to information, the online sphere places a significant responsibility on media representatives to evaluate sources and use their power responsibly (Burns & Matthews 2018, p. 105). Negative and sensational stories about CPOs can contribute to a negative perception and cause disruption, which is fuelled by poor communication between the public and the CPO, as well as negative media coverage.

Outcomes of strategic integrated communication

The effective implementation of the SIC framework in the CPO context can lead to positive communication outcomes, such as strong relationships, a recognisable brand and responsible reporting regarding CP issues, and in the long run, it can reinforce a positive public perception, contributing to the organisation's long-term sustainability. This chapter emphasises the importance of responsible reporting, which refers to the ethical and professional practice of journalism that prioritises accuracy, fairness and balance in reporting news and information (see Burns & Matthews 2018, p. 175; Zugazaga et al. 2006).

From the aforementioned it is argued that achieving these outcomes requires a unity of effort through networking, advocacy, sharing expertise and embracing technology. Embracing technology, specifically digital media, is a driving force and enabler for achieving strategic intent in the CPO-specific SIC framework, but it can potentially also disrupt the communication process in the CPO environment (for a comprehensive framework discussion, see Degenaar, Fourie & Holtzhausen 2022).

The role of digital media in the context of strategic integrated communication

Anyone can become or be a public communicator on digital media

Organisational integration requires involving non-communication individuals – such as volunteers, friends and external experts – as well as paid employees to perform part of the communication function, and digital media can facilitate this function.

Nevertheless, this has made it more difficult to manage and impossible to control (Freberg 2018, p. 23). Digital media allows users to engage with the content in some way, including participating in it and even influencing its outcome. This can lead to various perceptions being formed based on the user's experience with the content. While public or media members can actively share thoughts, photographs, stories and advice on these platforms, the CPO is bound by legal and ethical constraints to react to the communication. These messages can be based on unsubstantiated facts and opinions that may negatively affect the perception of CPOs.

Online employee advocacy

To enable the CPO to become a learning organisation that embraces technology implies that advocacy is necessary and coincides with being an open system. Online employee advocacy promotes an organisation via social networking by its employees on a more personal and trustworthy level (Kunsman 2017). Employees participate in this advocacy by creating content on their personal user profiles based on their areas of expertise, sharing content from the organisation's main Facebook page, and commenting on social media on behalf of the organisation in their personal capacity (Kunsman 2017).

While online employee advocacy can improve the credibility and positive perception of the organisation, it can also have the opposite effect if not implemented effectively. Employees who are not properly trained or monitored may inadvertently share confidential information or post inappropriate content that could harm the organisation's reputation.

☐ Beneficiary portrayal of children, using emotional appeal

Emotional appeal storytelling employs narratives to create a more personal and emotional connection with the target audience (Engelbrecht & Ngongo 2018, pp. 207, 209; Humphries 2003, p. 249). Digital media provides an ideal platform for sharing such stories (Gentès 2013; Lindgren 2022, p. 134). Using emotionally appealing images or videos in social media posts, or those that elicit an emotional response, such as 'Aww' moments, can increase their visibility and shareability, highlighting the importance of CPOs including visual content in their social media strategies to engage their audience (see Keib et al. 2018; Lindgren 2022, p. 147).

While emotional appeal can be a powerful tool to personalise messages effectively for CPOs, it can also carry serious risks when used on digital platforms. The spread of inaccurate or false information about CP procedures or cases by individuals not associated with the CPOs can damage the organisation's reputation and harm the children it serves. Irresponsible disclosure of information or victim identity can further traumatise children.

☐ Feedback to and from stakeholders

Feedback is an important part of stakeholder responsiveness. Responding to stakeholders, particularly on online platforms, is crucial, and all CPO employees should be involved in personal and online discussions concerning CP. A conversation should be established to manage any complaints online and offline, not just posting online and offline enquiries, issues and complaints but also posting messages on social media. However, legal restrictions and ethical responsibilities surrounding the sharing of information by social workers and communication practitioners can limit their ability to provide feedback on enquiries, complaints and allegations. As a result, people may form perceptions based solely on what they see and hear in the public domain without the context from the CPO's side.

Sharing of information and expertise

The SIC framework proposes a tech-embracing, learning CPO as an open system that shares information and expertise across different fields to achieve strategic intent through integration at various levels. Digital media provides a unique opportunity for the CPO to connect with individuals from diverse backgrounds and geographic locations, allowing for the exchange of different perspectives on CP issues. Social media platforms can, for example, be used to share expertise and knowledge by posting articles, insights and updates related to a particular topic, such as CP. But suppose employees share confidential information or post inappropriate content that harms the organisation's reputation and are not trained or monitored. In that case, it can lead to potential legal and financial repercussions. It can also damage the organisation's reputation and erode trust with stakeholders.

Networking and collaboration

Integrated communication efforts, along with stakeholder responsiveness and environmental integration through networking and collaboration, are involved in achieving strategic intent. Child protection networking and collaboration can occur through digital media, including online forums, social media platforms, virtual conferences, online training programmes and workshops. This provides an efficient way for professionals and other persons with a vested interest in the CPO to discuss and share best practices on CP, regardless of their location. However, such digital platforms should comply with legal and ethical regulations to maintain confidentiality and protect children's identity and sensitive information under statutory order.

Responsible reporting

Responsible reporting can go a long way to building strong stakeholder relationships, a recognisable brand and a positive public perception of the CPO. Accordingly, the framework highlights that achieving responsible reporting through a unified effort for strategic consistency is essential for all those involved in the CPO, not just in the organisational area, as in the original Niemann (2005) model.

According to Filak (2019), responsible reporting on digital media involves verifying facts, providing context, avoiding stereotypes and being sensitive to the privacy and dignity of individuals and communities. Besides adhering to journalists' ethical and professional practices, the ethical guidelines and standards for the CPO sector must also be followed.

In summary, potential disruptions to responsible reporting on digital media include the spread of fake news and misinformation, challenges in verifying source accuracy, pressure to prioritise speed over accuracy, lack of accountability for online content creators, harassment of social workers and managers, potential violations of privacy and confidentiality, sensationalism and bias and polarisation in online discourse.

Digital media has advantages but can disrupt communication in the CPO sector, as summarised in Table 7.1.

TABLE 7.1: Potential advantages and disruptions of digital media on communication in the child protection organisation sector.

Description	Possible advantages	Potential for disruption
Anyone can become a communicator on digital media	• Ease of dissemination	• The ease with which individuals can function as communicators on digital media can create potential disruptions for CPOs, including conflicts of interest, ethical dilemmas around informed consent and privacy, and challenges around the quality and accuracy of information shared
Online employee advocacy	• Enhanced communication effectiveness • Increased credibility and positive perception • Personalised stakeholder interaction • Cost-effectiveness	• It can also create potential conflicts of interest and raise ethical concerns around the use of personal social media accounts for professional purposes. Employees may unknowingly share confidential information or post inappropriate content that could harm the organisation's reputation.
Beneficiary portrayal of children, using emotional appeal	• Share success stories • Stronger bond with possible benefactors • Support fundraising efforts • Emotions drive donations	• Can create ethical dilemmas around informed consent, privacy and the use of emotional appeals to solicit donations or support • Careful consideration of legal and ethical boundaries must be taken; untrained employees of the CPO can inadvertently share confidential information or post inappropriate content
Feedback to and from stakeholders	• Two-way symmetrical communication • Listening and feedback to stakeholders	• Employees inadvertently share confidential information or post inappropriate content that harms the organisation's reputation.

Table 7.1 continues on the next page→

TABLE 7.1 (Continues...): Potential advantages and disruptions of digital media on communication in the child protection organisation sector.

Description	Possible advantages	Potential for disruption
Sharing of information and expertise	• Transferring knowledge, skills and experiences to enhance performance or achieve a common goal • Safe and inclusive space for different perspectives	• This can also raise concerns about confidentiality, data protection, and the quality and accuracy of information shared • Suppose employees share confidential information or post inappropriate content that harms the organisation's reputation and are not trained or monitored. In that case, it can lead to potential legal and financial repercussions for the organisation. It can also damage the organisation's reputation and erode trust with stakeholders.
Networking and collaboration	• Across organisational boundaries, this is an essential issue for CPOs • Digital media provides an efficient way for professionals and other persons with a vested interest in the CPO to discuss and share best practices on child protection regardless of their location	• The potential disruption to networking and collaboration in child protection can occur when digital platforms fail to comply with legal and ethical regulations, leading to a breach of confidentiality and exposing the identity and sensitive information of children under statutory order
Responsible reporting	• Prioritises accuracy, fairness and balance in reporting news and information • Upholding journalistic standards and principles, such as fact-checking, verification, and transparency, while considering the potential impact of reporting on individuals and communities • Aims to inform and educate the public while minimising harm and promoting social responsibility • Digital media can be used to report on the activities and impact of the CPO	• Spread of fake news and misinformation • Difficulty in verifying the accuracy of sources • Pressure to prioritise speed over accuracy • Lack of accountability for online content creators • Harassment of social workers involved in specific cases and managers of CPOs • Potential violation of privacy and confidentiality • Sensationalism • Bias and polarisation in online discourse • Ethical dilemmas around accuracy, fairness and objectivity in reporting, as well as the risk of sensationalism or exploitation of vulnerable populations

Source: Author's own work.
Key: CPO, child protection organisation.

Research methods

A qualitative research approach was followed by using semi-structured interviews and focus group discussions (Jensen 2012, p. 266; Leedy & Ormrod 2010, p. 95).

Semi-structured interviews and focus groups

The researcher used 22 semi-structured interviews and four focus group discussions to obtain detailed information about communication in the CP sector. These methods are valuable in social science research as they elicit a wide range of ideas and opinions through group interactions in focus groups and allow for in-depth exploration of topics in semi-structured interviews (Merriam & Tisdell 2016, p. 21; Niewenhuis & Smit 2012, p. 135).

As derived from the literature, the concepts and constructs of SIC were employed as a guideline to formulate the questions for the interview schedule and moderator's guide. Questions differed slightly according to participants' positions, functions and fields of expertise, such as managers and communication practitioners.

Strategic integrated communication is based on two underlying principles: the organisation's strategic intent drives communication efforts, and learning organisational principles promotes continual repositioning. The integration of the three areas encompasses the organisational integration area, which includes top management integration and the communication function. The stakeholder integration area is divided into interactivity integration and brand contact-point integration. Finally, the environmental integration area emphasises that organisations function as part of an open system.

Sampling of organisations

The four largest CPOs which have regional offices in South Africa were purposefully selected (see Babbie 2011, p. 343; Creswell 2013, p. 147). The national organisations chosen were RATA Social Services, SAVF Social Services, Child Welfare South Africa and the Council of Church Social Services (CSCC). The regional organisations were RATA North-West, SAVF Gauteng, Christian Social Council North (CMR North), Christian Social Council East, Child Welfare SA Gauteng, Child Welfare Tshwane, NG Welfare Gauteng, Christian Social Council Gauteng East and Badisa. Five of the regional organisations were purposely selected because they employed a person to take responsibility for the communication function, as shown in Table 7.2.

Data analysis

The data were submitted to qualitative content analysis – to derive meaning guided by describing attributes including perceptions, values, levels of meaning and opinions of the groups of participants involved in the CPO sector (Du Plooy 2009, p. 221). The aim was to understand individuals'

TABLE 7.2: Sampling of participants.

Target population	Sample size of participants (*n* = 49)	Criteria used for purposive sampling of participants	Data collection method
CPO managers	*n* = 10 • National (4) • Regional (6)	This person had to be situated at the head office and fulfil the role of the highest-ranking official at national and regional levels	Semi-structured interviews
CPO communication practitioners	*n* = 8 • National (3) • Regional (5)	The job description had to include the responsibility for the communication function or assisting with digital media	
External experts	*n* = 4 • Media experts (2) • Legal experts (2)	Extensive knowledge of Children's Court proceedings and child protection matters in their respective fields of law and media, and the influence thereof on digital media	
CPO provincial managers: Social services	*n* = 7	Extensive knowledge and expertise, with each having more than 20 years' experience in the field of child protection	Focus group: 1
CPO social workers in the field	*n* = 20	Work at branches that were in some way affiliated with one of the four national participating organisations. Social workers could share and discuss their different perceptions, experiences, needs and concerns about digital media.	Focus groups: 2–4

Source: Author's own work.
Key: CPO, child protection organisation.

construction of digital communication in the context of the CPO and participants' areas of expertise.

Ethics process

The study was approved by the Arts Ethics Committee of the North-West University, South Africa (ethics number: NWU-00370-17-A7). Participants were informed that participation was voluntary and that the details of the participants were kept confidential. The researcher always strove to maintain research integrity and objectivity by not being selective in reporting and analysing the qualitative data. Against this background, this chapter explores the views of professionals in the CPO sector.

Findings from the semi-structured interviews and focus groups

Unity of effort

The study found that the majority of management and social workers believed that their main responsibility was to provide professional services that ensure the protection of children or to carry out managerial tasks and that communication was not part of their job responsibilities, nor were they trained to do so. Most managers noted that social workers fail to provide noteworthy information and narratives on how children's lives are positively impacted. However, managers defended them in the light of the heavy caseloads of social workers, lack of time, lack of communication skills, and generally, they must 'keep all the balls in the air' (Participant 7, Regional manager: social services, full-time).

On the other hand, communication professionals recognised the importance of strategic communication and digital media. Communication professionals expect other employees to back their digital communication endeavours by engaging emotionally, reading electronic newsletters, visiting the website, supporting the organisation's social networking sites and contributing content for these platforms.

Although unity of effort in the SIC framework was initially intended to achieve organisational integration, the emergence of digital media has broadened its scope. As more people outside the organisation share information online, it affects the CPO, victims and social workers, resulting in hesitance and cautious responses from employees of the CPO. The uncontrollable nature of digital communication, highlights the need for everyone to communicate together.

It can be deduced from the conversations with participants that a deep-rooted mindfulness of a coordinated effort to create consistent messages in stakeholders' minds is largely absent. Although no participant was unwilling, this appears to be a case of different perceptions of what unity of effort and strategic consistency entail and their roles in communicating the CPO's unique value. Most participants agreed that a high level of service delivery by social workers is the most important aspect to reflect the CPO's value to the community and position the CPO brand. Should that be seen as inadequate, all other messages, including those via digital media, are perceived as futile. Therefore, unity of effort to ensure strategic consistency for the CPO should be considered in a broader organisational light rather than as a prerequisite for the effective functioning of the communication function.

Stakeholder responsiveness

The interactive and real-time nature of social media requires expert monitoring, especially in the context of a CPO. However, communication persons expressed difficulty in meeting diverse stakeholders' unrealistic expectations for tailor-made messages because of the real-time nature of digital media. They felt alienated and believed that social workers should be the ones to assist them on social media, 'as they are the experts in their field' (Participant 11, National communication officer, full-time).

Communication persons were only able to monitor Facebook after work hours, and feedback was problematic as they needed to consult with social workers before responding, making it difficult to answer immediately online. The CPO then appears to be unresponsive.

When asked about a shift to new ways of personalised communication, managers realised and agreed that it could create more opportunities to involve stakeholders, such as live-stream sessions, blogs, YouTube videos and WhatsApp groups. Websites and social networking sites, such as Facebook, are already being used by most CPOs to engage with stakeholders. However, although Facebook could be an advantage in finding safety parents, the managers of CPOs were hesitant to engage with individual stakeholders. These views surfaced mainly in relation to a lack of control, lack of expertise and fear that children may be identified. Although social media blogs can benefit a CPO, the majority of social workers felt that they could also have adverse effects, with the public using them to distort facts and present the CPO negatively.

While most of the communication participants demonstrated an awareness of the opportunities of new interactive media and technologies and made a serious attempt to incorporate these during stakeholder interactions, the focus was mainly on raising awareness and funds. For example, SMS messages, electronic newsletters, personalised email addresses, online shopping sites and webpages with donate buttons.

Most communication participants expressed challenges in implementing new communication methods because of organisational constraints. They cited a lack of skills, time and resources, particularly for managing newer social networking sites like Instagram. Consequently, many organisations have outsourced website and social media management to external agencies for professional support as ‘we don’t want to look like welfare’ (Participant 4, regional communication officer, full-time). While prioritising professionalism, there is a trade-off with costs associated with personalised and professional-looking content. Additionally, frustration was voiced by communication participants regarding older generation managers’ reluctance to embrace interactive media and new technology, with concerns about their lack of computer literacy hindering technological advancements within the organisation:

> ‘[*Management*] don’t really have the ability; they are not computer literate and many of our staff have already turned 50 and plus, so it becomes very difficult when it comes to renewal in technology.’ (Participant 11, national communication officer, full-time)

Feedback was a contentious issue, and most participants were only willing to provide assurance to stakeholders that their organisations were financially accountable. The majority of participants were unsure about the roles and responsibilities of who should communicate what to whom and how to redirect questioners or online complainants to a more appropriate spokesperson. Even if someone was chosen as a spokesperson, like the communication person, a manager, or a social worker, they usually were not trained for the role and felt like interviews were like interrogations. The communication practitioner must counter these perceptions, as inaccurate portrayals can harm the CPO's public image and sustainability. However, answering negative online complaints is challenging as legal experts have warned that 'confidentiality is too important to take the chance'.

Most participants highly valued trust, connecting it to core values like integrity. However, they primarily emphasised transparency in financial matters and service quality to build trust rather than directly linking it to responsiveness with regard to communication and digital media. The findings highlight the challenges CPOs face in maintaining public trust and credibility in the face of sensitive and confidential cases, as well as the potentially devastating impact of misinformation and negative publicity on the organisations, their staff and the people they serve.

The findings validated social workers' concerns about real-time communication on digital platforms because of the risks and challenges of engaging with stakeholders. Due to the difficulty of balancing legal and ethical considerations, the lack of preparedness to manage and respond to feedback on social media platforms was evident.

Online advocacy

With regard to online employee advocacy, social workers were hesitant and apprehensive to use their own personal networking sites to post on behalf of the organisation. The majority indicated that they were only willing to share neutral aspects such as fundraising events or quotes with friends and families on their own sites. They were cautious about sharing information via digital media and believed that communication should be done by the communication person:

> 'Who must handle online queries, negative comments and complaints on Facebook; not me, I block clients as they stalk me on FB and marketing is the work of the fundraiser/marketing person. My job is to protect children, and we are not trained in communication.' (Participant A, focus group with social workers in the field, full-time)

On the other hand, some communication persons, members of management and advisory boards were willing to use their personal social media platforms to advocate for the CPO. However, it should be noted that these participants were generally tech-savvy and only shared 'safe' information, such as fundraising events. It was noticeable that participants who used their own social media platforms in their private capacity as well as their organisational pages all remarked that it took a toll on them in terms of weariness and time. They performed this advocacy in the evenings and on weekends during their personal time. While such advocacy formed part of the majority of a communication person's responsibilities, other employees used their personal platforms more on an ad hoc basis to ask for support from friends, church groups and family members.

While managers and social workers expressed their support for the communication function, they did not fully understand the strategic value of communication and the role that digital media can play. During the focus group discussion with social workers in management positions, they dreaded disruption and agreed that 'you have to be very careful; we cannot just let anyone loose on our social media' (Participant B in focus group with provincial managers: social services, full-time). Similarly, during the interviews with the legal experts, the participants expressed the same concerns as those of social workers, specifically when social workers post in their own personal capacity about children on social media. Legal experts, as well as the communication practitioner of the Children's Institute, emphasised the importance of media and legal policies that should be in place, especially the correct interpretation of the legal aspects. In contrast, during the interview with the other media expert, a senior journalist, she conveyed a more positive attitude and felt that despite possible dangers, there were also opportunities. These opportunities include value-added positive media exposure, especially with regard to abused and neglected children who were helped, and to 'make it real' for readers. She emphasised that journalists are well-versed in the requirements to protect children's identity, and when articles are portrayed correctly, they can also counteract the mostly negative media portrayal of welfare.

Although participants realised the advantages linked to online employee advocacy, it was evident that those who were more natural social media users were more prone to share information. Findings also confirmed that all online activities must be accompanied by thorough training, especially regarding technology and the legal restrictions on sensitive information of children.

Beneficiary portrayal using emotional appeal

The majority of participants felt constrained in using emotional appeal or beneficiary portrayal due to the inability to communicate case-specific details that could resonate with donors. This resistance was mainly from social workers and legal experts because of the fear of exposing children during any interaction, especially on digital media. A social worker's question during a focus group discussion ('do you want me to take a picture of a crying child as they are removed from their home?')

was met with agreement from all other participants. Social workers, legal experts, communication practitioners and managers articulated annoyance with individual donors and companies who ‘want to receive stars on their foreheads’ (Participant 4, Regional communication officer, full-time) and ‘want to take photos and share children’s smiling faces to showcase so-called success stories’ (Participant 21, external legal expert, full-time) on their social media platforms such as Facebook. They felt that this was not an appropriate way to handle such sensitive information and could potentially compromise confidentiality or even exploit the children’s experiences for publicity purposes. Some of these benefactors become exasperated and subsequently retract their contributions because of their failure to receive the desired level of online publicity. Communication persons expressed frustration that promoting the positive impact of the CPO can lead to increased demand for services rather than donations.

Participants were particularly cautious about using images and disclosing information about children helped by the organisation due to confidentiality concerns. This caution limits the sharing of hopeful stories and restricts the implementation of interactive, personalised communication, which is a key component of the SIC framework.

Sharing of information and expertise

Communication practitioners recognised the potential of expanding digital networks with other stakeholders to integrate a wider knowledge base, including the communication function. However, they emphasised the importance of social workers sharing their expertise and experiences to provide them with stories, as they are the specialists in their field.

Social workers were well aware of interactive media and new technologies and agreed that their organisations should have an online presence to increase awareness and support. WhatsApp is used to communicate; however, they conveyed their reluctance to extend such interaction to a broader range of individuals and were uncomfortable about online sharing of any identifying content about the children with whom they work.

Provincial managers of social services emphasised that sharing of information and expertise should take place on national level. As a result, it will be to the advantage of the entire sector, ‘because everyone is struggling’ (Participant 9, National manager: social services, full-time). Sharing of information also links closely to advocacy, as managers highlighted the importance of a bigger advocacy role as part of raising awareness about the work that they do and sharing their expertise in CP issues with the public, the media and the government. As was aptly put by the president of one of the biggest child welfare organisations in South Africa: ‘We can no longer afford every organisation to sit on its own nest' (Participant 14, national manager, part-time).

Media experts have expressed that the CPOs' unwillingness to provide information and share their expertise is hindering joint efforts to report responsibly on CPO issues, both offline and online. Additionally, varying interpretations of confidentiality regulations by different parties, such as presiding officers, legal representatives, social workers, parents, witnesses and management representatives further complicate matters (see O'Hara & Pockett 2011, p. 32).

Networking and collaboration

While media experts felt that 'we must collaborate and work together' (Participant 22, external media expert, full-time), managers were less enthusiastic. Managers were cautious about other employees engaging with representatives of the media, including the person responsible for the communication function, and underlined the importance of following procedures. However, during focus group discussions, social workers agreed that networking using digital media can also be positive when they need urgent assistance for children who have been removed from their homes: 'We use WA and other new technology instead of 20 phone calls for milk and nappies' (Participant 1, Regional manager: Social Services, full-time).

Responsible reporting

Most social workers, communication practitioners, managers, and legal experts hold the view that the media often presents a negative image of the CPO and that they are not adequately equipped to counteract this. It was evident that social workers have a general lack of trust in the media, which makes them hesitant to engage with them, particularly through digital channels, as most news networks are online nowadays:

> 'The media portray us as s***t and just tell the stories when we mess up. They portray our social workers as the "tannie" [*auntie*] that brings the food, but we are trained professionals. Yet we are always the bad ones/scapegoat in the media; journalists want juicy and sensational stories and do not do their homework for the facts.' (Participant 6, manager, also voluntarily responsible for the communication function, part-time)

The negativity and distrust in relation to the media can be attributed to the fact that social workers perceived that journalists want factual, sensational information that will give the report or article impact. The ethical code and the restrictions stipulated by the *Children's Act*, to which social workers and legal entities have committed themselves, do not allow this.

Another key point to be noted is that the influence of media coverage is mostly seen as reinforcing a negative perception of CP and contributing to the unrealistic expectations of the broader public. As traditional media is replaced by interactive digital media platforms, unsubstantiated information can spread quickly and uncontrollably, damaging the image of the CPO. The findings emphasised that effectively managing an organisation's digital presence and responding to journalists in a timely and appropriate manner is easier said than done in practice.

Another factor that leads to negativity towards the media is the fact that journalists request real-life examples, which the CPO cannot provide. Employees and legal experts are hesitant to refer to so-called success stories, as CP is a complicated field, and they cannot guarantee successful outcomes in complex child abuse cases.

Discussion and recommendations

The potential role of digital media in the CP sector is a complex and multifaceted issue, and there are no simple answers to address its challenges. On the one hand, digital media provides many benefits, such as increased access to information and improved communication among professionals working in CP. On the other hand, there are still challenges to ensure effective CP measures in the digital world, including unverified allegations and the difficulty of monitoring and regulating online activity, including inappropriate content. The findings show diverging opinions on online platforms for CPOs, with practitioners recognising their significance but feeling burdened, legal experts viewing it as risky, and media representatives advocating for its potential, all while emphasising the importance of communication policies, training, confidentiality and addressing limitations.

Ongoing communication training

The CPO management team should take proactive steps towards developing a media policy and investing in ongoing media training for all employees. Collaboration with communication departments at higher education institutions or hiring external communication consultants can also provide valuable support for media relations.

It is important to view media representatives as potential allies in raising awareness of CP issues rather than as adversaries. By integrating media relations as part of their core work and becoming increasingly involved in advocacy matters, the CPO staff can promote a better understanding of their work in the public domain. This will help to create a culture of media awareness and collaboration, as well as provide a cost-effective means of raising awareness of CP issues and advocating on behalf of the CPO.

Networking and collaboration

CPOs should prioritise networking and closer collaboration with each other to improve the use of digital media. This can be achieved through organised discussions that focus on ways in which to effectively use digital media within legal boundaries. Collaboration with legal and media experts is also important to ensure that ethical standards are maintained. Furthermore, CPOs should establish positive relationships with journalists and editors across various online news networking sites to facilitate constructive discussions around the portrayal of children. This can be achieved by organising joint training sessions in partnership with institutions such as the Children’s Institute at the University of Cape Town.

Sharing expertise

A key recommendation is to encourage the sharing of expertise between various fields involved in CP, including management teams, volunteers, media and legal experts and journalists. It is also important to have open discussions on CP issues while ensuring the anonymity of children under statutory order. New policies must be developed to protect the identity of children, especially in cases where they are over 21, and their consent should be sought before they are identified. However, exceptions may exist where the individual decides to reveal their own identity on digital media. It is recommended that policies be reviewed and updated to ensure compliance with legal and ethical standards while also allowing for effective collaboration and communication between all parties involved in CP efforts.

Online advocacy

The recommendation is to include online advocacy and networking for all persons involved in the organisation, not only employees. This requires a diverse communication team, a well-defined, integrated communication strategy, a clear social media policy, ongoing training, and advice from media and legal experts. It is important for all functions, including management and social workers, to realise that alternative ways of communication must be explored, and fear of exposing children during online advocacy can be addressed by ongoing in-service training in new technology and utilising the technical expertise of external stakeholders.

Responsible reporting

It is crucial to address the problem of negative publicity on online news networks, which has been fuelled by a lack of understanding among journalists about the legal and ethical restrictions by which CPOs are bound. It is important that journalists do not make claims that suggest guilt on the part of these organisations. Many of these news networks have criticised these organisations for refusing to comment but have failed to provide the full context of the legal restrictions that prohibit such comments. It is important to recognise that because of the nature of their work, CPOs are both ethically and legally bound to maintain confidentiality regarding all cases.

The impact of social media on spreading misinformation is becoming more and more apparent, particularly in relation to real-world consequences. Although organisations like the CPO aim to establish trust and provide accurate information on a case, they are constrained by legal and ethical restrictions. Therefore, the media should avoid sensationalising stories and reporting without factual basis on digital media, which can erode public trust in the CPO.

It is vital that members of the media take on the responsibility of reporting on cases of CP in a responsible and ethical manner. It is essential that they have a thorough understanding of media policies and the legal and ethical stipulations regarding confidentiality and the best interest of the child. It is concerning that journalists sometimes appear to be subjective in their reporting, particularly when CPOs decline to comment on cases. Journalists must understand that CPOs are prohibited by the *Children's Act* from engaging in debates on digital media. Furthermore, it is crucial that they do not imply that CPOs have something to hide when they decline to comment.

To ensure that journalists are well-versed in the applicable laws and regulations, legal experts should be invited to provide training and give suggestions on how to make the law applicable to digital media while staying within legal and ethical boundaries. While it is important to hold CPOs accountable, this must be done in a way that is fair and respectful to all parties involved. It is also essential that the public and members of the media understand the potential harm caused by unverified allegations and misinformation. Such claims can have a devastating impact on the lives of the people involved in these cases. It is therefore crucial that the media exercises due diligence in reporting on these sensitive issues to avoid causing further harm to vulnerable individuals and their families.

Maintaining unity of effort in communication is crucial for CPOs. They can achieve this by organising combined training sessions with legal and media experts, ensuring all stakeholders grasp the legal and ethical boundaries of digital media communication and adapt to innovative methods.

Conclusion

Incorporating digital media is essential for the CP sector to embrace technology and achieve its strategic intent of protecting vulnerable children. In today's technological era, digital media has become a critical component of the SIC framework. However, it is important to note that social media can have both positive and negative effects on an organisation's reputation and relationship with stakeholders.

On the one hand, digital media provides a platform for CPOs to communicate with stakeholders and promote transparency, accountability and awareness of their work. It can also facilitate information sharing and collaboration among organisations. On the other hand, digital media can be a double-edged sword, exposing CPOs to potential risks such as unverified allegations, negative feedback and the difficulty of monitoring and responding to online reports.

Therefore, CPOs need to be mindful of the potential risks associated with digital media and develop effective communication strategies to mitigate them. They must also prioritise the best interest of the child in all aspects of digital communication and ensure that ethical and legal responsibilities are upheld. Ultimately, incorporating digital media can enhance the CP sector's work, but it requires careful consideration and management of the potential risks involved.

Limitations and future research

Firstly, because only four national CPOs with their selected regional and branch-level CPOs took part in the study, the results could not be generalised to all CPOs in South Africa. However, the study's aim was not to generalise the results but rather to obtain an in-depth understanding of the specific context. Secondly, although input from practice was gathered to compile this framework and make recommendations to improve the strained relationships with the media, it was only explored and has not yet been implemented in practice.

Addendum A

Table A1: Interview schedule for semi-structured interviews with managers and communication practitioners of child protection organisations.

Questions	Constructs
Demographic information	
a. Name of organisation.	-
b. What is the core purpose of your organisation?	
c. What are your key performance areas?	
d. How long have you been in your current post?	
e. Do you work at a national office, regional office, head office or branch?	
1. Child Welfare context	
a. Describe a typical day in the life of a manager/communication practitioner at a child protection organisation.	• Vision and mission as roadmap
b. Explain what your work means to you and how you feel about working at a child protection organisation.	• Unity of effort to achieve strategic consistency
c. Indicate which part of your work is your biggest joy/satisfaction and your biggest challenge?	
2. Environmental integration	
a. Describe the environment in which your organisation functions. (*Probe: Such as social, political, legal or economic.*)	Adaptability, legal environment, Media influence and PEST analysis
b. How do you attempt to address the influence this environment has on your organisation in carrying out your mission?	
3. Organisational integration	
Transition: Strategic intent as a response to these environmental difficulties:	Vision and mission as roadmap, adaptability, aligned communication strategy and top management support of communication functions
a. How is the organisational strategy developed? (*Probe: Based on the vision, mission, values and long-term goals of your organisation.*)	
b. Who is responsible for compiling this strategy?	
c. How is the communication strategy developed? Or, describe your communication strategy.	
d. Who is involved in compiling this communication strategy?	
e. How would you describe the unique values of your organisation?	
f. In your view, what role do you think communication can play in the long-term sustainability of the organisation – with a view to aligning the unique values of your child protection organisation with your strategies to add to sustainability in the long-term?	
Transition: Let us take a closer look at the communication function.	

Table A1 continues on the next page→

TABLE A1 (cont.): Interview schedule for semi-structured interviews with managers and communication practitioners of child protection organisations.

Questions	Constructs
Demographic information	
4. The communication function within the child welfare organisation	
a. Explain how the communication function works within your organisation. (*Probe: Explain by means of an organogram how the communication function is organised. Tell me something about the flow of communication between the same as well as different levels within the organisation, such as finance, social work and communication.*)	Horizontal integration, vertical integration, sharing knowledge and information, coordination of public relations and marketing functions as part of top management, top management support of the communication function, budget allocation, knowledge and understanding of core competencies, unity of effort to achieve strategic consistency, cross-functional planning and zero-based communication planning
b. Explain how the resources for the communication function compare with other departments (*please explain your answer relative to staff size, budget, etc.*).	
c. How does your organisation view the communication function? (*Probe for communication practitioner: What are the expectations the organisation has of your function?*)	
d. In your view; describe how management can drive and support the communication function as one of the major prioritised activities in your organisation.	
e. To what extent do you think communication should be the entire organisation's responsibility, including management and all co-workers? Or, to what extent do you consider yourself an active part of the communication function?	
f. Describe what skills you think are necessary for the person responsible for the communication function to lead communication within the organisation?	
g. Explain how you raise funds or what your fundraising strategy is. (*Probe: To what extent does fundraising form part of your communication strategy?*)	
5. Stakeholder integration	
a. What type of information do you, as the manager/communication practitioner, typically communicate to support the communication function, and how do you communicate?	Stakeholder identification, listening to understand views, feedback, mutually beneficial stakeholder relationships, trust, customisation, (appropriate, timed messages and delivery systems), research and databases, interactive media, beneficiary portrayal of children using emotional appeal storytelling, online employee advocacy, 360-degree brand ideas and monitoring and evaluation
b. Indicate who your main stakeholders are and what the best way would be to learn more about their interests and get them involved in and attracted to the work your organisation is doing?	
c. If you had a magic wand, what would be your ideal way of telling your stories of children saved from abuse and neglect?	
d. In your view, how are child welfare and child protection generally portrayed in the media?	
e. How do you feel about taking the child welfare/child protection brand online to tell your stories and give a 'face' to these children? (*Probe: Do you perceive any grey areas?*)	
f. To what extent do other staff members such as social workers contribute to the communication function?	
g. Illustrate how you would evaluate your communication/engagement with stakeholders and how you determine whether your communication was successful.	

Table A1 continues on the next page→

TABLE A1 (cont.): Interview schedule for semi-structured interviews with managers and communication practitioners of child protection organisations.

Questions	Constructs
Demographic information	
h. What are your thoughts: would you be willing to appoint or be part of a social media team consisting of, for example, a social worker, an administrative person, the communication person and yourself? Can it work? i. How do you see your organisation's brand? j. In your view, how do you perceive the following statement: *Every staff member should live the brand*? **General final question** Thank you for all your valuable information. Is there anything else you would like to add before we conclude this interview? Do you have any other thoughts about these issues?	

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In a modern and fast-evolving technological world, precarity has become more notable. Digital transformation has ushered in an era of ‘datafication’, profoundly impacting societies and individuals in such a way that there are emerging complexities and potential vulnerabilities in our interactions with technology. Thus, it is crucial that the Humanities subjects focus on human beings, their culture and values.

This book focuses on the challenges and opportunities experienced in the Digital Humanities. The main thesis of this book is on Digital Humanities in precarious times, while also reporting on topics and research methods in a variety of Humanities subject fields. Digital Humanities is a dynamic multidisciplinary, interdisciplinary and transdisciplinary field that encompasses a wide array of disciplines, methodologies and approaches. It represents a fusion of computational methods with humanistic inquiry, leveraging technology to explore and analyse various facets of human culture, society and history.

At its core, this field’s nature allows scholars from diverse backgrounds – including literature, history, linguistics, cultural studies and more – to collaborate and engage in innovative research projects that transcend traditional disciplinary boundaries. All the chapters in this book represent a scholarly discourse and provide original research, they are based on different methodologies ranging from an interdisciplinary approach, a philosophical desk study, case studies, qualitative studies and a semi-structured survey.

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