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**UNDERSTANDING 'THE ICE' THROUGH THE
HUMANITIES, ARTS AND SOCIAL SCIENCES**



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Ice on Stage: Antarctica as Character, Theme, and Symbol in Theater

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How many places on Earth remain where there is a nearly empty stage? Is there any other place where that stage is solely inhospitable ice? Antarctica serves alternately, and often concurrently, as character, theme, and symbol, in dramatic pieces about Antarctica. As a genre, theater itself is the least productive and has the fewest pieces, in terms of literary texts set in or pertaining to Antarctica, in comparison to poetry and prose. This paper examines why: among reasons, the extremely limited performance opportunities in Antarctica itself; the exponentially growing interest in film over theater; and simply, fewer playwrights are interested in Antarctica. But, why should the theater and drama of Antarctica be of greater interest and increasing importance? Theater is the venue in which the spectators feel more involved and connected to the action; historically, the theory of the suspension of disbelief and the actor-spectator immediate communication, which is simply unavailable in poetry, prose, and film, gives the theater genre its unique ability to incite the audience to action, which, in the case of Antarctica, is becoming more critical. Several dramatic texts will be examined, including Tally's "Terra Nova"; Moore's "Passion for the Antarctic: A Short Play"; Brenton's "Scott Of The Antarctic: Or, What God Didn't See"; Adebayo's "Moj of the Antarctic"; and Young's "Inexpressible Island"; for their use of Antarctica as character, theme, and symbol. These theater pieces have the potential to reach wider audiences, with the hope of growing increased awareness of, concern about, and passion for Antarctica.

Unlocking the (News) Secrets of the Icy Continent: Journalistic representations of Antarctica in Australian News Media

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For most people, Antarctica is a mysterious frozen continent: home to heroic tales of daring adventure; a place dedicated to science and collaboration; and more recently, a symbol of fears about global warming. But who decides the terms of reference for the publics' understanding of the icy continent? The role of news media has been largely overlooked in Antarctic scholarship, which seeks to understand public engagement with the region. This is a significant gap in research, given the crucial role the news plays in shaping public opinion and its use as a tool by the 'power elite' to legitimise their policy decisions. In the setting of Antarctica and the Southern Ocean, the Australian news media's role in framing Australia's presence on the continent needs researching, as is the role these frames play in public debate and the subsequent development of policy impacting the region. Using the Australian news media as a case study, data collected from online news media outlets over a recent 12-month period will be analysed to identify prominent frames in news discourse about Antarctica. This presentation argues that exploring journalistic representations of Antarctica provides valuable insight into contemporary understanding of the icy continent, and helps construct ideas of power, control and ownership in Antarctica.

Antarctica in contemporary visual art: more than a place of ice and snow

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Stephen Pyne wrote convincingly that "Ice is the beginning of Antarctica and ice is its end". This statement, first published in Pyne's influential work 'The Ice' (1986) and quoted 4 years later in the opening contextual pages of the catalogue for Neelon Crawford's 'Antarctica' exhibition, reflects commonly held imaginings and images of the continent. Yet, there are many more dimensions to this place which artists enable us to access.

Based on desk research and interviews with Antarctic researchers, artists, cultural professionals and the public as part of a study exploring the value of visual artists working in Antarctica, this paper discusses the diversity of concepts which have inspired artists' inquiries. Concepts include spheres of life on earth; interconnection and interdependence; and questions of geopolitical and humanitarian significance. Taking this broader perspective of artists' Antarctic inquiry creates space for deeper engagement and critical examination of the world in which we live.

Visual artists' presence on the ice: a worrying picture?

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Visual artists working in Antarctica have informed and influenced human understandings and engagements with the continent since the earliest recorded expeditions, almost 250 years ago. Whilst white, Western men dominated the creation of Antarctic visual art for over 200 years until the mid 1980s, the 21st century heralded important advances. The cultural diversity of artists and the number of opportunities open to them increased dramatically. This diversified representation in the Antarctic visual arts canon and expanded the space for “other” voices within critical engagement with the ice. However, the closure of some programmes and more restrictive eligibility criteria for applications to those that remain has resulted in a severe decline in both numbers and cultural diversity.

This paper presents findings from an internationally focused study exploring the value of contemporary visual artists working in Antarctica. Analysis of 98 surveys, and 56 interviews with senior representatives of Antarctic organisations, Antarctic scientists and researchers, artists, cultural professionals, and the public reveals a consensus that artists' presence in Antarctica has positive value. Moreover, perceptions and descriptions of this value are wide-ranging and multidimensional with social, cultural, scientific, environmental and political significance. Whilst criticisms of artists' presence offer a counterbalance for consideration, their presence is frequently described as an essential and fundamentally important dimension of intellectual critical enquiry on the continent. These findings, when considered in conjunction with the decline in numbers and cultural diversity, support the conclusion that internationally more opportunities for artists need to be created and supported with long-term organisational commitment.

Under the Ice: Literary Encounters with the Antarctic from Beneath

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Antarctica, The Ice, is vast, uniform, antithetical to most life. But this lifeless frozen crust belies a busy underneath: the sea plants which form hanging gardens on the underside of sea ice, the krill they feed, and the bustling—if seasonal—marine biological community the krill in turn support. The production of bottom water, retraction of grounding lines and operation of carbon sequestering are all critical Antarctic-submarine processes in a time of rising global temperatures. While the Arctic has a long history of submarine exploration, the subsurface Antarctic is less well-known. Against Cook's dismissive disappointment on glimpsing the ice cliffs for the first time, we might place the vivid sub-ice journeying of Jules Verne's explorers: bleak historical surface versus lively fictional depths.

This paper will explore fictional descriptions and visual representations of the Antarctic beneath the ice and water line, developing a perspective-from-below linked to the wider imagining of a southern submarine. It reads, for instance, South African science fiction author Lauren Beukes's short story, 'Her Seal Skin Coat', which develops interspecies collaborative exploration following seal scientist research, alongside Mohale Mashigo's 'Floating Rugs' which links polar whale migrations to the southern African coastline and conjoined postcolonial-ecological histories. Taking Christina Sharpe, Joshua Bennett and Fred Moten's work on blackness and the undersea further south and towards the ice, and in so doing exploring imaginative and political links between the unpeopled regions of the Antarctic and the deep ocean.

The Empirical Sublime: Antarctic Ice, Time and the Poetry of Elizabeth Bradfield and Jean McNeil

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Antarctic ice is a materialisation of the movement of time on a sublime scale; as substance and symbol, it functions as a paradigm study for the impacts of climate change on the environment. In this paper, I would like to suggest that the Antarctic experience – transformative, paradoxical, increasingly bound up with empirical observations of the material world – requires an expansion of ideas about what kind of language is suitable to evoke the sublime, especially in the age of the Anthropocene. The sublime has a long history of association with writing about Antarctica, from the time when James Cook reached for the language associated with it to describe the qualities of the environment he was travelling through, to more recent writing about the continent which acknowledges its importance as an aesthetic category with evolving cultural, literary and environmental significance. Pursuing ideas of ice, the sublime and time, this paper will study representations of ice in the poetry of Jean McNeil and Elizabeth Bradfield, demonstrating that the concept of Antarctic ice brings together earlier traditions of the sublime in literature and landscape, with ideas about the sublime as it is implicated in climate change. Their poetry gives expression to an empirical sublime, full of measure and number, rooted in a sensory and intellectual interrogation of the material world, which, with its de-centring of a single human gaze, provides orientation (without grand gestures and dramatic sound effects) from within the vast, potentially overwhelming icescape in both its material and symbolic forms.

Thinking from within and between: 'The Iceberg Project' and the creative-critical approach.

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Antarctica has become a paradigm study for the effects of human activity on the climate. Its ice acts as a living archive of earth's climate history, and data collected as part of on-going scientific investigations measures current, and models future, changes. 'The Iceberg Project' offers poetry as an alternative method of interrogating some of that data. The poems present a variety of ways of seeing - remote imaging, microscopic scrutiny, poetic interpretation - and the sequence collapses both temporal and spatial scales in a poetic observatory located in an imagined Antarctica. Key to the sequence is a shaman, the animation of waste products, discarded plastic and creatures destroyed by a warming climate, gathered together by the reader through the poems which track a real iceberg, A68, from snowflake to calving, and a speculative one, towed by two tugboats, on its way to the UAE to provide water. This two-part oral presentation will involve a critical presentation followed by a short reading, making a case for the particular strengths of poetry to enable thinking from within a problem, moving between, and combining, different disciplines (poems include haibun on krill and diatoms). The complex positionality of the lyric voice (echoing the complex temporality of ice) enables "the conquering gaze" to be set aside, making the lyric, especially in sequence, an ideal form from within which to develop the kind of critical thinking which allows for a renewed understanding of the human position within the Anthropocene.

Towards decolonial ways of thinking Antarctic Social Sciences and Humanities?

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Stephen J. Pyne in his book “The Ice. A journey to Antarctica” points out that ice structures in Antarctica present different variations in their form, shapes and movements. Such variations also happen in the diversity of knowledge production on the White Continent. Despite Antarctic Humanities and Social Sciences have grown in publications records over the last years, it is worth to have a look at the way it has been shaped. This paper explores the literature on Antarctic Social Sciences and Humanities published in English, Spanish and Portuguese. In doing so, we collected data from papers published in journals indexed in Scopus, Scielo and Latindex in the period 2013-2019. The results highlight the tendencies in the knowledge production and concerning Antarctica, focus on the main questions and major topics of interests, the funding institutions, the author affiliations of the most cited papers, the scientific collaborations networks, the types of knowledge circulation between countries and regions, and the perceptions about the future of Antarctica. This paper aims to promote discussions on decolonial and geopolitical approaches in the production of knowledge on the Antarctic Social Sciences and Humanities.

Decolonizing Antarctica

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60 years after the General Assembly of the United Nations adopted the Declaration on the Granting of Independence to Colonial Countries and Peoples, the efforts made to decolonize occupied territories can be celebrated. Although 17 non-self-governing territories still remain, most of the former European colonies have gained independence. That decolonization is, as the Declaration asserts, an “irresistible and irreversible” process that has become part of the politically correct discourse. And yet, there is a whole continent where colonial claims are preserved “on ice”. In approaching the end of the Third Decade for the Eradication of Colonialism, Antarctica remains an enclave mostly run by the same colonial and wishing-to-be colonial powers that claimed whole wedges of it between 1908 and 1940, or reserved their rights to make a claim in the future under the auspices of the Antarctic Treaty (AT). While it has become a trope within the Antarctic humanities that the continent was and still is part and parcel of the colonial project, less has been said about what was morally wrong about it, and what decolonization of Antarctica would actually require. This presentation sketches an answer for these questions. First, it problematizes the appropriation by a few of vast expanses of “empty” space and suggests how this type of “white colonialism” risks being replicated in Antarctica and beyond. Second, it looks critically at specific elements of the AT, in particular Articles IV and VIII, and considers whether reforming them could be a first step towards actual Antarctic decolonization.

On the edge: Towards an environmental and cultural history of Antarctic sea ice

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In this paper Joy examines the human and more-than-human histories of the sea ice that surrounds the Antarctic continent and islands. It represents the early stages of an environmental and cultural history of Antarctic sea ice that will explore the entangled histories of human and marine life at the edges of the Antarctic continent, as well as scientific and cultural engagements with the seasonal freeze and thaw of the circumpolar waters in the Anthropocene. This paper builds on Joy's recent work on Southern Ocean and Antarctic histories (*Wild Sea: A History of the Southern Ocean*, NewSouth 2018, UCP 2019; 'Australians and Antarctica: Stories From the Far South', National Library of Australia, in press; and, with Andrea Gaynor, "'I've had dolphins...looking for abalone for me": oral history and the subjectivities of marine engagement', *Oral History Review*, 44(2), May 2017). She will also discuss key themes and questions that frame her research, and consider the implications for environmental history, and the humanities and social sciences more generally, of studying the changing nature of human relationships with the dynamic, ephemeral, three-dimensional world of sea ice.

'Instrumentalized Matter': Considering the use of Antarctic natural objects in Cheryl Leonard's musical works

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Cheryl Leonard is a San Francisco-based composer who over the past two decades has focused on investigating sounds, structures and objects from the natural world in her compositions, including in the set of ten pieces titled *Antarctica: Music from the Ice* (2009-14), inspired by her time spent as an artist with the US Antarctic Program. A key characteristic of Leonard's practice is that she cultivates natural objects such as water, ice, feathers, bones and shells – including from Antarctica – as bespoke musical instruments.

This paper considers how Leonard's creative practice problematizes and reframes the narrative agencies of Antarctic natural objects and processes. Using the theoretical lens of material ecocriticism, we will provide close readings of several of the musical works within Leonard's *Antarctica*, examining what new perspectives these works bring to contemporary understandings of human and more-than-human relationships with 'The Ice.'

Icy Interiors: Materiality, Spatiality, and Atmospheric

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Antarctica and its ice mass are commonly described through spatial metaphors such as stage, archive, repository, cabinet, library, laboratory, window, portal, threshold, screen, curtain, mirror and sink. These notions related to interior spaces and elements are projected onto Antarctica as ways of understanding, imagining and conveying the continent. When the complex material conditions of the ice are taken into account, however, all of these interior metaphors are put into question. While this session aims to extend contemporary understandings of 'The Ice' through humanities, arts and social sciences, this paper applies Antarctica's ice critically to rethink the concept of the interior. Drawing on research in scientific fields of glaciology and atmospheric as well as the humanities, this paper takes a spatial approach to understand human interaction with the continent's ice and local climatic conditions, arguing for a form of thinking with the continent. Understood through its material variability and spatial complexity, ice is turned into a mode of enquiry to explore notions of 'insideness'. The spatial and interior metaphors projected onto the continent suggest distinct boundaries and contained sedentary fixed spaces. In contrast, a focus on the ice leads to a reconceptualization of the interior as conventionally understood. The ice is an organising force of unbounded interior conditions in ongoing flux. Antarctica is entangled with notions of the interior, albeit dynamically.

How to convey Antarctic facts in South Africa with 11 official languages? Translate Antarctica to the previously disadvantaged in their home language.

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South Africa has been involved since the Heroic Age in Antarctica, but people of colour were only sent down to the three stations as part of the overwintering teams since 1989 (Marion Island) and 1998 (Antarctica). In the last decades, the demography of the teams has changed to represent all South Africans. The South African National Antarctic Programme has the responsibility to make Antarctica understandable for all South Africans in their home languages. Language forms the heart and soul of communication, traditions, social integration, and education. Language also plays a pivotal role in representing various cultures and traditions, as well as capturing the history of a community. The United Nations declared 2019 as the International Year of Indigenous Languages (IYIL2019). The South African Centre for Digital Language Resources (SADiLaR) is a national centre and at its core is the development of the South African languages, where they pool language resources and computational tools to ensure that our languages remain relevant in the digital age.

In collaboration with the Antarctic Legacy of South Africa (ALSA), SADiLaR translated general Antarctic Facts that were compiled in 2009, in all the official languages of South Africa. Workshops have been held by SADILAR and ALSA and translations of all 11 languages will be completed in 2020. This will be an ongoing project, as information will be revised and new information will be added. This presentation will highlight the process and the outcome of this collaboration during the IYIL2019.

History from the freezer: early scientific observations of Antarctic ice

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Curating a recent Antarctic photo exhibition showing the diversity of work in the Antarctic it became clear that a majority of viewers were highly responsive to landscape pictures showing ice in its large variety. Photos shown were 'the' favourite personal pictures of a diverse group of University researchers who had travelled to the Antarctic. The viewers' choice of more than 200 submitted ballot papers revealed that pictures of icebergs fascinated most.

At the same time, many questions were asked about the history of early Antarctic exploration, the motivation of scientists, how findings were made, and the legacy of these findings. Paintings, photos, and descriptions of ice are available from early explorers who studied the ice. Many of them were geologists such as Hartley Ferrar (Scott expedition 1901–1903). His accounts on ice observations show a great passion and diversity in observation techniques. Otto Nordenskjöld, leader of the Swedish Antarctic Expedition (1901–1903) shaped the name 'ice shelf' based on his observations. David Paige, artist at Byrd's expedition 1933–1935, caught the icy world in stunning paintings.

This paper shows the exploration of Antarctic ice from a historical angle and focuses on early explorers' findings and their legacy that is still motivation and the basis of current research of a changing polar world. It will appear that ice has still its fascination until today and that the mystery of the icy world has been attracting both scientists and the public alike.

On Blue Ice: Antarctic Meteorites and Deepening Planetary Time

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During the Antarctic field season of 1969, a group of Japanese glaciologists stumbled on a unique find—nine meteorite fragments, frozen and embedded in a patch of ancient blue ice. After geochemical analysis, the find was revealed to be even more surprising: rather than being pieces of one parent body, the meteorites were a collection of different rocks of varying terrestrial ages. An explanation lay within the ice: slowly spreading from the center of the continent, the Antarctic ice sheet was a “stranding surface” that collected, subsumed, and finally revealed meteorites over a vast timeframe. Since then, the Antarctic Search for Meteorites program (ANSMET) has scoured patches of blue ice for the rare celestial objects, collecting as many as 6000 unique fragments in one field season.

This paper takes up Antarctic meteorites as natural chronometers, and traces how the space rocks gave glaciologists and meteoriticists a unique temporal tool for understanding the shape and flow of the Antarctic ice sheet. It argues that by treating meteorites and ice as relational timekeepers, rendered legible through similar modes of geochemical analysis, geologists and astrophysicists repositioned blue ice as a scientific tool, one that could connect the deep time of Antarctic ice to the deeper time of the cosmos. In so doing, this paper repositions *The Ice*. While for Pyne, “Ice is the beginning of Antarctica, and ice is its end,” here ice is better understood as a complex and unique repository that connects Earth to the ends of the universe.

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