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ABSTRACTS SUBMITTED TO THE (CANCELLED) SCAR 2020 OSC IN HOBART

Fully immersive virtual reality experience of Sir Edmund Hillary's Antarctic hut

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Antarctic Heritage Trust partnered with Auckland University of Technology (AUT) to create a ground breaking virtual reality experience of Sir Edmund Hillary's Antarctic hut which was launched in early 2020. The virtual reality experience allows people to step inside Hillary's (TAE/IGY) Hut and to explore the first building at what is now New Zealand's Scott Base. Stories of Hillary's 23 man team and their mission to further science and exploration in the world's most extreme environment feature within the experience and through accompanying material. It is a fully interactive experience, which includes a guided tour through the hut; it celebrates New Zealand's first presence in Antarctica as part of the Trans- Antarctic Expedition and International Geophysical Year.

The authors used a combination of photogrammetry and lidar technology to map the interior and exterior of this historic hut and create this virtual reality walk-through. By delivering a highly affordable, accessible and immersive virtual reality experience, this research pioneered new science communication tools to improve public and media engagement with Antarctic heritage and climate issues. This presentation will share more about this exciting research and how being at the cutting edge of new technologies, can bring important heritage sites and their stories alive for the public.

Contemporary conservation theory and methods for the preservation of archaeological remains recovered in sealer's shelters on Livingston Island

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The proposal aims to present research on the conservation methodologies for the archaeological collection excavated in archaeological sites on Livingston Island (South Shetland Islands), dating from the 19th century and resulting from the activity of seal hunters in the region. The collection contains very fragile materials, preserved due to the cold climate and the specific environment context. The remains are fragments and objects characterized by the simplicity of the common worker classes of the period. They are originally dense and with few aesthetic details, made to be cheap and sturdy. The collection also contains artefacts made provisionally, in response to the immediate needs. However, the classical conservation methods have been focused on remains related to artistic and historical narratives, coming from intellectual and economic elites and based on principles such as the "aesthetic and historical originality". Only in the last three decades, from the new dialogues between Conservation and the Human Sciences, as well as the Anthropology, becomes possible for the contemporary conservation theory to consider the subjective social dimension existing in the decision of treatments and results. It also began to be possible to think of methods focused on the identity and cultural information existing in the Livingston Island archaeological sites.

The Geopolitical Deployment of Historic Sites and Monuments: Ulterior Agendas for Antarctic Heritage.

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All heritage, no matter where in the world it is found, is constructed by someone for a particular purpose – so who is heritage in Antarctica constructed by, and what is it for? Some historic remains on and around the frozen continent have been multilaterally and officially recognised as possessing historical significance. These sites and monuments, of which there are now almost 100, are recorded on the register for formal Antarctic heritage, that is, the List of Historic Sites and Monuments. This paper will consider three ways in which states might deploy Historic Sites and Monuments (HSMs) for geopolitical means: HSMs as a means to exercise de facto sovereignty; HSMs as a means to nation-build; and HSMs as a means to evade environmental obligations. There is no doubt that Antarctic states are genuinely invested in the preserving and conserving of Antarctic heritage, but by exposing their potential ulterior agendas it is possible to gain a deeper understanding of how the governance of Antarctic heritage has progressed, and where it might lead in the future. In an increasingly uncertain physical, as well as political, climate that stands to threaten the very existence of Antarctic heritage, it is imperative to remain critical of, and continually better, the decisions and processes that manage it.

Antarctic visual cultural heritage: are collections stagnating?

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Several national art collections include individual artists' work made in response to time spent in Antarctica, notably, a small number of museums and Antarctic organisations across the world house archives and collections devoted to Antarctic visual art. Archives and collections are important sites of knowledge for current and future generations; therefore, it is vital to understand whether organisations are actively acquiring artworks that reflect cultural and critical engagement with Antarctica. The management and development of these collections can vary considerably, with resources and organisational priorities affecting acquisition decisions.

This paper draws on desk-based research and 56 semi-structured interviews with cultural professionals, Antarctic researchers, senior Antarctic organisation representatives, and exhibition visitors collected during a project exploring the value of artists working in Antarctica. The research identifies that artworks are an important legacy and dimension of Antarctic cultural memory. Further, archives and collections have a substantial and internationally significant role in preserving and making available that legacy and cultural memory. The high potential for stagnation and lacunae in collections will be examined in relation to the management and acquisition challenges that organisations face. The research offers a step towards a comprehensive understanding of the location, content, and acquisition activity of Antarctic visual art archives and collections.

A system apart? Creating and managing cultural heritage in Antarctica

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This paper critically engages with the study of heritage management within the Antarctic Treaty System, examining the evolution of the relationship between the ATS, national and international heritage management systems, as well as tourism. We discuss three key issues: First, we consider the extent to which domestic heritage processes and understandings of natural and cultural heritage have been neglected, in research and international practice of Antarctic heritage. We ask how has this affected our understanding of the historical role of heritage in the ATS and the efficiency of heritage protection? Second, we take a closer look at some of the idiosyncrasies of official cultural heritage protection within the ATS as compared to other international heritage management frameworks. What are the consequences of heritage protection being subsumed under an environmental protection system? What conceptual and management tools that are available to cultural heritage managers in other political contexts are excluded in the process? We argue that in some aspects, these systems are not compatible. Third, we argue that tourism has historically played and continues to play an important role in driving changes in heritage management (for example through guidelines and plans). Cultural heritage is part of a larger assemblage of elements of tourism experiences in Antarctica, and likely to increase in importance. This integral tourism experience defies divisions like natural and cultural or tangible and intangible heritage and can thus push the ATS towards a bigger acceptance of the heritage vocabulary as used by ICOMOS and other international agencies.

Audiovisual management of the Antarctic Heritage

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We live in a visual age. Audiovisual narratives are part of our everyday life and tell us something about the world. Such narratives shape our understanding. This paper explores the audiovisual narratives of the UK Antarctic Heritage Trust, the NZ Antarctic Heritage Trust, and Mawson's Huts Foundation. In doing so, we examined their websites and posts on YouTube, Instagram, Facebook, and Twitter. The results highlight their main topics of interests and focus on their views about the environment changes in Antarctica, the challenges for the management of Antarctic Heritage, and the future of the Antarctic Treaty System. This presentation aims to evoke reflections and discussions about the role of audiovisual narratives in the management of the Antarctic heritage.

The probable future of Antarctic heritage and the emerging paradigm of triage and reconciliation to large scale loss as a result of climate change.

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Until recently most Antarctic monuments and sites have enjoyed the relatively stability of cold dry environments. These historic conditions which are associated with low humidity, stable permafrost and predictable sea-ice formations, have been providing relative immunity from the sorts of decay mechanisms that are more commonly encountered at temperate sites worldwide. Sometime around 1976 however, things began to change: that was the last year the earth was cooler than the 20th-century average. Since then polar temperatures have been rising at more than twice the rest of the planet, and this year we witnessed the highest temperatures ever recorded in Antarctica (Barr, 2011, Brazilian Antarctic Program, 2020; Bush et al., 2019; “NASA” 2019,).

Increased visitor impacts (a consequence of easier access), disturbance of the archaeological record via cryoturbation and biodeterioration of historic fabric, including molds, soft rot fungi and wood aggressive insects, are some of the predictable outcomes of global warming (Harmsen, 2017; Olynyk, 2014; Wolff 2013). If we want to better understand the changes taking place in Antarctica, we need only look north. In parts of the Arctic, artefacts are currently being released from their thawing landscapes faster than they can be documented or collected, while coastal erosion exacerbated by wave action, reduced sea-ice volumes and increased storm events is either threatening or destroying many other sites (Barr 2008, 2011; Goose et al. 2018; Harmsen 2017). This paper will explore the implications of climate changes for Antarctic heritage and what we can learn from the experiences of our northern colleagues.

Antarctic Can Conservation: Maintaining 'Spirit of Place' in the Expedition Bases of the Ross Sea Region

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For the last decade, the New Zealand based Antarctic Heritage Trust (NZAHT) has managed a programme of interventive conservation to the buildings and artefacts comprising the four Heroic-Era expedition bases of Scott, Shackleton and Borchgrevink. More than 70 heritage professionals have worked in Antarctica on the project, and more than 20000 artefacts have been assessed and treated. With so much activity and intervention at the site, one of the greatest challenges aside from the remote location and difficult weather, has been how to maintain the integrity, and tremendous sense of place which each of these sites intrinsically holds. This poster introduces the challenges of maintaining 'Spirit of Place' at the sites, focussing on the canned food collection as a particular example.

Keywords: Cans; Canned; Antarctica; Heritage; Trust; Conservation; Food; Heroic-Era.

References:

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Game Engines, Photogrammetry and Deep Learning for Antarctic Heritage Visualization

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Antarctic Heritage presents unrivalled opportunities for contemporary computational visualization techniques. These range from compelling immersive heritage experiences for the general public, through to the more exacting development of accurate digital archives for scholarly use.

Game engines have a wide variety of heritage applications as development environments for computational humanities, digital museology and GLAM-sector applications. Reconstruction of historic Antarctic sites using satellite and other geophysical data in concert with photogrammetric scene reconstruction enable the construction of physically accurate heritage site models. These can be displayed as immersive screen experiences (e.g. VR, Augmented Reality and Dome environments) and afford novel visual analytics approaches to Antarctic heritage data. Associated historical textual, map, photographic and film materials can be restored, animated, translated into 3D scenes and actors, and colourised using machine learning techniques ('Deep Learning') employed in the film, special effects and games industries.

Immersive interactive simulations that embed historic materials demonstrate new ways of interacting with museum collections and scientific archives, new digital methodologies of historical scholarship and effective ways of exposing fragile archival materials for general and specialist audiences.

Interactive post-cinematic narratives suggest novel opportunities for dramatising the experience of significant artefacts, bringing place, biography, history and science alive. Remote environments, both in space and time, become far more accessible and available to contemporary enquiry.

A demonstration model of the Mawson's Huts Historic Site will be presented, using a computer game engine.

Antarctic Legacy collaborates to celebrate South Africa's Polar heritage with 60th year anniversary of the Antarctic Treaty.

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The Antarctic legacy of South Africa (ALSA) collaborates with various institutions in South Africa to preserve our Polar Heritage. The 60th anniversary of the Antarctic Treaty was celebrated with a few activities. This presentation aims to give a short overview about these celebrations and to emphasise the fact that South Africa has a long standing history with Antarctica since the Heroic Age.

Iziko Museums established a new exhibition - Sentinels of the South. It examines the history, discoveries and current role of South Africa's involvement in the Antarctic region. It take visitors through the history of early Antarctic exploration, and South Africa's role in this and the role these islands play in helping us understand some of the global issues affecting everyday South Africans. South Africa's multidisciplinary Antarctic scientific endeavours, research facilities and flagship research vessel, the S.A. Agulhas II are showcased.

A Launch was held by South Africa as a Gateway country at the beginning of the Antarctic season. ALSA had an exhibition stall and the 360 footage of the South African National Antarctic Expedition (SANAE) IV was launched at this event

60 years ago the first South African National Antarctic Expedition (SANAE) left from Cape Town harbour on the 3rd of December 1959 bound for Antarctica. In commemoration of this first journey – Chris de Weerd, diesel mechanic of SANAE 1, and Mettie (wife) and Karen Hechter (daughter) of team leader Hannes La Grange – visited Cape Town harbour at East Pier on the 3rd of December 2019.

What will remain of the research vessel “Polarstern”? A Strategy of Archival Appraisal for the Documentation of a Workhorse in Antarctic Research.

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Since 1982, the German Research Vessel "Polarstern" was 36 times on expedition in Antarctic waters. So it can be considered as part of the Antarctic heritage. In view of its age, plans are currently being developed to replace the ship with a new one and to decommission it.

Even though the end of Polarstern's service has not yet been determined, from the point of view of the German archives and against the background of the widely scattered ship documentation, the identification of its important documents must already be considered today in order to be able to hand them down to posterity, after the Polarstern will have been decommissioned. Therefore, a strategy should be developed, with the help of which the responsible archives can identify important ship documents in a coordinated manner and by thus initiate a concerted archiving process.

To this end, an appraisal concept has to be formulated. It should contain a balance of existing Polarstern's documentation with regard to its document types, scope, storage location and gaps. In addition, the plan should include a documentation profile, with which the archives can appraise the existing ship's documents in their area of responsibility. Moreover, such a concept should comprise an agreement for an archival appraisal network, where - apart of the document profile - arrangements on membership, responsibilities and further steps in the archival process (archival description, retrieval, public presentation etc.), are recorded.

In the talk, the plan with its elements outlined above will be presented and discussed in detail.

A			
Avango, Dag	316		
B			
Bennett, Gregory	328	Bollard, Barbara	328
D			
De Alkmim Radicchi, Gerusa	848	Doshi, Ashray	328
E			
Eathorne, Francesca	328		
F			
Fachel de Medeiros, Rosângela	1237	Frame, Bob	316
G			
Gillman, Len	328		
H			
Hingley, Rebecca	783		
J			
Jackson, Adele	16	Jackson, Lee	328
L			
Liggett, Daniela	316	Lorenzo, Cristian	1237
Lindström, Kati	316		
M			
Macdonald, Gordon Heath	835	Meek, Lizzie	328
Markovic, Katarina	328	Morse, Peter	461
Meek, Elizabeth (Lizzie)	1341		
N			
Navarro Drazich, Diego	1237		
O			
Olivier, Maria	648		
R			
Reading, Anya	461	Roura, Ricardo	316
S			
Salewski, Christian	811	Stål, Tobias	461
V			
van der Watt, Lize- Marie	316		
W			
Waterman, Melinda	328		



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