

Workshop: Towards the Incorporation of the Humanities and Social Sciences into Large Polar Research Projects

Hobart, 7 July 2017 5:30pm

Facilitated by Dr Renuka Badhe

European Polar Board

*"Depths and Surfaces: Understanding the Antarctic Region
through the Humanities and Social Sciences"*

SCAR Humanities and Social Sciences Expert Group Conference

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Workshop Overview: Towards the Incorporation of the Humanities and Social Sciences into Large Polar Research Projects

Hobart, 7 July 2017-07-07 5:30pm

Facilitator: Dr Renuka Badhe

Panel Members:

- Dr Adrian Howkins – A historian in the Dry Valleys with the NSF
- Dr Daniela Liggett – HASSEG history and purpose
- Professor Akiho Shibata – A lawyer in Antarctica with JAPARE
- Dr Richard Vokes – An anthropologist in Antarctica with Antarctica NZ
- Ms Sachie Yasuda - Australian Antarctic Arts Fellowship programme manager

Format:

- 5:30-6:00: Five speakers to give short presentations, followed by panel discussion
- 6:00-6:10: Break and refreshments
- 6:10-6:50: Workshopping specific questions in five breakout groups, lead by one mentor each
- 6:50-7:00: Event wrap-up

56 attendees

Aim: To explore a series of questions about stakeholders and the role of humanities and social sciences (HASS) in Antarctic research, in order to collect responses from the Antarctic Humanities and Social Sciences community. The workshop mirrors the one held at ICASS IX in Umea, Sweden, in June 2017, but engages with the Antarctic, rather than Arctic, humanities and social sciences community.

Workshop responses will be used to feed back into polar research priorities within Europe, and to identify any gaps. A report will be created by EU-PolarNet, comparing Arctic and Antarctic results, which may also lead to a peer reviewed publication. Workshop attendees will be invited to join a contact list for consultation on future polar priorities.

Questions address during the workshop:

- Who are the humanities and social science stakeholders in Antarctic research?
- What role can HASS play in Antarctic research?
- What models are there for incorporating HASS research into larger projects?
- What support is needed to enable this to happen?
- What are the lessons learned from the addition of social sciences to previous projects, or research groups?
- What value will be added to projects by such inclusion?

- How do humanities and social science researchers think they should be involved in scientific proposals?
- How can consultation be done as a (meaningful) process throughout a project life span rather than e.g., a single pre-study consulting event (which might be understood by the stakeholder as token rather than sustainable inclusion of their views and needs)?

Short description:

In the last decades social sciences have substantially increased their voice and visibility in polar research, an area that has historically been dominated by the natural sciences, or Science, Technology, Engineering, Medicine and Mathematics (STEMM). Over the past two decades insights from social sciences have led to a better understanding of rapid societal changes, particularly in the context of physical processes such as climate change etc. Interdisciplinary (collaboration of social sciences, humanities and natural sciences) and trans-disciplinary research (collaboration with stakeholders) has gained in profile, and has commonly become a requirement in programs of national and international research funding agencies. It is recognised that science does not happen in a vacuum, but rather within a particular cultural context. The inclusion of Humanities and Social Science (HASS) in polar research projects – including in those initiated by natural sciences – can provide vital cultural and human context, and is an aspect of research that is ripe for development. Bringing a range of perspectives to a project at the design phase can be an enlightening exercise, and result in projects with a clear sense of both scientific goals and societal relevance. During the workshop, discussions shed light on the best approaches to achieve these.

Introducing the Workshop Panel

Professor Akiho Shibata:

Prof. Shibata began the Arctic Challenge for Sustainability (ArCS) project in 2015. The five-year long project aims to incorporate HASS throughout. It can be difficult to incorporate HASS into natural science-dominated projects, as experienced in the Arctic. Discussions on how to improve the process are usually too general or abstract to provide practical solutions, and agreement among researchers and research communities on best approaches is elusive. Prof. Shibata undertook a specific project, working with marine scientists, and asked how marine science could be better promoted using international law. He notes the need for long-term commitment from all sides, and believes that the primary requirement of inter- and trans-disciplinary research is trust between partners and disciplines, as well as understanding of how different disciplines are able to help each other.

Dr Daniela Liggett:

Dr Liggett is involved in a number of projects incorporating HASS elements in natural sciences research. It has at times been a struggle to embed HASS into large funding initiatives and programmes focused on the Antarctic, with funders initially seeing HASS playing a role in science communication and outreach. Following persistence and a great effort, funders and organisers now understand and appreciate the role of HASS researchers in Antarctic projects and programmes, beyond being translators and science communicators. The world is connected, and humans cannot be removed from the equation. HASS researchers must work closely with natural scientists in the field to ensure their work and its relevance is understood.

A good example of the incorporation of HASS in natural sciences projects is the World Meteorological Organization's (WMO) Year of Polar Prediction (YOPP). The project was initially designed to be entirely natural-science based. Following the suggestion that in order to best target the end user of the project's deliverables, it is necessary to understand how people make decisions in different situations, the project opened up for the incorporation of social sciences.

Dr Adrian Howkins:

Dr Howkins has many years' experience of interdisciplinary work in Antarctica. His own work focusses on the geopolitics of the Antarctic Peninsula. Dr Howkins now works with soil scientists in the McMurdo Dry Valleys, where the US National Science Foundation (NSF) now requires a HASS component to its Long Term Ecological Research (LTER) programmes if they are to be renewed. The NSF aims to fund long-term research in the region, to understand change there – there is enthusiasm for understanding the importance of human history in the Dry Valleys, and understanding the impact it has had. HASS is now a key component of LTER programmes.

In part thanks to efforts to include HASS in LTER programmes, historians and other HASS researchers are increasingly being acknowledged for their valuable ideas and contributions to natural science research in Antarctica. HASS is a key component of research proposal writing across the natural sciences, and true collaboration between HASS and natural sciences in Antarctica will continue to develop in the coming years.

Dr Richard Vokes:

Dr Vokes spent seven weeks undertaking anthropological fieldwork in Antarctica with Antarctica New Zealand during the 2016/17 season. He notes that a point has been reached in popular imagination where there is agreement that problems are caused by a combination of both human and natural factors; in other words, there has been a mainstreaming of the idea of the Anthropocene. Solutions to issues such as climate change, tourism, and environmental impacts must therefore incorporate both social and technical factors. In future, it is important to look towards focused questions of how we get interdisciplinary projects up and running in a successful manner.

Dr Vokes stresses it is important that social science does not simply get tagged on to existing projects as window dressing, or as an after thought. In order to reach best practice, social science should be integrated with other disciplines at the outset, and across all stages of project (design, implementation, conclusions).

The issue of funding landscapes is worth examining. Dr Vokes noting that although one could be negative and say social science does not fare well (due largely to fewer publications and collaborative networks), it is also possible to take a constructive spin. When talking to scientists in the field, it became clear that frustrations with facilitating successful interdisciplinary projects were issues also recognised by scientists. One reason for this is the siloing of disciplines (for instance, it is hard to find projects that cross chemistry and biochemistry). As techniques become more specialised and specific to disciplines, scientists also struggle with the same questions of how to talk across boundaries.

Talking with scientists on their own terms can help HASS researchers to understand their frustrations, and to better engage with colleagues from a wide range of disciplines. In terms of best practice in Antarctica, the Dry Valleys LTER offers a very good model, while examples outside Antarctica often centre around disaster management; the integration of social processes and technical solutions within this domain works better than in many other areas around the world.

Ms Sachie Yasuda:

Ms Yasuda has a background in the commercial arts space and not for profit sporting sector, and is now housed in corporate communications at the Australian Antarctic Division, and manages the Australian

Antarctic Arts Fellowship programme. The Antarctic Arts Fellowship Programme has a 30-year history with AAD. In previous years up to five fellows were sent to Antarctica each season, but now one fellowship is offered, due to competing resources. In the past the focus of the programme has been on traditional arts (visual arts etc.), but there has recently been a shift towards proposals that utilise new and developing technologies (VR, 3D printing etc.) and those utilising scientific research (live data visualisation). As the traditional view on art has changed, the AAD has been challenged to build new connections. Ms Yasuda highlights that the aim of the fellowship programme is not simply to send an artist to Antarctica, but to help them to build relationships beforehand, and to make sure that expeditioners don't see artists as a token extra person that no one wants to hang out with. A key part of her role is helping to see the fellowships become more collaborative in future.

Dr Renuka Badhe, Session Chair: *Around the world there is a clear shift away from thinking of HASS as an add on to natural sciences research, and towards fully incorporated inter- and trans-disciplinary approaches; in Europe it is now a standard requirement for social sciences to form a part of the project proposals. It is now important to ensure HASS researchers are fully able to participate and that research topics are arranged to best facilitate this.*

DISCUSSION:

Mr Steve Chignell, Dry Valleys LTER project: *Mr Chignell explains that learning the languages of humanities and the social sciences has been a new experience for him. He stresses the need to have trust between both sides in order for successful communication to occur, and notes that distrust can stem from not knowing each other's languages. Further, he sees this tendency to mistrust happening within science at all levels, including when those undertaking "hard science" dismiss social science projects. In order to address these challenges, he suggests coming up with a class at the start of any large interdisciplinary project, where researchers **outline epistemological frameworks** and go through the vocabulary for each of their disciplines, explaining their own understanding of what key terms mean.*

Dr Daniela Liggett, HASSEG Co-Chair: *Dr Liggett refers to the mini-symposium "**Linking Antarctic Science with environmental protection: Celebrating the 25th anniversary of the Madrid Protocol**" that was held during the SCAR 2016 conference in Malaysia. This project made an active attempt to link Antarctic science and policy, in order to facilitate better communication. The workshop was run by a mix of social scientists, scientists, and those involved in policy making. Many initially found the idea of running a social science type project with surveys and interviews, in order to better understand status of science policy nexus, a straightforward prospect. Colleagues from the field of biology agreed to take it on, and after numerous skype calls and meetings they realised it was not so straightforward - when elements such as human ethics, semi structured interviews, avoiding biased*

questions, and recognising their own bias were all factored in, the project was much harder than imagined.

The social scientists on the research team developed guidelines, and talked colleagues through the process of how to get the best out of the project. In the next stage of the project, interviews were presented, in the format of voice recordings. These then needed to be transcribed – while it was assumed that the social scientists would take care of this element, it was important for all collaborators to experience the whole process. As a result of this particular project, colleagues with a scientific background came away with a much greater understanding of what social scientists do in the course of their research, and a greater appreciation of the value that such researchers can bring to larger projects. Dr Liggett notes that it did take some time for all collaborators to start speaking the same language, although the process of negotiating understanding did bring the researchers from various disciplines closer together.

Dr Renuka Badhe, Session Chair: This also points to the value of having interdisciplinary conferences, rather than single disciplinary conferences. **Interdisciplinary conferences** provide a forum for researchers to be exposed to other ways of thinking, and offer a place for people to both learn about and come to understand other disciplines. It is also useful to have presentations from a range of disciplines in a single (thematic) conference session, to avoid disciplinary silos. Dr Badhe observes that there is still a way to go before this sort of integration is achieved.

Audience member: An artist in the audience notes that this resonates with their knowledge of arts in Australia, where collaboration occurs across many sectors (STS, business health etc.). The suggestion is made that there is value to be had in consulting the Australian Arts Council's expertise, as the organisation has spent decades building relationships across other sectors, and working through translations across specialisations.

Dr Renuka Badhe, Session Chair: Dr Badhe emphasises that this event does not represent the end of the quest to get science and humanities working together, but rather it is just a first step, and talks will continue.

Professor Anne Noble: Prof. Noble offers her perspective on behalf of the arts, and acknowledges that models for cooperation between scientists and artists have been occurring for many years. In the US context, the NSF writers and artists programme was embedded within a science programme as a funded enterprise for those working in the arts and humanities. The Antarctica New Zealand Artists to Antarctica Programme was also modelled on this approach. Prof. Noble points out that domains of knowledge need to be complete human enterprises, and that we do have models available to look at – it is important for the whole picture to be represented in such discussions. She notes that artists often suffer from the expectation that their art works will be purely illustrative. Instead, the focus should be on how art engages alongside science to create **new ways of understanding**.

Art is often not seen as **an independent investigative mode** of developing new knowledge, but rather channelled through corporate communications. In fact, this is a mistaken place for art to exist. We need modes of knowing through which we can be transformed, and these need to be deliberately placed at the beginning of the functioning production of any scientific process. Prof. Noble reminds the room that "Scientia" is knowledge, and that the investigative mode is part of all knowledge seeking practices. She highlights the model created by the NZ scientist Craig Stevens and artist Gaby O'Connor; Dr Stevens took Ms O'Connor to Antarctica as part of a funded science project, and the working relationship led to new discoveries and ways of thinking on both sides. Such models need to be unpacked, and could offer a guide for future projects. Prof. Noble further notes that 100 years ago, the skill sets of botanists were huge (they acted as geographers and artists, survived in tough conditions, and analysed and classified new discoveries). It is useful to keep this heritage in mind, and build on what they did, rather than remaining locked into silos.

Dr Rupert Summerson: Dr Summerson observes that **sciences and arts have much in common**, and in many instances they would dearly like to get together. He invokes the metaphor of two patches of dry land, calling to each other across the swamp of bureaucracy, and suggests that a major obstacle is the funders who set the frameworks and demand KPIs, making it more difficult for artists and scientists to get together and work productively.

Dr Renuka Badhe, Session Chair: Dr Badhe states that this is exactly what we are trying to do here: remove barriers and build connections.

Dr Emmauelle Sultan: Dr Sultan responds to Prof. Noble, and suggests that we have to learn how to make tartan between the different areas. She notes that, as a physical oceanographer, to do modelling or to undertake observation are two different things. Even within the sciences, we **need effective dialogue** in order to create new knowledge. It was noted that it can be beneficial to enlist the help of ethnologists to do this, as they are used to speaking with different knowledge, and to dealing with people who do not necessarily write as a form of communication, but still have vast knowledge. The arts should not be considered separate, but rather as part of a human being's skills. Finally, the audience are reminded that in the Middle Ages arts, music, and architecture were all considered to be part of the scientific realm.

Dr Renuka Badhe, Session Chair: Dr Badhe summarises discussions by noting that people have mentioned schemes that are working already. She invites workshop participants to send through specific examples, as these will be collated.

BREAKOUT SESSION QUESTIONS:

(1) Who are the humanities and social science stakeholders in Antarctic research?

Main stakeholders identified were:

- Antarctica and Southern Ocean Coalition (ASOC)
- Association of Polar Early Career Scientists (APECS)
- Antarctic Treaty System (ATS)
- Committee for Environmental Protection (CEP)
- Council of Managers of National Antarctic Programs (COMNAP)
- Funding bodies
- Governments
- SCAR Humanities and Social Sciences Expert Group (HASSEG)
- International Association of Antarctica Tourism Operators (IAATO)
- IAATO members / operators
- Interested members of the public
- United Nations Intergovernmental Panel of Climate Change (IPCC)
- Media
- National Antarctic Programmes (NAPs)
- Other Government bodies e.g. meteorological agencies
- Researchers
- Scientific Committee on Antarctic Research (SCAR)
- Schools
- Tourists to Antarctic region
- United Nations and other international bodies
- Universities and Higher Education Institutions

(2) What role can humanities and social sciences play in Antarctic research?

- Social sciences contextualise ideas
- Offers potential for contextual linkages
- Adds diversity to research
- To better understand why we research Antarctica
- Research into governance
- Independent research advice
- Social science increases overall productivity and outputs
- The Arts present insights into research
 - e.g. Lisa Roberts' krill sex project and Donald Fortescue's Ice Cube project
- Adds qualitative aspect to the quantitative research and adds value
- It may be critical or validate a certain order of things

- Extends reach of research into other areas
- Rigorous, intellectual discussion that can assist in facilitating governance
- From archival point of view, it shows the 'human behind the science' in terms of information-capture (History of science)
- To develop theories to underpin statements made within the Antarctic Treaty System (ATS), as well as National Antarctic Programmes' visions
 - e.g. Australian Antarctic Division's vision: 'Antarctica: valued, protected and understood'
- Development of an ethical engagement of Antarctica
- Attract more people to involved in Antarctic affairs

(3) What are the lessons learned from the addition of social sciences to previous projects, or research groups?

No matter what the research question is, you **cannot take humans out of the equation**. When the focus is only on pure science, the human connections that are there are not acknowledged. It is important to remember that human impact is not just physical, but also has a social dimension.

The Arts add value to a range of research projects; consider bringing the fine arts into the question alongside the humanities and social sciences. Gabby O'Connor's work with Dr Craig Stevens is a prime example of value of adding artists to research teams. Ms O'Connor was imbedded in the Antarctic field season team, photographing ice platelets. Preventing the ice melting before images were taken took considerable skill, and the new techniques developed benefitted and offered new insights to researchers in a range of disciplines.

The Association of Polar Early Career Scientists (APECS) provides a useful forum for fostering interdisciplinary projects from the bottom up. Although some early career researchers (ECRs) are discouraged from working with others outside their disciplines before they have established their own reputation, activities like the APECS Online Conference provide a venue for researchers from a range of backgrounds to become familiar with concepts and language well outside the scope of their everyday work.

Communication is a key skill. Scientists are well aware of need to communicate, and the trope of the physical or natural scientist as being unfeeling, uncommunicative, and uninterested in talking outside realm of knowledge is not the case. While there can be a tendency for empirical researchers to hide behind data, push charts in front of them, the majority do want to share their passion for what they do with others.

HASS researchers and artists bring different **modes of interpretation and communication**. When it comes to scientific datasets, there is a tendency to take the stance that "if you can't read data, it's your

problem.” There is space for artists to help here; art/science projects work when a work transforms data into an artwork that adds new insights, and invites another way of looking.

Outreach that communicates what various human endeavours are achieving in the Antarctic research space is important. This can be aimed at children, but it is also important for adults to have opportunities to engage with the variety of ways of understanding Antarctica. Examples where this is put in practice include the International Antarctic Centre in Christchurch and the Mawson’s Huts Museum in Hobart.

In reach within research groups is important, and helps ensure effective communication.

Collaboration requires that terms, which can be understood differently in different disciplines, are defined and deployed in a consistent way by all parties. Discussion over terms and concepts at the outset of a project can help to expand the perspectives of all involved, and to avoid conceptual clashes further into the project. Note that this concept applies to groups made up of scholars from various humanities and social sciences disciplines, as well as groups of HASS and STEMM scholars.

Creativity is an important precursor for both ground-breaking science and art, and is not limited to any one discipline. The process of joining the dots in order to solve problems and create new knowledge is common across arts, science, and the HASS disciplines. See “Creative Matters” lecture series, University of Iowa.

A workshop at the 2017 Arctic Science Summit Week (ASSW) centred on the Science and Technology Studies (STS) concept of the “**boundary object.**” A “boundary object” need not be a tangible thing, but rather can consist of an idea, a common understanding, or an experience. This could also be a useful model to adopt in the Antarctic.

(4) What value will be added to projects by such inclusion?

- Incorporating HASS researchers into projects brings **different perspectives** to the table.
 - HASS researchers consider elements such as affect, relational power structures and intersectionality, all of which impact upon research design and applicability.
- HASS researchers can help to find **creative solutions** to problems (and at times the problem can be a human problem).
- HASS researchers bring **an understanding of human behaviour.**
 - It is important to help people create an emotional connection with problems so they feel a sense of ownership and feel propelled to act.
 - Researchers must consider several questions: for whom you are doing this work? For what reason? For the humans. It is important to come back to this, and to acknowledge the hierarchy of masks, and different personas that are displayed, depending on whom you interact with, and in what context.

- Nudge factor (from social science) is a useful tool to understand when desiring to affect changes in human behaviour.
- HASS researchers **contextualise** the human decision-making processes present in any interactions with the natural world.
 - It does not make sense to think of Climate Change in a natural science context as if there are no humans around, constantly adding to impacts.
 - Researchers cannot influence actions without understanding all these human interactions.
 - Values research is a rich area upon which to draw.
- HASS researchers **add positioning value** to projects.
 - Help ensure society can appreciate the value of projects, and make the links as to how to do something about various issues.
 - Such understanding leads to the creation of more value for research.
 - For society to invest in science, the findings and significance of work needs to be fed back to the public.
- **Curating materials** and **streamlining communication**
 - Contextual information plays a role in how information is received.
 - It is necessary to “gift-wrap” scientific results for the vast proportion of the population, who don’t really care about the survival of a species etc.
 - Scientists working in isolation won’t be as successful in receiving support or communicating their results as those who understand and make use of their networks and connections.
 - One major problem is finding ways to connect with people who wouldn’t normally engage with science; curation of material, and choice of platform play a role in addressing this.
 - Although researchers with HASS backgrounds do often have well-developed communication skills, it is important to remember this is just one element of the wide skillset they bring to the table.
- More **streamlined engagement** with the Antarctic Treaty System and policy makers.
 - Contextual information plays a role in how data is received and interpreted.
 - HASS researchers can critically analyse how science fits into the ATS, and is shaped by a number of influential forces.
- Help **identify the global framework** in which science sits.
 - HASS scholars provide contextual critical thinking about how the world operates, and the various values places on scientific research.
 - Articulating the frameworks helps scientists to better understand the environment they are operating in (social, values, political, historical), and how these factors impact upon research capabilities and opportunities.

(5) What models are there for incorporating HASS into larger projects

The **Dry Valleys Long Term Ecological Research Project (LTER)** is a useful example of a large project that includes a HASS component. Dr Adrian Howkins was brought on board initially to satisfy grant requirements, but by working with a range of researchers in the field, all parties have developed a deeper understanding of the methods and value of various approaches, including historical. In this case, historical research plays an important role in quantifying the human impact in the Dry Valleys, and has implications for both scientists and policy makers.

The **Institute for Marine and Antarctic Studies (IMAS)** at the University of Tasmania hosts a Philosophy group, with sessions based on various areas scientists are working in. Visiting philosophers walk researchers through various framings of major issues, and this reflection on practice and assumptions helps provide useful grounding for scientists when the rationale for their work is questioned. Critically assessing the questions “why do we do the science that we do?” benefits both scientists and the wider community who have an interest in their work.

The **Association of Polar Early Career Scientists (APECS)** provides an open forum for researchers from a wide range of disciplines to come together and discuss questions of interest. The existence of such a forum is useful for building capacity, and the presence of HASS researchers within APECS ensures that early career scientists become aware of other paradigms early in their careers.

The **Centre for Marine Socioecology**, based at IMAS, offers a prime example of how HASS researchers can be integrated into larger projects. Researchers approach questions relating to fisheries and the marine environment from many angles simultaneously, including from scientific, legal, and sociological angles. The question of social licence is an area where HASS researchers are well placed to make significant contributions.

The innovative and future-looking model is trans-disciplinary. A prime example of a model for this is the work of New Zealanders **Dr Craig Stevens (scientist) and Gabby O'Connor (artist)**. Ms O'Connor travelled to Antarctica as an active member of Dr Stevens' research team. Imbedding people in teams at the beginning of the project, when you can impact on the question, is very important. Upon interrogating the terms of the project, and the reasons for undertaking such work, the scope of the project may change and one perspective may end up being surrendered for the benefit of another question altogether.

Discussion is held regarding how Social Science research might theoretically be incorporated into the **Ross Ice Shelf project**, undertaken by NZ in the 2017/18 field season. This project takes 1/3 of the human hours on continent this season for the NZ Antarctic Program. There is a history element that is relevant - humans have been in the area for a long time. Historical records can therefore be helpful – these include diaries and logbooks, but also illustrations from the past, e.g. of a glacier falling into the sea.

Future considerations:

In order to make existing examples visible, organisers of large interdisciplinary conferences, such as the biennial SCAR Open Science Conference, should invite researchers to **present models of successful collaboration**. Participants suggest collaboration can be fostered at a number of levels: by arranging conference schedules so they allow for thematic discussions between those from different disciplines; offering a diverse range of presentation formats, such as pecha-kucha talks that are designed to start conversations; and by running grass-roots level events, such as a “bring your own scientist” social event at HASS conferences.

Running **workshops on authorship** that highlight the different norms and expectations of those in various disciplines can help to avoid future conflicts once collaborations reach the publications stage. Published papers are a standard academic output, but co-authorship and the order of authors are viewed differently in different disciplines. For HASS scholars the first author position is often most prestigious, followed by second author; in many STEM cases, the final position is influential.

Examples of where HASS has been successfully incorporated into science projects:

- Dry Valleys LTER project
- HASSEG history and purpose
- Lawyers in Antarctica (Japan)
- Australian Antarctic Division fellowships
- Art has many examples of integrating into science – e.g. NZ and NSF Artists in Antarctica programmes, Australian Council for the Arts, Australian network for art and technology
- Plant collectors (historical)

Dialogues that encourage different fields to talk together foster inclusivity of knowledge, and allow for exploration of the knowledge of language.

(6) What support is needed to enable this to happen?

- Institutions **recognising the value** of a variety of scholarly outputs e.g. Articles, rather than focussing on having a monograph makes it easier to collaborate well with others (Dr Adrian Howkins).
- Institutions **removing practical barriers** to interdisciplinary work.
 - Addressing bureaucratic issues that see PhD students penalised for working across more than one school, or that require funding to be directed into single discipline projects.
- At a **funding level**, ensuring calls require a multi-disciplinary team to tackle large problems.
 - Adrian's involvement with the Dry Valleys NSF project was funding-driven; they needed a social scientists and they knew of his work (Dr Adrian Howkins).
 - Seed grants that require the input of researchers from a range of backgrounds and career stages can build capacity and induce conversation (e.g. The Oceanic Cultures and Connections grants available through the Marine Antarctic and Maritime Strategic Theme Area at UTAS).
- **Providing forums** to learn about each other's research, and where HASS researchers can explain ourselves and what we can add is useful (Poppy Gullett).
 - Interdisciplinary "speed dates" can work to assist with networking, particularly during large interdisciplinary conference e.g. SCAR OSC (Ass Prof Elizabeth Leane).
 - An icebreaker for a conference including a buddy system where you get assigned someone to talk to (Johanna Grabow).
 - APECS aims to provide these kinds of forums, particularly prior to conferences, and welcome invitations or suggestions of meetings where these could be incorporated (Hanne Nielsen).
 - Utilise opportunities presented by the SCAR OSCs, where scientists can attend HASS seminars and vice versa - the response can be quite positive (Johanna Grabow).
 - Running events where researchers present to the public with representations from each disciplines, highlighting the various perspectives and uses of language (Poppy Gullett and Dr Adrian Howkins).
 - As a biologist, Prof. Nicol has had real problems collaborating across even scientific disciplines - but there is a push within science to break down these barriers (Prof. Steve Nicol).
 - This area of fostering "communication across borders" (disciplinary, geographic, national etc.) is another where APECS is well placed to contribute (Hanne Nielsen).
- Offering to give **presentations in scientific forums** can open doors e.g. Putting name down for the science lecture at McMurdo - this provided a great opportunity to connect with others, and let to wonderful conversations (Prof. Anne Noble).
 - From a scientist's perspective, the humanities and the social scientists look quite different (Dr Bryan Lintott).
 - HASS people are often looked at as translators - one solution is to embrace that role and

start a dialogue highlighting the wider range of skills and value HASS researchers bring to the table: "I can do that, but I can do other things as well" (Prof. Steve Nicol).

- Institutions **removing the word 'science'** from their Antarctic seminars can widen the scope of what is recognised and valued as Antarctic Research (Prof. Steve Nicol).
- In order for interdisciplinary research to succeed, researchers themselves need to be **become more interdisciplinary** – when attempting to work with others it is useful to have a varied background in terms of disciplinary training (Kanae Komaki and Elle Leane).
 - Researchers need to open up the idea that there are different kinds of knowledge and research approaches.
 - There are still research disciplines that are underrepresented within Antarctic Studies, such as Philosophy.
 - Recognising the hierarchies at play within your own discipline is a useful first step; what assumptions about research practice, quality, and value are made within and about your discipline? Be aware of the strengths and weaknesses associated with these assumptions, and understand the value of your specific disciplinary background.
 - One-on-one contact with other researchers is useful for fostering interdisciplinary work. Prof. Steve Nicol notes the importance of mutual interest and respect, and the way researchers can engineer the situation to best fit their needs and interests. Spending time in a remote field location or on a ship in close proximity to other researchers is useful for developing relationships with those in other fields (Dr Michael Pearson).
 - Institutions can help to foster interdisciplinary projects. An example of a scientific organisation seeking to incorporate HASS aspects into its existing structure is SCAR (Dr Cornelia Lüdecke).
- **Introducing students** to the value of and tools needed to undertake interdisciplinary research at an early stage in their careers is a useful precursor to later interdisciplinary collaborations.
 - Interdisciplinary research often evolves organically, rather than being deliberately sought out. Supervisors need to find ways to prepare students to be open to other ways of thinking, whilst also understanding their positioning as specialists in their own fields (Dr Adrian Howkins).
 - Attitudes towards the relationship between science and HASS can be established early in formal education. Deena DeSelincourt notes that engaging with school children and educators can play an important role in shaping future trajectories.
 - There are challenges associated with engaging in interdisciplinary projects during mid-career phase, due to organisational pressures. The best times to engage researchers in this practice is early in their careers, when they are curious and keen, or later in their careers, when they have an established research presence and are expansive in their thinking (Prof. Steve Nicol).
- Understanding the **value of data** in various disciplines is an important first step.
 - Dr Adrian Howkins notes that one of his colleagues gave up because he felt like a data-gatherer; his own approach was to do that but also extra things. When working with the

scientists, he began to understand their views on data; they are data-gatherers, so we shouldn't feel inferior if they treat us the same way.

- Recognition of the **importance of fieldwork** for HASS researchers.
 - There is a paradox where humanities work is not seen as important enough to warrant a visit to Antarctica, but humanities scholars are not considered credible when they talk about Antarctica unless they have been there. As a result, the humanities work (histories etc.) has traditionally been left to the scientists who have expertise based not on any specialism in the discipline (e.g. history) but because "they have been there." (Ass. Prof. Elizabeth Leane).
 - Fieldwork by HASS researchers produces new knowledge, and is a very valuable and valid research tool.
- Integrating HASS researchers into the ASPA and ASMA **permitting process**.
 - As an archaeologist, Dr Mike Pearson notes how this discipline could be better integrated into the management of ASPAs and ASMAs.
 - Those wanting to do hard science in an ASPA are not necessarily required to know about cultural sites - in the past they have disturbed them.
 - In terms of the ASPA process, it would be useful to integrate HASS into the permits required - e.g. when doing geological work, including archaeologists or cultural heritage experts in the project, who know which sites not to disturb from a human history perspective.
 - Note that this kind of awareness-raising activity as to the (multiple) value of various sites could also be improved amongst scientists of different disciplines e.g. how do you not disturb the penguins? (Dr Mike Pearson).

Post Break-Out Report and Summary

***Dr Renuka Badhe, Session Chair:** Dr Badhe thanks participants for their discussion and input, and hopes that participants found the activity productive. She invites the panellists to report back on the discussions within each of their groups:*

Dr Richard Vokes:

Addressing the questions of “how to define stakeholders,” Dr Vokes observes that **everybody is now a stakeholder in what happens in Antarctica**. This view is enshrined in some National Antarctic Programmes and official documents – and example is the Antarctica New Zealand conceit of putting Antarctica into every home in NZ. Dr Vokes highlights the necessity of being clear and definite about who your stakeholders are, and who your end users will be. He reports that historically, the sense has been that NAPs have been more sympathetic than scientists themselves. In fact, they also see the virtue of social science fields and tools, such as psychology and network analysis. In many cases it is the scientists in their own disciplinary silos who need convincing, rather than national organisations. Dr Vokes also notes discussion around the increasing role of private sector stakeholders in the Antarctic sphere, and suggest that the natural sciences are better at thinking through the various issues related to working with private sector providers; such discussions are still in their infancy within the social sciences realm.

Ms Sachie Yasuda:

The group discussed what role the humanities, social sciences, and fine arts play in Antarctic research. Ms Yasuda reported several strands of discussion: the contextualisation of contemporary approaches; governance and ethics; and rigorous qualitative scholarship. Those from HASS disciplines can help the **wider research community** better understand why we research Antarctica, and to develop an ethical engagement with Antarctica going forwards. Visual Arts can provide insights into research, as well as produce new knowledge of their own. These disciplines are home to a burgeoning scholarship about Antarctica, and can add value to larger projects by bringing qualitative methods of analysis, thus diversifying approaches to larger questions.

Dr Daniela Liggett:

Dr Liggett reports that discussion crossed into other questions; the group suggested that the arts be added to future discussion, as they can contribute to research and research methods in own right. **Creativity is needed** in order to find solutions to deal with certain issues. Arts practitioners can also add a critical perspective; their ability to be outrageous and get scientists to question their position with regard to the work they’re doing can be an advantage. This group noted that being creative is important, as is retaining the ability to explore and redefine issues and questions from a range of perspectives.

Dr Adrian Howkins:

In terms of models, Dr Howkins suggests that the incorporation of arts into sciences projects is important, and offers a helpful model for the humanities and social sciences. He underscores the importance of building on existing models, but acknowledges that, at the same time, researchers do not need to be constrained by what has gone before. Support is needed; this includes education; recognition of the career stages where collaborations work well; and assistance to find open minded and willing collaborators. Dr Howkins suggests that this kind of **networking and connection building** is most readily conducted at the SCAR Open Science Conferences, which bring researchers from a range of fields together to talk about Antarctica. He recalls that Ass. Prof. Leane's "speed dating" experience, specifically designed to foster connections, led to a collaboration in his own case, and suggest that it would not be difficult to run something similar at future meetings. *[Note: APECS often runs events similar to these, designed to foster connections across disciplinary boundaries].* Looking at projects that have succeeded is helpful, and allows lessons learned in previous projects to carry on to other projects.

Professor Akiho Shibata:

Prof. Shibata notes the enthusiasm of the exciting young scholars in his group, and how he is encouraged by the attitudes they have towards engaging with other disciplines. He emphasises that design is important: stakeholders must come together from beginning to the end of a project. All members of the project need to have a background understanding of the approach, and collaboration is a continuous process that involves an awareness of opportunities, mind-mapping, and space for different disciplines to come together and develop a concrete idea.

Prof. Shibata notes the **value in the APECS model**: web seminars that include people from all disciplines, and take time zones into account, mean participants are forced to listen to those from other disciplines. Participants are therefore exposed to new approaches, attitudes, and perspectives, and learn a lot from such a process. He notes that one must be an outside push to do this with other disciplines. The topic of mentors was also raised in discussion with this group, and Prof. Shibata acknowledged that sometimes mentors can be conservative. Mentors and supervisors should also be open-minded towards multi disciplinary ideas. One suggestion to facilitate this is to host an interdisciplinary dinner occasion at the SCAR Open Science Conference, where researchers from diverse backgrounds come together with open minds to listen to a keynote speaker and talk about the importance of interdisciplinary sciences.

The discussion group led by Prof. Shibata also proposes introducing a standing game where all those present have to get 5 stamps from researchers in a range of different disciplines. *[This activity is similar to the icebreaker events run by APECS prior to large conferences].* Finally, he suggests that all those present should endeavour to share HASSEG announcements amongst local science departments as well as social sciences, to raise the profile of the research that is already underway.

Discussion:

Workshop participants note that the HASSEG conference overlaps with the timing required to get to the SCAR biology the following week. It is suggested that it would be useful to have a calendar on the SCAR website, detailing upcoming events and dates, to allow organisers to space these out as appropriate. Difficulties with timing are noted, particularly given the timing of the Antarctic and Arctic field seasons.

It is recognised that the SCAR Biology Conference has a balance of social science and arts represented: of the five plenary presentations, speakers address topics relating to policy, CCAMLR, and art, as well three scientific presentations. The polar community is realising the value of including a wider range of researchers in discussions. Having workshops like the current event also helps. Workshop participants are invited to attend the SCAR Biology Conference in future to present their own work. It is also suggested that it would be useful to invite a scientist to give a keynote at the next HASSEG conference in 2019, and to make it clear that the conference invitation is extended to those in the traditional scientific research community, as well as those identifying as coming from HASS disciplines.

The chasm between indigenous knowledge and science is noted, and recognised as an area that deserves further attention.

Many science programmes now expect pathways to impact should be defined in a project justification. This is an area for further analysis; what constitute impact, and how does this look different in HASS<STEMM, the fine arts, and in collaborative projects.

Prof. Steve Nicol presents his view as a token scientist, and suggests that HASS has a marketing problem; scientists don't know what the humanities and social sciences are. Researchers in these fields need to represent themselves in an ore forthright manner, and show what they can do, in order to engage people. He believes this is hard to do under an acronym that no one understands, but proclaims he is 'a convert' – working with HASS researchers has allowed him to meet many talented people, and to have a lot of fun.

The point is raised that social sciences and humanities work usually doesn't get much funding; frameworks around funding need to change as well. It is noted that structural changes are being made, and it is becoming more common for a quality social science or humanities aspect to be included in large projects from the start. Such developments are to be encouraged, as they enrich the research project and add nuance to scope, approach, impact, and findings.