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**ANTA 601 – SYNDICATE PROJECT**

**VALUING ANTARCTICA:**

**The Imposition of Human Values on Antarctica**

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**ABSTRACT**

This study investigated individuals' personal experience of Antarctica - physical and/or intellectual – in relation to the wider human engagement with the continent. Schwartz's (1994) definition of values was used to identify values apparent in personal experiences of Antarctica (through analysis of the authors' own values), and in the wider human engagement with Antarctica (through analysis of the Antarctic Treaty System (ATS), Antarctic Treaty Consultative Meeting (ATCM) Final Reports from 2001, 2005 and 2010, and the activities conducted in Antarctica). The values of access, cooperation, environmental conservation, exceptionalism, peace and wealth were represented consistently between the authors' personal values and in the values of the wider human engagement with Antarctica, whereas historical conservation, globalism, power, science, wilderness/aesthetic value differed. These values and their and their inter-relations provide a useful lens for understanding issues in Antarctica. Recommendations are made for future research to continue the investigation and categorisation of values related to Antarctica, to explore quantitative, statistical analysis of ATCM reports and to investigate the deconstruction of the values identified –particularly science.

**TABLE OF CONTENTS**

Abstract	2
Introduction	4
Methodology	5
Values in personal engagement	7
Values in wider engagement	12
Discussion	27
Conclusion	36
References	40
Appendix – Value definitions	43

## INTRODUCTION

'Nowadays,' wrote Oscar Wilde in the late nineteenth century, 'people know the price of everything and the value of nothing' (Wilde, 1992: 39). Over one hundred years later, arguably, little has changed. While the study of human values is generally a growing area of research, investigation of the imposition of human values on Antarctica (which for the purposes of this study includes the continent, the Southern Ocean, and the sub-Antarctic islands) is underdeveloped. This study aims to provide a starting-point and an overview of the territory for such investigation.

Values underpin everything we do. They establish an order of importance in the beliefs and opinions which govern our choices and control the decisions we make about our actions. Whether for individuals, institutions, or in a wider global context, they have a profound effect on the outcomes of all our endeavours. Thus they constitute a lens through which we can usefully examine all levels of human engagement with Antarctica.

This study is aware of the Scientific Committee on Antarctic Research's (SCAR) Social Science Action Group (SSAG), recently created to begin research into this area. SSAG intends, as its first task, to catalogue the range of human values imposed on Antarctica, with a secondary objective of explaining their importance with respect to SCAR's mission of 'initiation, promotion and co-ordination of scientific research in Antarctica' (SSAG, no date, <http://www.scar.org/researchgroups/via>, accessed 7 January 2011). We

hope that the present study will be of use to SSAG as it begins its research.

## **METHODOLOGY**

In this study we offer a perspective on the values evident both in individuals' personal experience of Antarctica - physical and/or intellectual - and the wider human engagement with the continent.

We experienced Antarctica through a multi-disciplinary postgraduate course at Canterbury University involving a period of intensive study and a field trip to the Ross Sea region of Antarctica. This experience provided us with a unique perspective as we had little prior experience of working in the Antarctic community.

Each of us recorded the development of our values about Antarctica, as well as our view of how these values functioned before, during and after our time there. To maintain a consistent standard for comparison we used Shalom H. Schwartz's definition of values:

A value is (1) a belief (2) pertaining to desirable end states or modes of conduct, that (3) transcends specific situations, (4) guides selection or evaluation of behaviour, people, and events, and (5) is ordered by importance relative to other values to form a system of value priorities (Schwartz, 1994: 20).

Individual value narratives were then combined into a summary of value themes.

Assessment of the values associated with Antarctica at a political and scientific level focused on three areas. Firstly, we focused on the principles of the Antarctic Treaty System (ATS), which we follow the 1991 *Protocol on Environmental Protection to the Antarctic Treaty* (the Protocol) in defining as 'the Antarctic Treaty, the measures in effect under that Treaty, its associated separate international instruments in force and the measures in force under those instruments'. Secondly, we looked at the Antarctic Treaty Consultative Meeting (ATCM) Final Reports from the years 2001, 2005, and 2010. These reports from the last decade were chosen to see if a preliminary investigation would demonstrate observable trends notwithstanding the constraints and scope of this study. Finally, we examined the major activities ongoing in Antarctica in recent years. The values identified were then compared with the personal values of the authors. The similarities and differences of values displayed by the two groups were assessed.

Through this process of reflecting on our own values and examining those of the wider system, we compiled a list of the major values across both areas. This list was used to structure our approach to the rest of the study. See the Appendix for this list of values, and our definitions of them.

Given that the ATS regulates international relations with regards to Antarctica

and that these regulations are both driven by, and filter down to influence, the values of people with an interest in Antarctica, we expected the ATS values to be congruent with personal values.

In any regulatory system inconsistencies between the values it embodies and the values held by those impacted by it are usually apparent. We expected the method of approach we had adopted to identify any such incongruent values.

## **VALUES IN PERSONAL ENGAGEMENT**

This section summarises our individual values about Antarctica and the similarities and differences they demonstrate.

Emma McFadyen quoted yachtsman Sir Peter Blake, an environmental campaigner, to demonstrate her underlying value of Antarctica as a vital part of a global system with which human beings interact. She stressed the importance of gaining an understanding of the function of environments, which can be incorporated into education, and saw Antarctica as having a central role in this regard, pointing out that the qualities of cooperation and respect required for collaboratively creating sustainable futures are present as core values in the ATS. The trip to Antarctica, while not altering her values, deepened her understanding and respect for the organisations and people working in the Antarctic community, and of the complexity of the decision making process involved in creating these futures. She believed that co-

operation, collaboration, education and outreach can increase the speed of this process.

These responses can be categorised within the values peace, cooperation, science, and environmental conservation identified in this report of.

Alex Moffat-Wood also cited cooperation and environmental conservation as the first two of his core values. For him respect, care and interconnectedness were at the centre of a synergy in Antarctica that allowed survival and great achievement unhindered by isolation and conflict. Like McFadyen he valued environmental conservation and particularly sustainability as an understanding of the limits of finite systems affecting and affected by a greater world system, and directly influencing our conduct within Antarctica.

His other values were those which he held central to his own behaviour and saw them manifest and symbolised in Antarctica as exemplars both for individuals and for the world. He suggested that the integrity of individuals is a necessity for successful work there, and that its constituent qualities of honesty, self-responsibility, tenacity, courage, and leadership could be a model for the rest of the world. On that level, too, he hoped that advancing science, improving geopolitical relationships and personal self-reflection, as well as growing environmental awareness would be the consequence and quality of progress.

Simplicity, his last value, suggested 'Antarctica as a symbol ... of a clean,

uncluttered space in the world, and thus of our ability to lead uncluttered lives.' This refers less to the external aspect of wilderness and more to the simplifying effect of Antarctica as absence.

It is this same sense of the 'pure and untouched space' that Dan Wilson alluded to in consideration of his personal values. Like McFadyen and Moffat-Wood these values remained unchanged but underwent an intensification. For him the untouched areas were those where no-one had set foot but inevitably would, and which summoned a sense of excitement at the prospect of their exploration. They resonated with his appreciation of Antarctic history of the heroic era and his enjoyment of the great stories of adventure, but they also forced him to more rigorously consider conservation: 'I came to appreciate the value of areas that although had been explored, were still free of permanent significant human influence.'

Wilson responded to the unique nature of scientific enquiry on the Antarctic continent but also considered it to be partly a function of human choice.

All three of his values correspond with those identified in this report, namely: Wilderness/Aesthetics, History/Heritage, and Science.

For Julian Evans too, History/Heritage figured as a prominent value. 'The stories of my grandfather's adventures exemplified values and qualities of 'hardihood, endurance, and courage,' and proper provision (a sense of duty) to draw from that most quoted quote.' Evans described the 'imagined'

Antarctica as distinct from the 'remembered' Antarctica in the context of preparation and planning compared to the execution of the trip where notions of wilderness are starkly contrasted with the concretion of industry and urbanity, and in this prosaic vein talked of the financial value of the trip in terms of cost compared to experience: 'Standing on the ice shelf looking at Mount Erebus ... Priceless. For everything else there's Master Card!'

The values he went with, like those of his colleagues were 'not changed so much as enhanced. Value as notion becomes value as experience, value as material fact.'

### **Analysis and summary of values**

There is significant correspondence between the various personal values reported by McFadyen and Moffat-Wood. Both highly value Cooperation: McFadyen wrote of 'ideas of co-operation and respecting the diversity of people and culture, acknowledging the unique contributions and perspectives of individuals and groups.' Moffat-Wood that 'Cooperation encompasses the ability for people to work together, respecting and caring for one another, and acknowledging their position in an interconnected, often interdependent community.'

Environmental conservation was another key issue for both: 'Human beings live as part of the interconnected systems of plants, animals, land, water and air. To be able to achieve healthy communities and a healthy world, one must

recognise the types of teaching and learning that can build and create sustainable outcomes.’ and for Moffat-Wood ‘Sustainability is an appreciation of our position in a world of finite systems; an understanding of the limits ...’. Science too had importance for him when he asserted ‘Progress is the hope that things will get better. Advancing science, ... the increasing ability for humans to survive in hostile environments, more sophisticated technology...’. McFadyen’s inclusion of science as a core value was overtly stated and an integral part of her core educational values. ‘The knowledge and understanding obtained from science in Antarctica can achieve this [sustainability] through guiding and enriching learning around the world.’

Moffat-Wood also incorporated many of the underlying values implicit in Wilderness/aesthetic value through the introduction of his own categories of integrity, progress and simplicity. That category, with History/Heritage is common and most prominent for Wilson and Evans. For the former, ‘Visiting Antarctica ... I became much more aware of the permanence and tangibility of the conceptual areas that I valued. I don’t feel like I had any direct experience of untouched space when I was in Antarctica, but I feel my experiences reinforced the idea that some areas were untouched.’ For the latter it was laced into his experience of the journey. ‘Antarctica was a metonym for the narrative of archetypical human values with which I had grown up.’

Of the range of value categories used in this paper, exceptionalism, globalism, power, and wealth might be considered macro values unlikely to be attributed to the continent as special values by most visitors although they are

often implicit in the broader perception or narrative. Of the remaining seven categories: access, cooperation, environmental conservation, history/heritage, peace, science, wilderness/aesthetic value, five were identified specifically. It could be argued that the remaining two, access and peace were in some ways implicit, expressed perhaps in the fact of their journeys.

## **VALUES IN WIDER ENGAGEMENT**

This section will investigate values at work in the wider human engagement with Antarctica by focusing on three areas: the texts of the Antarctic Treaty System, primarily the Antarctic Treaty and the Madrid Protocol; the final reports of the 2001, 2005, and 2010 ATCMs; and activities ongoing in Antarctica in recent years.

### **The Antarctic Treaty System**

Four major values are embedded within the fabric of the ATS itself: peace, science, exceptionalism, and environmental protection.

Peace's primacy becomes apparent very quickly in the Antarctic Treaty. In the treaty's preamble the states parties took pains to make clear they believed it was 'in the interest of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes'. Consequently Article 1 of the treaty states, with absolute clarity, that 'Antarctica shall be used for peaceful purposes only'.

Science follows close on peace's heels. The treaty's preamble proclaims the importance of 'substantial contributions to scientific knowledge resulting from international cooperation in scientific investigation in Antarctica'. 'Freedom' of such investigation in Antarctica, the treaty's second article thus states, 'and cooperation to that end ... shall continue'.

Antarctic exceptionalism is not described overtly. It is, however, deeply entrenched within the assumptions of the treaty (Hemmings, 2009). The establishment of the treaty at all – the decision to manage the Antarctic differently from anywhere else – reveals this value at the system's core. In the Preamble to the Protocol exceptionalism is made explicit: the states parties note that they bear 'in mind the special legal and political status of Antarctica'.

The protocol also introduces the fourth of these major values, environmental protection. In Article 2, the states parties 'commit themselves to the comprehensive protection of the Antarctic environment and dependent and associated ecosystems'. The same article places this value incontrovertibly at the same level as the treaty's major two, designating 'Antarctica as a natural reserve, devoted to peace and science'.

### **Antarctic Treaty Consultative Meetings**

Discussions and decisions that take place in ATCMs reflect both the values of the nations involved - the Antarctic Treaty Consultative Parties (ATCPs) - and

the collective values of the ATS as a whole. By analysing value-revealing statements in the final reports from three ATCMs - 2001, 2005, and 2010 - insight can be gained into some of the values held by ATCPs, and interacting in ATCMs, over the past decade. References in each section refer to the paragraph numbers of that particular ACTM's final report.

*XXIV ATCM, St. Petersburg, 2001*

The final report of the twenty-fourth ATCM displayed a variety of values through thoughts and actions during discussion in the meeting and in the content being discussed. Cooperation, environmental conversation, science, exceptionalism, globalism, power, history and access were all noted to be operational values in the meeting and are discussed below.

Cooperation was evident throughout the meeting and the value was displayed in a variety of ways. Cooperation among various parties, commissions and committees through participation and contribution was shown with integrity, equity and respect towards one another. Cooperation was mentioned in regards to the Arctic Council and the sharing of resources (96, 101). This included the work of the International Maritime Organisation (IMO) in the Arctic and when the work was completed, was to be reviewed and applied to the Antarctic (88, 89, 90). International cooperation was often displayed in relation to exchange of information (148, 149, 150, 151) and the collaboration and effort of parties on information and working papers (21, 25, 26, 29)

A large component of the ATCM was dedicated to environmental protection indicated in the report, and a high level of involvement was displayed by most parties. The discussion involved the Committee for Environmental Protection (CEP) mostly and the inspection of bases under the Antarctic Treaty (113-121). COMNAP and SCAR raised questions relating to activities resulting in harm to the environment during the normal operations of national programmes and wanted to investigate further. Support was to be given by the CEP (76). Much time was spent discussing tourism, with acknowledgment that tourism was going to be of serious concern in the future (104-112).

The ATCM displayed values towards science in relation to environmental conservation (131, 136,137). A number of projects were questioned including drilling operations (49), unrestricted collection of meteorites (43) and the establishment of a base in an area where many already existed (137).

There were ideas related to the value exceptionalism shown when comparisons between the Arctic and Antarctic were discussed. It was suggested that the geographical, geological, biological, economic, political, and legal characteristics of the two regions were distinct and shouldn't be compared (95). However, the value of globalism was expressed through acknowledgement of the impact of global climate change on the Arctic and Antarctic, specifically ATS's use of documents published by the Arctic Council (96, 101).

Power as a value seemed to be evident in members questioning or

expressing concern over the development of scientific operations. This was apparent in the suggestion that the Czech Republic collaborate with existing knowledgeable parties with regards to the building of a new facility on King George Island (138).

There was reference to valuing historic occasions of the Antarctic Treaty System. A consensus was reached on the new location of the ATS secretariat and it was noted that this represented an important point in the history of the ATS (24).

The value of access was evidenced in the support for a working paper beginning the development of the “Guidelines for Antarctic Shipping and Related Activities” (83).

*XXVIII ATCM, Stockholm, 2005*

Cooperation was a prominent feature of the Final Report of the twenty-eighth ATCM and was explicitly noted for its importance at several points: in the opening remarks, the operational reports (18,20,25,26), and with regards to liability (128, 130, 132). Argentina stressed that adoption of the Liability Annex had been achieved thanks to consensus which is ‘the golden rule in Antarctic cooperation’ (128). Several incidents were reported to the meeting - Germany reported on an aircraft accident, and China, Russia, and Ukraine all received varying forms of international assistance. All incidents were considered excellent examples of international cooperation (136, 137).

Information presented on inspections (181-198) uniformly emphasised the excellent international cooperation apparent during these processes. Japan's offer to collaborate with Belgium with regards to construction of their new base also clearly represented international co-operation (220).

The value of history was evident in the issue of what should be done with unoccupied stations: the UK recommended that parties which own unoccupied stations should consider options for them which might include their re-use, removal, transfer to another party or conservation as a Historic site or Monument (184).

Access was shown to be an important value when ASOC states that tourism was being given serious consideration (23). The Meeting agreed that the term 'visitor' was more appropriate than 'tourist' (158), this distinction provided some insight into the extent to which the access to the continent for all people is important, and represented a move away from the distinction between access as a scientist vs. access as a tourist. After discussions on these issues it was explicitly acknowledged that tourism was not a prohibited activity in Antarctica, but that the issue of land based tourism involving permanent infrastructure in the Antarctic needed to be addressed in future meetings (169).

Environmental conservation was evident in discussions around illegal, unregulated, and unauthorised (IUU) fishing of toothfish. It was positively

acknowledged that IUU fishing in this area had declined considerably (21), although estimated IUU catch was still larger than the legal catch (22).

Conservation was a key component of the information on bio-prospecting presented in a paper by New Zealand and Sweden (233).

Science appeared throughout the report as an underlying feature, and specifically with regard to Lake Vostok, bio-prospecting (23), liability (99), and safety (138). The discussion of Lake Vostok revealed a balance between the values of science and conservation with Russia explaining that in 2005-2006 the drilling in Vostok would be continued for another 50 meters of ice, but that this would not imply any penetration into the water region of the Vostok Lake (150).

The application of the value power was seen when delegations expressed concern that the CEP had discussed policy and legal matters rather than only scientific and technical issues (44). What could be viewed as a challenge to peace is expressed when Argentina and the UK restated their dispute over the sovereignty of the Malvinas, South Georgia and South Sandwich Islands, and the surrounding waters (47, 48).

Exceptionalism was seen when Argentina stressed that adoption of the Liability Annex had been achieved thanks to consensus which is the golden rule in Antarctic cooperation (128).

*XXXIII ATCM, Punta de Esta, 2010*

In the Final Report of the thirty-third ATCM the values of co-operation, science, environmental conservation, power, peace and history were evident.

International cooperation was often raised with regard to information exchange (8, 121) and collaborative ventures (139, 430). The value of inter-organisational cooperation was seen during a discussion highlighting the importance of collaboration between the CEP and SC-CCAMLR to achieve the goal of a network of MPAs by 2012 (142), and when the UK raised the importance of CCAMLR and the ATCM taking a harmonised approach to protection of the marine environment (43, 44). The importance of conditions that underlie cooperation are observable throughout the ATCM with references to responsible behaviour of interested parties (198), inclusiveness (42), the benefits of collaboration with regards to infrastructure (370, 479, 232) and science (139, 512).

There was evidence of the value of science positioned as a tool for progress (512, 280) that should be employed in a pro-active manner (285). As part of a discussion on the scope of the CEP an interesting point was raised about the possibility of providing temporary protection to newly exposed marine habitats to allow exclusive access for scientific research (280). This comment provided some insight into the relative importance and interaction of science and conservation values, in this case science was viewed as an activity that ultimately assists conservation rather than as an activity that should be

controlled in order to promote it. The implication here is that science has a greater right to access than other activities.

The value of conservation was positioned as being changeable and understandable through the use of science (36, 280). For example, it was proposed that the categorisation of Antarctic Specially Protected Areas (ASPAs) should be “evidence based, dynamic and flexible” (280).

Power was expressed throughout the report, evident in statements of intention which were often based on the implicit assumption of the robustness and large field of influence enjoyed by the ATS. Specific references to power were made when discussing the potential for the ATS to apply substantial regulation and control over tourism (36).

Peace was mentioned in the opening remarks (7,8), but was not explicitly discussed elsewhere. The co-operation evident in the meeting can be considered to have been in part based on the peaceful context of the interactions.

The importance of history and accuracy of the historical record are raised throughout the report. The multinational support for granting historic site status for the plaque commemorating the nuclear power plant at McMurdo Station (187, 188) is evidence of its high value. Argentina made reference to an ATS document that contained incorrect information about the history of the South Shetland Islands (69), highlighting the importance of an accurate

shared history.

The general value themes highlighted in these three ATCMs and how these match with the ATS and activities in Antarctica is discussed at the end of this report. As evidenced above there is consistency in the values expressed in each of them and some change over time is observable, particularly with regards to the importance of tourist access to the continent.

### **Activities in Antarctica**

Beyond the values contained in the structure of the ATS, and those found in the discussions and decisions of states parties in the ATCMs, there are values played out in those activities taking place in the Antarctic – values which do not necessarily correlate directly with those of the ATS and ATCMs. A brief census of major values inherent in key activities in the Antarctic can most usefully, if crudely, be broken into two categories: activities that support values congruent with those of the ATS and the ATCMs, and activities that support values that oppose those of the ATS and the ATCMs. An immediate observation is that the border between these two categories is permeable – activities are of course encoded with more than one value, and consequently sometimes fall into both the ‘support’ and ‘oppose’ categories. Some values, too – access, for example – can wind up on both sides of the divide. This is a reflection of the complexity of human activity in Antarctica.

*“Supporting” activities*

The Antarctic activity with perhaps the highest public profile is, of course, science. As already identified, science is also a major value of the ATS, but as an activity it supports other values harmonious with the ATS and ATCMs. It contributes to environmental conservation, to access with its desire to work on and in all parts of the continent, to peace and cooperation by encouraging collaboration, and to exceptionalism with its insistence on the importance of Antarctic science.

Environmental conservation is another identified value that functions also as an activity supporting ATS and ATCM values. It contributes to all of the same values as science (especially exceptionalism), but also to wilderness and aesthetic worth.

The building, maintenance (of both structures and personnel), and removal of national programmes' bases and stations touch on a number of values that fit with the ATS and ATCMs. They support science, environmental conservation (more so today, at least), peace and cooperation (by remaining open and welcoming to staff from other programmes), and access.

Tourism is a major activity that, in terms of numbers, brings more people to the Antarctic than any other (Snyder & Stonehouse, 2007), and helps sustain a number of ATS values on the part of both the tourists and the tourism operators. It supports wilderness and aesthetic worth, environmental

conservation, and historic conservation as these provide the objects of tourists' interest, and exceptionalism to ensure these objects cannot be found elsewhere. Peace and access are, of course, key in allowing the activity to function at all.

Artists and documentary filmmakers are occasionally active in the Antarctic, producing works to interpret the region for, substantially, those who will never travel there. Similar to tourism, such activity would tend to support values of wilderness and aesthetic worth, environmental conservation, and historical conservation, but also science, as objects of study. Exceptionalism may be supported, and peace and access are also likely to be important.

NGOs are generally more active lobbying on Antarctic issues elsewhere in the world, but are also represented 'on the ground' in the Antarctic, for example by Greenpeace and the Sea Shepherd Conservation Society in the Southern Ocean. NGO activity supports wilderness and aesthetic worth, peace, science, environmental conservation, exceptionalism, historical conservation, and access.

Smaller-scale activities are also present. Conservation of historic huts clearly supports historic conservation, but also access and exceptionalism. The creation of stabilised transport routes from roads to traverses to shipping and air traffic lanes supports science and access while bioprospecting supports science, access, and exceptionalism.

*“Opposing” activities*

Activities in the Antarctic also transmit values that oppose or threaten those held by the ATS and the ATCMs. Fishing and whaling in the Antarctic promote globalism over exceptionalism, as they demand that the region play its part in providing resources for a global economy. Insofar as they are extractive economic activities, they also support wealth – the accruing of capital as an end in itself – as a value. They also, of course, support access, a value that in the case of whaling and IUU fishing may not correlate with the ATS and ATCMs.

Bioprospecting, one of the issues most exercising the ATS at present, also promotes values of globalism and wealth (Herber, 2006). With bioprospecting comes science, a perhaps surprising activity to find in the ‘opposing’ category. Science supports globalism by insisting on Antarctica’s place in the physical global system, wealth by allowing the development of lucrative technologies, and power – in the sense of geopolitical power both in Antarctica and elsewhere which tends to oppose peace and cooperation – by contributing both to a state’s ability to project physical force and its political force around the bargaining table.

Stabilising transport routes supports globalism and power by opening the continent and allowing for easier force projection – potentially military. The activity related to national programmes’ bases also thus support power, both military and political. They also support wealth by contributing to the weight of a state’s claim over territory and the resources therein should the continent

ever be divided up. Some Indians, for example, suspected other states parties of economic motives, protecting their potential interests from 'newcomers', in resisting India's ambitions for a base in the Larsemann Hills (Jayaraman, 2007).

Finally tourism, too, supports wealth as a value of the Antarctic.

### **Value relationships in the wider human engagement**

There are thus broad parallels between the values held in the ATS, the ATCMs, and Antarctic activities. Cooperation and science are promoted consistently across the ATS, ATCMs, and activities, as is access although this does change depending on who is clamouring for such access.

Exceptionalism is almost as consistent other than where it is challenged by globalism.

Within these broad parallels, however, the values are not always equally weighted, apparent, or otherwise consistent across the three areas. Historical conservation is considered similarly between the ATS and ATCMs, but differs slightly from activities which are concerned with the entire past of human engagement with the Antarctic, the former seem interested only in the past of the ATS itself.

Environmental conservation holds equal weight in the ATS and ATCMs, but it becomes difficult to determine the extent of its support in activities. Antarctic

activities undoubtedly tend to comply with environmental conservation measures but whether this is because the activities hold conservation as a value or because they are conforming to imposed measures is hard to judge.

Power and globalism through activities appear to challenge ATS and ATCM values, but both also appear in limited form in the ATCMs with discussions of the ATS being a structure of power, and of Antarctica's relationship with the rest of the world through climate change.

Wealth is generally a value associated with activities in contrast to the ATS and ATCMs, but it may have a submerged place in the latter as states parties keep an eye on the prize of a territorial claim and the resources within such territory in the future.

Finally, peace is a major value in the ATS, but becomes harder to detect in the ATCMs and Antarctic activities. It may underlie the ATCMs, in that the ATCPs have come together to discuss issues rather than resort to conflict, but it may also be, for example, that the peacefulness of the Antarctic to date has been a function of the generally peaceful contexts of the ATCPs since the ATS came into effect. It is not clear that peace would hold sway in the Antarctic if these contexts changed dramatically.

Within the wider human engagement with Antarctica there is a broadly consistent landscape of major values. There are discrepancies and conflicts within it and when breakdowns occur they tend to be between the ATS and

the ATCMs on one hand, and activities taking place in Antarctica on the other.

## **DISCUSSION**

With some conclusions drawn about the trends in our personal value systems related to Antarctica, and those of the wider human engagement with Antarctica, comparisons can be made and the relationship between the two value systems broadly characterised.

### **How I learned to stop worrying and love values**

It is worth dwelling briefly on some observations of values in general, and the hazards and opportunities of studying them. It is obvious but worth noting overtly that as deeply set aspects of human life they are complex and slippery concepts. They are changeable, subjective, often interconnected, and tend to resist being tidied into neat categories and boxes. They can be deconstructed to reveal other values at work within them, and they can build up to create others. Values are messy.

The value we identify as access, for example, refuses to pledge loyalty to either supporting or challenging those of the ATS and ATCMs. As with so many values, one's particular deployment of it depends on who one is – a tourist, for example, or a scientist? Access also demonstrates the complex interconnections between values: the other side of a concern with access is a concern with power, a necessity for restricting access to others considered

undesirable (such as tourists, perhaps). Attempting to discuss values themselves, without also considering the pathways and influences that connect them, misses half of the picture.

Furthermore, values are not always obvious. Some will be held consciously and proclaimed as a value; others, often the more powerful ones, sit below the surface subconsciously influencing decisions and behaviour. To continue the example, access is not much discussed overtly as a value but underpins much of the wider human engagement with Antarctica's preoccupations and debates. Pulling these not necessarily sinister values into the light is one of the more important values of this sort of study.

The aim of such research is to walk a path between treating values as objective, clear-edged boxes, and throwing one's hands up in surrender at a shifting, chaotic mess of subjectivity. Approaches are possible which allow for recognition of values' interconnection and flexibility, but also for sensible and useful statements to be made about them.

### **Us and them**

A comparison of the authors' personal values and those of the wider human engagement with Antarctica – the micro and macro scales – reveal a general resemblance, with some intriguing discrepancies. The similarities will be discussed first.

#### *Similarities*

An immediate similarity is the value of cooperation. Cooperation is incontrovertibly held up as of great importance in both the personal reflections and the interrogation of the wider human engagement. From the cooperation between individuals required in a field camp to that between nations around the table at an ATCM, this value has a high profile. Indeed, it is foundational – many of the other values associated with the Antarctic, such as peace and science, are predicated on cooperation.

Environmental conservation is another high-profile similarity. Two of us noted it explicitly as a value in our personal reflections, while it was implicit in some of the others' stated values. With issues of climate change and sustainability of great concern in our society, this is perhaps unsurprising.

Peace has a correspondence between the personal and the global but, interestingly, only insofar as it is a difficult value to confidently detect in either area. It is certainly possible that it underlies many of the other values, but it is unclear as to whether it has a strong identity separate from cooperation. Would peace surface if challenged, or would it prove to be a mirage?

Access is treated alike at both levels. It is the one value with a noticeable trend in increasing importance in the ATCMs in the last decade. In the wider system access is currently primarily about the balance between scientists and necessary support personnel such as base workers, and tourists in the Antarctic. Both groups are visitors, but the former is often granted more

legitimacy. Belonging clearly to neither one group nor the other access underlies much of the authors' concerns in their personal reflections. The other side of access is power, the goal of restricting access to others.

Wealth is similarly absent from both the authors' values and those of the wider system. It is primarily associated with resource extraction activities, such as fishing and bioprospecting with which the authors and the ATS are only concerned insofar as such activities are regulated. Wealth may be covertly present in the wider system in the activities of states to support potential territorial claims but the authors do not advance this.

A final similarity is exceptionalism. Both the personal and global systems implicitly promote exceptionalism, although it is less central to the authors' value systems. This may be because individuals will tend to have a plurality of interests and concerns in their lives, of which Antarctica is one, whereas the global system is designed and built specifically to consider only Antarctica.

### *Differences*

The micro and macro systems are broadly similar but there are some discrepancies in their relationship. The most immediately apparent is the value of science. Science is central to the wider system: it is embedded in the words of the ATS, preponderates in the discussions of the ATCMs, and science or science support constitute the bulk of activities taking place in Antarctica. It is less important for the authors, however, and is flagged overtly

by most of us, but it is not dominant in the way it is for the global system. None of the authors are professional scientists, which may skew such a conclusion. The majority of the world, however, is not comprised of professional scientists either, so the comment should not be dismissed.

In place of science, the authors foreground two values which, while acknowledged in the ATS and ATCMs, are marginal. The first, wilderness and aesthetic value, is named prominently in the Protocol, but beyond this is underdeveloped at best and ignored at worst. Indeed, it comprises two quite separate values: wilderness, and aesthetics, lumped together (Codling, 2001). Wilderness and aesthetic values are much more prominent in our personal reflections, with Antarctica providing either a reality or a symbol of them.

Historical conservation - investigation into, protection of, and education about the past of human engagement with the Antarctic - is of much greater concern for the authors than the wider system. This may be because the ATS and ATCMs have dealt with such issues as the establishment of protected historic sites in earlier meetings and because any evidence of a historical conservation value is being enacted on the ground, for instance by the Antarctic Heritage Trust. It also appears to be the case that the ATS and ATCMs are more interested in the history of the ATS itself, whereas the authors' values are focused more on the fifty years preceding the ATS, and the Heroic Era in particular. When asked what tourists go to the Antarctic for, a tourism operator responded that it is wilderness, wildlife, and history (Russ, A. personal communication, 17 November 2010). This suggests that the

authors' values in this case are representative of the 'lay person's', in contrast to those of the personnel deeply engaged Antarctic community.

Another difference is the treatment of power. Power exists in our own values insofar as we support, for example, environmental conservation which relies on power for its resourcing and effecting, but it pales into insignificance when compared to the valuing of power in the wider ATS/ATCM context. This may not be a surprise, when one considers that the ATS is an agreement between nation states, whose very natures are driven by power, but it is a discrepancy worth keeping in mind when considering how the macro-scale human engagement with Antarctica relates with the micro-scale of the individual's engagement.

Finally, there is a difference between the two value systems in their perception of globalism. Globalism is often positioned as antithetical to exceptionalism (see for example, Hemmings, 2009). We have found, however, that our value systems contain both exceptionalism (as described) *and* globalism. We value the scientific placement of Antarctica in the world system, but also the role the continent has as a symbol for the rest of the world of cooperation, environmental conservation, personal integrity. Here again is a breakdown in an attempt to force values to behave tidily: values positioned in a binary opposition can in fact be held at the same time within an individual without strain.

**A possible matrix for interrogating value - or, simplification of complexity, values-style!**

Identifying the constituent values operating in an issue within the ATS or ATCM business can provide the basis for a useful analysis of the way in which they operate as vectors on each other. We may say that when the influence of two values is balanced they are equal. Likewise we may consider a situation where they are positioned in opposition to each other, one versus the other. Reductive statements about these states can help formulate a meaningful description of the interaction taking place.

For example, there is clearly a relationship between the values of access (A), wealth (W), power (P), and environmental conservation (EC). To put this another way let us consider a state where wealth equals access,  $W=A$ . This we may summarise in the reductive statement: If you have enough money you can go where you want. We may position power versus access,  $PvA$ , and conclude that: with enough power you can stop that happening. When power equals access,  $P=A$ , we can say: if you have the power you can access anywhere you want. When wealth and power are equal,  $W=P$ , we could say: ultimately money is power. In these various states we can see that  $W=A$  and  $W=P$  and  $P=A$ . There is clearly a balancing process between these vectors.

If we introduce environmental conservation we can list more states. Placed in opposition to access we have  $ECvA$  so we can say environmental conservation is necessarily a restrictive practice and therefore  $EC=P$  which

tells us environmental conservation is a kind of power.  $(EC+P)vA$  says that environmental conservation endorsed by power, the ATS for example, restricts access. This may be considered a very positive state. Another,  $ECvW$ , when interrogated can yield  $ECvW=Fishing$  and lead to  $(EC+W)vA=IUU$  Fishing.

The process demonstrated here may prove useful as an approach for further systematic analysis of the ways in which values interact.

### **Methodological considerations**

In taking the decision to investigate values related to Antarctica SSAG has entered an important area of study that is both broad and unexplored. As with any initial investigations into such an area the starting point can be arbitrary. The present paper considers that it is of more value to provide a broad, albeit low-resolution, overview rather than comprehensive analysis of a specific topic. This has been allowed by the multi-disciplinary approach taken.

Such an approach inevitably has limitations. The size of the information collection, both in terms of the personal values and the wider human engagement with Antarctica, limits the extent to which the findings can be generalised. There are obvious limitations in using the study's authors to provide information on personal values. Such an approach, however, can also be considered to strengthen the conclusions drawn since their perspectives are transparent. With regard to representing the values associated with the

wider human engagement with Antarctica the approach taken is limited in scope by its focus on the ATS, and limited in size by the small number of ATCM final reports examined. The present study is also unable to make inferences or draw conclusions about the extent to which activities ongoing in Antarctica actually reflect values that are held by the groups and individuals involved. Taking these points into consideration, and given the objectives of exploratory research, the present study is considered to provide a sound initial investigation into values associated with Antarctica.

### **Values research: reconnecting Antarctica with the world**

This study has begun to show that research into values is useful in three ways. First, it can help the Antarctic community – those deeply engaged with the Antarctic, from academics to policy makers to tourist operators to environmental NGOs – understand itself and the system in which it operates, leading to more informed decisions, better processes, and hopefully better outcomes for Antarctica.

Second, and perhaps more importantly, such research can help the Antarctic community connect with the general public – those people not deeply engaged with Antarctica, but interested and influential nonetheless. Their values are often assumed to be the same as the Antarctic community's, but this study indicates that, despite broad similarities, there are also discrepancies and wrinkles, bergs and crevasses in the relationship. Charting such disconnects will allow the Antarctic community to connect more closely

with this interested general public. If a message is not resonating, a policy is not having the desired effect, a lesson is boring the children or a fundraising campaign collecting only enough to pay for lunch, it may be that there is a discrepancy between the values assumed to be held by the public, and the values they actually hold.

Finally, and perhaps more important still, research into values brings back into focus that interested public, that great mass of humanity, for which our personal reflections modestly stand in this study – those people who have read a book, seen a documentary, visited an exhibition, or simply, idly thought they'd one day like to see a penguin in the wild. This research reminds us that it is not only the officials and scientists who have a perspective on, and a stake in, the Antarctic.

## **CONCLUSION**

### **Recommendations for future research**

First, we recommend that work be continued on the imposition of human values on Antarctica. If nothing else this study shows that useful investigation in this area is possible. We commend SSAG to continue with its proposed catalogue of values attached to Antarctica, and add the following suggestions.

We consider that further work should be done to deconstruct some of the value categories identified in this report. Science, for example, could be

usefully interrogated as it is, perhaps, more an activity than a value in itself. By examining the values that underpin science and scientific enquiry other values may arise, such as reason or rationality, which may stand in opposition to more emotion-based values. It is important to note that values are constructed by human beings and as such cannot be essential or intrinsic. Establishing a reason-emotion spectrum of values may provide a useful frame for categorising activities or constituent elements.

While extracting values from the ATCM reports we noticed that value word searches of ATCM reports for key value words served as a proxy for the qualitative analysis conducted in the present report. We consider that a quantitative, statistical analysis of ATCM reports would yield useful data.

Finally, the way that values propagate through the relationship between individuals and the wider system could be usefully investigated. Are values imposed from 'above' by structures such as the ATS and ATCMs, or do they begin at the 'bottom', in the mass of people unconnected with the Antarctic community, and work their way up? We suspect the answer is somewhere between the two, but this raises other questions. Do certain types of values tend to propagate in certain ways? And what makes a value more likely to become deeply entrenched?

## Final remarks

In Lewis Carroll's *Alice's Adventures in Wonderland*, Alice asks the Cheshire Cat:

"Would you tell me, please, which way I ought to go from here?"

"That depends a good deal on where you want to get to," said the Cat.

"I don't much care where—" said Alice.

"Then it doesn't matter which way you go," said the Cat.

"—so long as I get *somewhere*," Alice added as an explanation (Carroll, 1920:89).

Alice is unaware of her values, unaware of where she wants to go, what she wants to be and to achieve. She consequently has no direction - only a sense that she wants to go *somewhere* - and so she could end up anywhere. The Antarctic community and the interested general public, however, certainly *do* have ideas about where we ought to be going with the frozen continent, and consequently require some clearer directions than the Cheshire Cat's for how to get there. Without understanding the values informing the choice of such destinations, and the values underlying our methods of proceeding there, we may as well take the Cheshire Cat's advice and head in any direction – and end up who knows where?

'We all have our own White South,' wrote Ernest Shackleton (Shackleton 1982). It is imperative to understand the values that we – as individuals, as

societies, and as a species – use to construct our various Antarcticas. The alternative is that, one day, we may find ourselves trailing, bewildered, after the Cheshire Cat's fading grin towards an unknown, and potentially undesirable, White South.

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## **APPENDIX - VALUE DEFINITIONS**

### **Access**

The ability to travel to, and move around within, Antarctica.

### **Cooperation**

Working together to achieve goals, from the scale of two individuals collaborating on a scientific project to a group of nations working together to manage Antarctica.

### **Environmental conservation**

The practice of attempting to manage the environment, on an individual, organisational, or governmental level, for the benefit of the natural environment and/or humans. This allows for 'rational use' of resources.

### **Exceptionalism**

The sense that Antarctica is a place unlike any other in the world, and deserves to be treated as such, with its own set of rules and norms.

**Globalism**

The attitude that the world's interests are more important than those of individual places. Globalism seeks to interconnect and standardise the entire world.

**Historical conservation**

Investigation and protection of, and education about, the stories, objects, and physical structures relating to past human engagement with the Antarctic.

**Peace**

A lack of violent conflict.

**Power**

Geopolitical power, both political power around the negotiating table and the potential for the physical projection of force.

**Science**

A systematic mode of inquiry that seeks to build knowledge that can be used to reliably predict physical phenomena.

## **Wealth**

The accumulation of capital for the sake of the capital itself.

## **Wilderness/aesthetic value**

Wilderness is an idea of a landscape that shows relatively little human impact.

Aesthetic value is the appreciation of something as beautiful or pleasing to the senses. They are different values, but commonly bound together in the ATS.