Antarctic futures:

*Tourism and the tipping point*

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Abstract: Historically, growth in Antarctic activity levels has taken place in quantum leaps. Change themes and factors interact additionally and synergistically to drive activity levels to a point at which the inertia for the next quantum leap is irreversible. The location of Antarctica and the Antarctic Treaty System presents significant costs of entry for economic activities on the continent. Tourism ventures appear to be the most attractive commercial proposition. The tipping point concept, adapted from business theory, can be used as an analogy to assess the themes and factors affecting tourism that are likely to contribute to the next quantum leap. Technological, economic, political and societal shifts were identified and examined. The potential for radical and dynamic change exists - a small and individually insignificant event may complete the critical mass required for the next tipping point to be reached.
Introduction

Antarctic tourism

Current data indicates that the number of tourists visiting the Antarctic continent has reached up to 15000 persons per season. The growth of tourist numbers throughout the 1990's has not been uniform. It includes periods of decline and stabilisation from season to season, illustrated by the reduction in visitors to the continent for the 2000-01 season (see figure 1).

Figure 1. Number of ship and land based tourists in Antarctica between the 1992-93 and 2000-01 seasons

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1 Data obtained from International Association of Antarctic Tour Operators database
Quantum leaps

Historically, advances in continental exploration and activity have taken place in distinctive phases or 'quantum leaps' (see figure 2). There is a combination of factors that drive such quantum leaps and these are highlighted in table one.

Figure 2. Significant events, advances and levels of activity in Antarctica. (Note that level of activity on the vertical axis is represented by a logarithmic scale)
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Table 1. A selection of factors contributing to quantum leaps (see figure 2)

A cursory examination of the factors listed in table one that contributed to those advances illustrated in figure two, reveals a set of common change themes:

- Scientific discovery prompting technological and equipment advances
- Communication and dissemination of Antarctic information
- Changes in political structures influencing geo-political objectives
- Shifts in the economic environment influencing funding of Antarctic activities
- Changes in attitudes toward Antarctica

These themes influence the factors that contribute to a quantum leap. Within such themes the factors themselves interact additionally and synergistically to create a tipping point.\(^2\) A point from which there is no going back.

\(^2\) Concept adapted from Michael Gladwell's business development book “The tipping point: How little things can make a big difference”
Economic opportunity

As a result of the Environmental Protocol\textsuperscript{3} to the Antarctic Treaty, there is a fifty-year moratorium, banning mining until 2041. This single factor has significant influence over the economic dimensions of all other change themes. Without mining, commercial activities on and around the Antarctic continent are limited within three categories:

1. Bio-Resource harvesting (e.g. fishing)
2. Scientific discovery and development (e.g. new gene capture, product testing)
3. Tourism

Bio-Resource harvesting and Scientific ventures in Antarctica require significant capital investment. Along with the risk, the necessary technical expertise and the degree of international scrutiny attracted by such commercial activities, their costs of entry are on a scale much greater than that of tourism ventures.

Tourism ventures and the potential for change

Tourism in Antarctica, particularly in the Ross Sea region, has significant potential to change with technological advance and the establishment of a reliable air bridge. There are examples of this in the Northern hemisphere. Tourist numbers in the Norwegian controlled Arctic territory of Svalbard have risen from non-existence to 50000 per annum in the five-year period since the establishment of an air link.\textsuperscript{4} Combined with such growth is an alteration of the tourist profile. Svalbard is no longer the domain of the educated adventurer. It is host to wedding functions, business meetings and conferences. Tourists dressed in city clothes are driven from the air terminal to their comfortable 4-star hotels. Cost is likely to prevent this scenario from manifesting itself in Antarctica, but there remains the potential for a profile shift from older, well-educated travellers to younger, time-limited, affluent thrill seekers. Denise Landau\textsuperscript{5} of IAATO described the future tourist profile as follows:

Antarctica is a continent of 'firsts' and because of its remoteness, this alone makes it an attractive destination and an exciting prospect for adventurers. Mountain climbers, skiers, cross continent expeditions, camping, mountain biking, ballooning, parachuting, motor-cycling. Anything is possible and it isn't necessarily wrong if it is planned and executed correctly and if enough safeguards are in place.

\textsuperscript{4} Svalbard Turist Informasjon
\textsuperscript{5} Executive secretary of IAATO, speaking at the Antarctic tourism workshop, 2000
The Tipping Point

A tipping point is reached when the culmination of factors influencing change generates an inertia that is irreversible. If we consider tourism as a product, we can use an analogy based on the business development theories of Gladwell. In the book *The Tipping Point: How Little Things Can Make a Big Difference*, Malcolm Gladwell argues that for us to understand why some products succeed, we must think of each as part of an epidemic. "Ideas and products and messages and behaviours," he writes, "spread just like viruses do."

The same three factors that cause measles to spread through a grade school classroom, writes Gladwell, can be used to explain the change phenomenon: (1) contagiousness, (2) the fact that little causes can have big effects, and (3) the way change often occurs at one dramatic moment rather than gradually. Gladwell calls the big moment of change the "tipping point" and explains how companies can deliberately infect the market with a "virus."

Antarctic tourism products predominantly rely on external vectors to infect the market. Very few people are even aware that tourism takes place on the Antarctic continent. Going to the mysterious and inhospitable place on the bottom of the Earth is considered comparable with travelling to the Moon. However, it is this very image of uniqueness and position as almost out of reach that presents commercial value and the potential for the spread of infectious ideas and messages.

What makes Antarctic tourism possible now, also acts to further drive it toward the tipping point. A host of factors are operating on all sorts of different levels and it is these that will be examined to assess our progress toward the next quantum leap.
Key factors driving tourism toward the tipping point

Technology

Information technology
Dissemination and management of information has been revolutionised in the electronic era. Use of the internet and the creation of the world wide web has redefined the dimension of market reach. The travel industry in particular has successfully exploited the new medium to create an online market place of global proportions. Images, facts and an array of information about Antarctica are now available to the one billion people connected to the Internet. This change factor, above all others, influences the way we see Antarctica now, and will shape the view of the continent in the future.

Transport
There are two aspects of transport options for Antarctic tourism: Inter-continental travel and Intra-continental travel. Travel to the continent has been dominated by shipping and aircraft forms that have changed little in nearly fifty years. Does this increase the probability of change in the near future? An answer to this question can be aligned with the fact that since the IGY, the travel mode has been dictated by government programmes. In an era of tourism opportunity there are possibilities for change. These may include the use of ‘mother ship’ craft carrying helicopter and small sea-borne craft capabilities for the transportation of tourists to specific locations. A recent example is the use of an ATV by a New Zealand tour company for travel over sea ice from their Russian icebreaker, which operates around Ross Island.

Several other options are being investigated by tour operators to tailor make vehicles to meet their operational requirements. Options are also being investigated for the use of government programme air strips by private tourist operations, with a commitment to maintenance and sharing of the costs. The use of private helicopter companies by both the New Zealand and US programmes indicates that bridging the gap between private and government operations has already begun. The foundations for future change have been laid.

Equipment
Adventure equipment is undergoing constant development. Clothing, tents, cookers and sleeping bags continue to improve and enhance the comfort levels and possibilities for Antarctic travel. Specialist equipment is being developed including skis, sails and sleds as the popularity of cross continent expeditions grows. Recent innovations include the Antarctic bike, initially developed for personnel movement around the US South Pole station. The triple hulled kevlar sea kayaks used by the three New Zealanders on their recent Antarctic Peninsula journey have set a new frontier for paddling possibilities. Safety transmitting devices which rely on satellite technology, are now the norm for Antarctic adventurers. The size and reliability of such devices and use of satellite telephone systems has revolutionised the safety and communication aspects of Antarctic adventures.

Equipment develops in conjunction with demand. Recent trends show equipment retailers bringing ‘extreme’ equipment into mainline selling. The product awareness levels are being raised and in an outdoor culture where ‘extreme’ is cool, sales look set to grow. Further innovation and product development will follow.
Legal & Political factors

The Antarctic Treaty System (ATS) has been in place since 1959. With the adoption of the Environmental Protocol to the Antarctic Treaty in 1991, the ATS obtained a greater degree of influence over the form of tourism on the continent. Tour operators, from ATS states incorporating the protocol into domestic legislation, must meet environmental impact assessment (EIA) requirements.

The use by the International Association of Antarctic Tour Operators (IAATO) of the EIA requirements generates international credibility for their organisation. The potential exists for tour operators subscribing to IAATO membership, to use their EIA status as an environmental marque. Companies using the EIA (or any other) standard could market their tour operations under this flag to the ever increasing environmentally aware customer base. Any future changes to the ATS or in particular to the EIA requirements are going to directly influence tourist activities and potentially, the way in which tour operators advertise their environmental performance.

Will there be any significant changes in the ATS prior to 2041 when the moratorium banning mining comes off? At this time it seems difficult to conceive, however activity on the continent by non-member states could change all that very rapidly. The fact that Pakistan have already carried out an independent expedition to Antarctica is cause for serious concern, especially when one considers their current relationship with India and their development of nuclear weapon capability. Future activity by non-member states could seriously undermine the ATS. The change that results may present itself in the form of a tightening up and strengthening of the ATS. Alternatively other non-member states may follow the precedent set by Pakistan and an era of ATS instability may follow. Whatever the outcomes, it is clear that the potential for radical change exists.

Another factor of change to be considered under this theme are the policies of Antarctic Treaty States operating government funded programmes in Antarctica. The issues of co-operation with private tour operators and provision of search and rescue services are likely to influence future tourist activity. The US has made a stand in not supporting or helping private expeditions in Antarctica in any way, their lead has been followed by other government programmes. However, benefits such as additional landing strip options and logistical support provided by tour operators may change the way government programmes associate with them. Recent scoping work done by an Australian company looking at setting up an air bridge to the continent, with government co-operation in mind, is evidence of this. The relationship between the US (as major logistics provider on the ice) and other government programmes operating in Antarctica will determine how far private companies progress in obtaining support. Whatever their result, their intention of involvement is clear and has been considered by national programmes. Changes will come.
Economic factors

Economies of major tourist nations drive the tourism market. One only needs to look at the dramatic decline in the number of Asian visitors to New Zealand shores following the Asian economic crisis of 1997-98. The German and US economies have enjoyed relative stability and growth throughout the latter part of the 20th century. Between them, they represented nearly two thirds of the tourist population visiting Antarctica during that period. There are obvious implications for Antarctic tourism from the development of the European Union economy and changes in other major economies. There are also unforeseen changes caused by the performance of major economies. An example is the charter and employment of Russian icebreaker vessels by several tour companies in Antarctica - a direct result of the collapse of the Soviet Union and the resulting economic crisis in the new Russia.

The global fuel economy is another significant change factor affecting Antarctic tourism operations. The recent fuel crisis has alerted everyone to the dependence on fuel and its real value once on the continent. Higher fuel costs do not necessarily mean higher tourist package prices and a decline in the number of tourists. The factor may influence the mode of transport and stimulate the exploration of other travel options to and from and within the continent. Whatever the outcome, it is clear that fuel price and availability is a powerful agent for change.

Anne Kershaw\(^7\) indicated in a recent interview that insurance for commercial air travel to Antarctica was a strong limiting factor for tourism expansion. The global travel insurance market is governed by a handful of major players. However, in a rapidly expanding and more competitive tourist market, competition by specialist and adaptable smaller scale travel insurance providers is likely to open the avenue for change. Kershaw indicated that competition between Antarctic tour operators is intense and cruise ship style voyages have dropped significantly in price in an attempt to attract passengers from the dwindling customer base. It was also revealed that in a recent extensive USA newspaper marketing campaign, advertising Antarctic tours, only one single response was netted! These events are all strong motivators for a change in operational approach by the tour operator community.

\(^6\) Based on calculations using data from IAATO’s searchable database
\(^7\) CEO of Adventure Network International
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Attitude

Attitude has been identified as a key component of change. As information about Antarctica is disseminated to a wider audience, people’s knowledge about and attitude towards the continent will change. Dr Maj De Poorter\(^3\) refers to incremental changes, with respect to the acceptance of environmental impacts:

Incremental increase or change in activities leads to incremental changes in attitudes towards Antarctica, and incremental changes in the acceptance of impact.

Her comments reflect the growing trend in acceptance of tourism impacts in pristine environments. As an adventure tourist destination Antarctica is the ultimate. De Poorter points out that the risks created by the activity (adventure tourism) are probably not as great as the risk created by the attitude that it engenders.

A change in attitude toward Antarctica that is linked to the provision of information could manifest itself in a wider understanding of the continent and what activities are possible. It is likely that the barriers to travel, currently perceived by the average person, are going to be overcome. As attitudes shift in this manner, Antarctica loses some of its mystique – just as explorers in the heroic were made into folk heroes, today’s cross continent travellers rarely make news of the day. We are now better informed and our views are less influenced by the romantic tales of Scott and Shackleton that we grew up with.

Risk

Personal safety risks are abundant on the continent and in the past may have acted as a barrier to tourism in Antarctica. Our perception of both safety and environmental risks is largely governed by the information we are provided with. Future sales and marketing of Antarctic tour products is likely to present risks in a digestible form for the target market. Given Denise Landau’s definition (see introduction) of Antarctica’s adventure tourist of the future, it is possible that the risk factor may even be used to attract a certain type of tourist to the continent.

Antarctic tour operators are likely to take greater risks and take them more often in an increasingly competitive market place. The acceptance of these greater risks could be a product of operators seeking to provide a new or unique experience, or an attempt to provide an existing tourist experience on a more frequent basis. Risk margins are likely to become tighter and will probably be exceeded more often - as was the recent case when a New Zealand tour operator transported tourists over the sea ice from their ship to Scott’s historic hut at Cape Evans on Ross Island - when the sea ice had been deemed unsafe for travel by the New Zealand government operations at Scott Base, over a month earlier.

\(^3\) Representing the International Union for the Conservation of Nature
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Marketing, advertising and the media

The mediums for advertising are changing at a revolutionary rate – internet, WAP phones, Tele-billboards are an example of the new technologies being employed and represent a quantum development in target market reach.

In the new Attention Economy, advertisers and media climb over each other to compete. The target market has become increasingly time-poor, busy, stressed and is bombarded by information and messages from several sources. How would a unique product like Antarctica cope in such a cut-throat environment when it has traditionally been branded as a cold, inhospitable place on the end of the Earth.

James Hall\textsuperscript{9} suggested at the New Zealand Antarctic Futures Workshop\textsuperscript{10} that the future of Antarctica is dependent on its inevitable commercial realisation. He indicated that to compete in the attention economy Antarctica would have to be re-branded. The marketing challenge would be to create new and big ideas that were infectious and became part of the market’s personal belief system. His sales pitch cast Antarctica as “clean, untouched, pure, beauty, the last frontier, adventure, mystery, hope, deep time, infinite possibility, aliens, wisdom, the last stand...a chance to rectify mistakes we’ve made elsewhere.”

Commerce transmits ideas faster than any other medium. With companies like Saatchi & Saatchi and their much trumpeted credo ‘nothing is impossible’, there exists significant potential for radical change in the way in which Antarctica is portrayed. The reaction to Hall’s workshop presentation ranged from outrage to a nervous agreement with some of his material. He made us all realise that there are different approaches, very different approaches!

Currently Antarctic tourism is marketed on an expedition platform. There is an emphasis on large groups, safety and education. There are many throwbacks and references to traditional Antarctic expeditions, which works well with the older target market, whose childhood took place at a time when Scott and co still enjoyed a heroic folklore status. Change is not far away. The media coverage of two 25-year old Norwegian men who recently skied across the continent on a low budget expedition exposed the new adventure tourist. The media eluded to the problems encountered by the pair, but highlighted their success where other high profile and big-budget crossings had failed. There was a certain degree of ‘coolness’ about what they had done.

Through hip adventure-culture marketing, Antarctica could easily be portrayed as the ultimate adventure playground. You only need to look at the snowboarding set to see how understanding and attitudes towards the mountains have been radically altered by the sales images manufactured by clothing and equipment companies. The huge wave of popularity in the sport reflects the success of the sales pitch, which no doubt, could easily be mirrored by Antarctic tour operators.

\textsuperscript{9} Managing Director Saatchi & Saatchi, Wellington, New Zealand
\textsuperscript{10} Hosted by Antarctica New Zealand, Christchurch, New Zealand 28-30 April 1998
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Summary

Five predominant themes have been identified which drive changes in the level of Antarctic activity:

- Scientific discovery prompting technological and equipment advances
- Communication and dissemination of Antarctic information
- Changes in political structures influencing geo-political objectives
- Shifts in the economic environment influencing funding of Antarctic activities
- Changes in attitudes toward Antarctica

Within the themes dimension a number of change factors are operating additionally and synergistically to push tourism toward the tipping point. A point at which the inertia for the next quantum leap in Antarctic activity is irreversible. The principle change factors operating are:

- Information technology advances
- Transport options (land, air and sea)
- Equipment development (safety, comfort and adventure)
- Legal and political factors (ATS and policy of Government programmes)
- Economic factors (global economics, fuel and insurance)
- Attitude shift
- Risk acceptance
- Marketing, advertising and the media – rebranding Antarctica

Communication and dissemination of Antarctic information is the theme at the hub of the wheel of change. The rapid development of new communication tools has seen an exponential increase in the speed of transmission and the global reach of Antarctic ideas and messages. Information technology has provided a platform for many of the additions and synergies between other change factors to take place.

Tourism is happening. The next quantum leap is inevitable. The tipping point may be an event that seems insignificant, yet in combination with other factors it completes the critical mass. How we prepare for and subsequently manage such dynamic change is the challenge we are faced with.