

Tourism, research, and governance on Svalbard: a symbiotic relationship

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ABSTRACT. The tourism industry, research activities, and governing institutions are often seen as three very different, independent, and partly antagonistic activities and sectors – tourism as pure profit-pursuing, research as indifferent to business, and governing as controlling both. In this paper, it is argued that this is not the case on Svalbard, where a symbiotic relationship exists between the three sectors. Tourism to the islands emerged in the wake of the exploration of the Arctic in the late 1800s, but for a long period tourism rates were low, mostly due to a strict environmental regime supported by researchers in the natural sciences as well as the government. However, tourism has increased over the past 20 years, partly due to changes in the relationships between the tourism industry, researchers, and governing bodies. The involvement of research in different types of governance and its influence on tourism development will be demonstrated using theories of modern governance as points of departure for an analysis of the current situation; how tourism has provided governors with activities to govern and researchers with a rationale for comprehensive research activity. This case study shows how a symbiosis between tourism, research, and governance can be seen to emerge.

Introduction

This article is about the relationships that exist between tourism, research and governing institutions (here called the ‘TRG triangle’). The location for the study reported here is Svalbard, an archipelago located halfway between the Norwegian mainland and the North Pole. Traditionally, the sectors in the TRG triangle are seen as separate, independent and partly opposed; tourism is regarded as profit-driven, research as somewhat autonomously defining its rationale, and the governing institutions as steering and controlling activities. The argument put forward here is that this is not an accurate description, and that, on the contrary, a rather symbiotic relationship exists between the three sectors. The lexical meaning of symbiosis is a partnership within which all parties gain. Recently the term has been used to characterise industrial relations; for instance analyses have unveiled a symbiosis between the oil industry and other production sectors, for example where waste is turned into commercial products (compare Desrochers 2002). ‘Industrial symbiosis’ and ‘ecological economy’ are general terms used for this approach (compare McManus and Gibbs 2008). One of the reasons for the close relationships between the TRG parties is that both modern tourism and governing are research-based activities, but also that governing, at least of the tourism-environment nexus, which is the focus here, often takes place through *governance* (Jessop 2004; Kjær 2004; Kooiman 2003). This is a form of steering that involves the governed and other actors necessary to provide knowledge-based management. In the article it is first shown how the governance character of steering creates a system and a culture for collaboration between the tourism sector, the governors and also, to a certain extent, research. Secondly, the article demonstrates how research-based knowledge and the university and research sector have been involved in the development of tourism on Svalbard.

Svalbard is located in the Arctic Sea (Fig. 1). It is one of Earth’s northernmost inhabited places, stretching from the 74° to 81°N. The archipelago covers a land area of 61,229 km², with a coastline that is over 3500 km in length. About 65% of the islands are protected, including seven national parks, six large nature reserves, 15 bird reserves and one geotropic area. The climate is cold but, thanks to the Gulf Stream, not as cold as many other locations in the north. The average air temperature is +6° C in summer, –14° C in winter. The sea temperature hovers between –1° C and +4° C. In the winter, the sea is normally frozen.

Svalbard had 2570 inhabitants in 2009, of which 2085 lived in the capital, Longyearbyen, and 470 in the Russian settlement Barentsburg.

The article starts with a short historical background, including a presentation of tourism in the past and its subsequent development on Svalbard. A theoretical platform is presented in two sections: the first section discusses the ties between research, governing and industrial development, while the second addresses governance as a relational form of governing. The article goes on to show how four types of governance are frequently applied in tourism development on Svalbard, while a subsequent section illustrates the ways in which academic involvement is manifested in staffing, prevailing values and in the content of Svalbard’s tourism development. Towards the end, the relationships between the governors, the research sector and the governed are discussed as a form of symbiosis.

The methodological platform for this account

This article is written (except for this section) in what has been called ‘the third person hegemonic voice’ (Boje and others 1999: 356). This is a choice made by the author. ‘Researchers must make personal decisions as to how much of their “self” to inscribe in their “texts”,’



Fig. 1. Map of Svalbard

according to Feighery (2006: 273). However, he continues as follows. ‘This situation is often compounded by institutional and disciplinary discourses which disparage reflexive accounts as “unscientific”...’. In this paper it is impossible to keep strictly to a ‘neutral’ paradigm as I have had several roles in the process described and have in addition conducted research in, and written about, the field, and the interface between tourism development and governance (Viken 2006), one of the themes here. Therefore the article is partly an autobiographical account where the data encompasses personal interpretations of events, roles and processes.

The author’s 20 year association with tourism development, as consultant and researcher, naturally influences his point of view and academic *habitus*. I have been part of the discourse of tourism development in the Arctic and have provided academic instruction to several individuals who are, or have been, involved in tourism

development on Svalbard and the Norwegian Arctic, but I have never held a prominent public position. My role as consultant has not been well known, mostly articulated through documents produced under the auspices of local institutions; thus, I have played the role of ‘neutral’ supervisor in ‘author-evacuated’ texts (Geertz 1988: 14). In terms of research, my accounts take the form of articles in journals and books. But of course, an outline like this, a description of the focus, how it is referred to and the theoretical approach, is influenced by one’s own experiences, disciplinary position and career background. Thus, there is reason to believe that this article is biased, although, since I adhere to the tacit and neutral researcher tradition, my intention is quite the opposite.

Several methods have been used for reducing the personal touch; what is written has been commented on by several of those involved in the process, a certain perspective is chosen, environmental concern, scientific



Fig. 1. Continued

involvement and governance, and reflexivity is sought. According to Feighery (2006: 271), '[t]he term "reflexivity" is used to refer to the capacity of researchers to reflect upon their actions and values during research, whether in producing data or writing accounts.' The more the writer has been involved in the processes described, the more difficult is this option. Thus, although intentions are good, questions may be raised concerning aspects such as 'interpretative validity', 'discipline-cultural' and 'own deep-seated structures of argumentation' (Feighery 2006: 273, compare Hollinshead and Jamal 2001). There is of course a risk that processes of which I have been a part, will be referred to in greater depth and given a more prominent position in the development than deserved, and that other processes will be underestimated or even overlooked.

The evidence for this article, besides the introspective accounts, is secondary data, some statistics and official documents, and academic material such as articles, books and websites.

Svalbard: the Norwegian involvement

Svalbard was 'discovered' by the Dutchman Willem Barents in 1596 (see Arlov 1996a, 1996b). The history of Svalbard has five distinguishable industrial eras, which partially represent separate commercial activities; whaling, trapping, mining, tourism and research. Until the beginning of the 1900s, Svalbard was a no-man's land. Norway claimed sovereignty over the islands and, after World War I, an international treaty granting Norway sovereignty was negotiated and signed in 1925 (Svalbard Treaty 1925).

Environmental concern for Svalbard can be traced back to the period before the Svalbard Treaty was signed.

For instance the protection of northeast Spitsbergen was proposed by the Norwegian authorities at an international Svalbard conference in 1914, and again by the well-known polar scientist Adolf Hoel in 1920 (Norway Ministry of Environment 1994). The Svalbard reindeer has been protected since 1925 (Norway Ministry of Environment 1994). Where protection has been suggested, it has been based on science and research. In 1928, the Norwegian Polar Institute (at that time Norwegian Svalbard and Polar Sea Investigations (NSIU)) was founded with Adolf Hoel in charge (Norway Ministry of Environment 1994). The Institute has been central to both polar research and the governing of Norwegian polar possessions ever since. A new environmental regime that emerged in the 1970s was ambivalent to tourism on Svalbard, seeing it as an inevitable development but focussing on how it could be delimited (Norway Ministry of Justice 1974: 35). 'Tourism has consistently been viewed as a threat to the natural environment, largely without qualification or documentation of problems' as Kaltenborn (1996: 106) wrote in the mid 1990s. However, in the late 1980s an internal report by the Ministry of Industrial Affairs discussed and suggested a new regime and tourism was celebrated in a white paper presented in 1990 (Norway Ministry of Industrial Affairs 1990).

Svalbard had been known about for centuries when the islands in the 19th and beginning of the 20th centuries became a destination and a stopover for Arctic explorers. Several of the most well-known expeditions to the north were devoted to science (Riffenburgh 1993). For instance, several Swedish 'scientific' expeditions in the 1800s had Svalbard as their goal: an expedition led by Sven Lovén in 1837; in 1861, one led by Otto Torell; in 1864 another expedition led by Erik Nordenskiöld; and in 1896 and 1897 Svalbard was the point of departure for

Salomon August André's unsuccessful attempts to reach the North Pole by balloon. Among the Norwegian explorers, Fritjof Nansen was a scientist, Roald Amundsen and Otto Sverdrup were not, but scientists participated in their expeditions.

The expeditions of the 1800s received much public attention. Both travel writing and newspapers were emerging genres during the period and for the newspapers, explorers and their stories was prime material (Riffenburgh 1993). This was also the first period of modern tourism (Urry 1990), in terms of planned, prepaid and escorted travel, and the Arctic was one of the destinations. The first private yachts to Svalbard arrived in the 1850s followed by cruise ships from Europe in the 1870s and from the 1890s and by a scheduled ship route from Harstad in northern Norway (Drivenes and others 2007). This overseas and ship based tourism has existed ever since, apart from during war time and periods of recession, and is still a major part of Svalbard tourism. Local and land based tourism began in the 1890s; a hotel was run for a very few of years close to where Longyearbyen is today. Longyearbyen is in fact named after a tourist on his first visit to Svalbard, John Munro Longyear. He subsequently returned and started mining operations in 1905. The second period of Svalbard tourism began in the 1930s but further north, in Ny-Ålesund, where another hotel was constructed. World War II brought this era to an end, and apart from some cruise and expedition tourism and some trophy hunts, tourism activities were minimal for decades. For today's tourism, the new airport in 1975 and the political changes in 1990 have been the most significant factors.

In the period from 1990 to 2010, Longyearbyen was more or less transformed into a tourist resort. The private tourism sector already existed before the island opened up to tourism in 1990. Tourism had not been an illegal activity, but operations were difficult due to the lack of support infrastructure on the islands; no food supply, no transport or accommodation, no tourism industry. To go there was a complicated and expensive task requiring extensive planning. It was, in other words, an expedition. Since 1990, Svalbard tourism has been given priority by the authorities, and tourism has increased in every possible way. The number of commercial overnight stays in Longyearbyen was about 15000 in 1990, in 2008 the figure had risen to 93171 (Svalbard Industrial Development 1994; Svalbard Tourism 2009). The total number of visitors (the total number of cruise passengers and hotel guests) was stated to be approximately 32,000 in 1990, and around 50,000 in 2009. Tourism has also spread to all corners of the islands, increasing from about 50 ports of call to a maximum of 164 in the early 1990s; in recent years, the figure has stood at around 135 (compare Viken 2006). Tourist facilities in Longyearbyen in 2009 encompassed four hotels, a guest house, four restaurants, five pubs, several cafés, about ten local wholesalers (activity producers), two locally based cruise operators, a travel

agency and several air companies (one offering overseas flights).

Industry, research and environmental governance

There are several possible theoretical frames for analysing the relationships between tourism development, research and government. For instance the relationships could be viewed from the perspective of the theory of 'industrial districts', as naturally and historically bonded and bounded phenomena (Hjalager 2000), or as related industries in an 'industrial cluster' (Porter 1990). Another perspective is the triple helix model. As mentioned above, tourism on Svalbard emerged in the wake of the scientific exploration of the Arctic, and so did the authority involvement. To some extent, this is the traditional relationship between research and industry; research constitutes knowledge that can (or should) be used for industrial purposes. Tourism is no exception, it is an industry based on knowledge from a variety of fields: geography, natural sciences, history and heritage, and disciplines related to business, social life, culture and politics. One can also argue that tourism is a matter that should be managed from a societal or natural resource perspective. Therefore, authorities are often the second or third parties in discussions concerning tourism development. It is this relationship between industry, research and government that has been labelled triple helix (Etzkowitz 2003). In this model, both authorities and the university sector have innovative roles, and there is supposed to be collaboration between the parties. Both top-down and bottom-up examples exist (Etzkowitz 2003: 332); the bottom-up model is normally less intentional or strategic, but often has a better foundation. Application of the triple helix model within tourism studies is rare. However, it is argued that, in this sector too, universities can take on roles within technological transfer and innovation, leadership and networking (Pinto 2007). To some extent, what has happened on Svalbard can be seen as a triple helix case. However, the model is intentional, and the relationships studied are not, or only partly. Therefore industrial symbiosis is chosen as an alternative departure, an approach related to ecological economy and to the fact that modern industry is constrained to take environmental precautions (Deutz and Lyons 2008).

Tourism is a complex system, including 'tourism, community, government, non-government and natural environment systems (for example climate, ecology) dynamically interacting', according to McDonald (2009: 456). In recognising this, it is easy to see that tourism development involves many aspects of society and several scientific disciplines. Analyses using a complex science approach show how changes on one level or in one part cause changes elsewhere. For instance, strong environmental focus in one part of a system influences the thinking in another. As the quotation above states, environmental concern is one of the factors in

regarding the tourism industry as a complex system. Environmental concerns are part of current industrial thinking, and are highlighted in theoretical approaches such as ecological economics and sustainable development. Tourism development and planning is another area where sustainable policies are recommended (compare Sneddon 2000; McDonald 2009). It is widely recognised that tourism utilises common pool resources, involves diverse stakeholders and has societal and environmental impacts. Taking this into consideration and with its governance tradition, it is no wonder that reciprocal dependency, or symbiosis, is the result in a place such as Svalbard.

According to Desrochers (2002) industrial symbiosis can be categorised as a type of agglomeration economy. Along the same lines, Chertow and others (2008: 1300) claim that '[i]ndustrial symbiosis engages traditionally separate industries in cooperative approaches for managing resource flows that improve their overall environmental performance.' In the case analysed in this article, the focus is slightly different; how the products or services in one sector produce missions, work and progress for other sectors, with a mutual goal of preserving the environment. The intentionality of the industrial symbiosis is not as strong as in the triple helix model, and is often based on transactions, occasional interactions and experiences from individual cases. Over time, and through different types of interaction and collaboration, separate actors and sectors develop interdependencies or solve commonly recognised challenges (Desrochers 2002: 51). In most cases, industrial symbioses take place in networks that are more or less formally defined. Hewes and Lyons (2008: 1331, relating to Granovetter 1985) argue that embeddedness and trust tend to form central elements in such networks, and emphasise the 'role of personal relations and networks of such relations...' and '...discouraging malfeasance...' as aspects of such viable industrial symbioses. Longyearbyen is a small community with many opportunities for creating such trust and bonds. But the community also exhibits high population turnover (Viken 2008), a factor which tends to undermine such bonding.

Governing and governance

During recent decades, it has become widely held that the steering paradigms in western society have changed, especially in terms of a movement from government to governance. Such changes are also seen within the governing of tourism on Svalbard (Viken 2006). In general terms, governance implies that those being governed take part in the governing through participation in governance networks. As modern society and the modern state have developed 'no actor has sufficient overview to make the application of particular instruments effective; no single actor has sufficient action potential to dominate unilaterally in a particular governing model' according

to Kooiman (2003: 4) as an explanation for this development. Thus, governance refers to regulation, management or steering activities where a multitude of actors are normally involved, both in the decision-making and implementation processes (Kjær 2004; Kooiman 2003; Pierre 2000; Pierre and Peters 2000). The culture for governing has changed in this direction due to privatisation processes, a new awareness of societal responsibility, and new opinions about the roles of the nation state (Kooiman, 2003). In relation to this discussion, Jessop (2003) mentions both tendencies of 'de-nationalization', transference of power from the state to both transnational and subnational levels, and 'de-statification', stronger private sector involvement in governing.

Four major models for governance will be analysed here: hierarchical governance, self-governance, co-governance and meta-governance (Kooiman 2003, Jessop 2004, Kjær 2004). Hierarchical governance is an old type of steering and could also be called traditional governing; it is a model in which the authorities, through laws, rules, policies and plans, decide what constitutes right or wrong conduct, and are also in charge of implementation and control. Self-governance or self-regulation, on the other hand, can be defined 'as a legal regime where the rules that steer the behaviour [...] are developed, managed and implemented by those whose behaviour shall be managed' (Sanford and Kimber 2001: 162). However, even more common than self-governance, is co-governance: projects, processes and decisions made in collaboration between the governments and those being governed; a shared responsibility for governing or managing among private and public stakeholders, constituting more or less formalised networks. To many, governing networks are the essence of governance, and there is a whole variety of models and terms, all referring to different forms and degrees of private involvement; 'collaboration', 'co-operation', 'partnership', 'co-management'.

The final model and term to be used here is 'meta-governance,' which refers to the creation of frames and incentives according to which networking governance can take place, but also 'governance of governance or governors through modification of the (normative) framework in which ... governing activities evolve' (Jessop 2003: 14). Normally meta-governance will be a responsibility for the authorities (Kjær 2004: 49). The 'emerging meta-governance roles mean that different forms of coordination (markets, hierarchies, networks, solidarities) and different forms of the self-organisation characteristics of governance take places: "in the shadow of hierarchy"' (Jessop 2003, quoting Scharpf 1994: 40). Governance is steering based on trust and responsibility, meta-governance is about establishing such cultures, and providing governing regimes through means that make governance possible.

The literature on the governing of Svalbard tourism is very fragmented. In the period focussed on here, a kind of political awakening took place, which resulted

in scepticism towards the existing top-down political culture. Traditionally, Svalbard has been governed by the ministries without significant local influence. Regime scepticism was observed in the implementation of a recreation and tourism management plan in the 1990s that has been characterised as a process of ‘stumbling through’ (Kaltenborn 1996). The opposition towards external management efforts can also be observed in a process in the 1990s through which the World Wide Fund (WWF) produced a set of tourism guidelines. Most locals were sceptical, seeing the WWF project as a form of encroachment. But, the 1990s was also the era that saw an emerging network governance involving both the private sector and the authorities, and blurring sector borders and power relations (Viken 2006).

Among those writing about Arctic tourism, many tend to make comparisons to Antarctic tourism (Mason 2005; Snyder 2007; Stewart and others 2005). A problem with these accounts is that they tend to be inaccurate. For instance they are essentially overlooking the fact that whereas Antarctica is uninhabited, more than four million live to the north of the Arctic Circle (which is one way of defining the Arctic). Another example of inaccuracy is ignorance of recent developments on Svalbard (Viken 2010). None of the accounts referred to above mention the Svalbard Environmental Protection Act that has been in force since 2002. Some of this writing gives an impression of the Arctic, in contrast to Antarctica, as not being monitored, controlled or managed (Mason 2007: 171). The actual fact, the opposite is far more likely. In the north there are national states taking care of management and policing, in the south there is a treaty that is difficult to control (Snyder 2007: 234). As this article will show, at least on Svalbard, the national regime on these islands represents a somewhat comprehensive governing system. And the WWF guidelines seem to take up a disproportionate amount of space in academic accounts, probably due to the fact that many of those writing about Arctic tourism themselves took part in the creation of the guidelines (including this author).

In relation to Svalbard and even more to the Arctic in general, a series of precautionary articles have been written, listing threats and challenges, based more on opinions and possible future events (and risks) than on factual problems (Mason 2005, compare Viken 2010). It should also be said that an account written in 2003 on behalf of the authorities, stated that no real environmental problems were registered related to tourism and travel (Presterud 2003).

Environmental governance of Svalbard tourism since 1990

The development of tourism on Svalbard after 1990 can be seen from different angles. It is a private, business-driven development, but the research sector and authorities took part in different processes. And it has been a development within which the authorities have been both

drivers and controllers; the Ministry of Industrial Affairs was in charge of tourism policies but collaborated with the Ministry of Environment and the Ministry of Justice, which is responsible for Svalbard politics in general. The governor of Svalbard is in charge of implementation; however, the local governing committee (the equivalent of a municipal assembly) can make decisions in some local issues. The government’s overriding objective is for Svalbard to rank among the best managed natural areas on earth. In the 1990s this aim was reiterated several times in white papers, but also in local documents and plans, for instance in a revision of the tourism plan for Svalbard in 1997 (Svalbard Industrial Development 1997). In more general terms, the Government’s responsibility is ‘... maintenance of peace and stability in the area, preservation of the area’s distinctive natural wilderness and maintenance of Norwegian communities on the archipelago’ (Norway Ministry of Environment 1999).

Table 1 contains the most central governance types, bodies, processes and remedies, as well as research involvement. The table relates to the four types of governance introduced in an earlier section and shows examples of the different types. The model also differentiates between policy-making agencies, implementation and monitoring/control. There is a strong link between policy-making and governance: ‘governance is now seen as the negotiated outcome of many interacting policy systems, participation in which is not simply the preserve of “policy planners” and “top-decision makers”’ (Boivard 2005: 222). Policymaking networks are indeed more common than governance in implementing processes (Dredge 2006). Nonetheless, most implementation takes place through different actors following rules and plans, and in most cases the authorities take care of monitoring and control. However, a whole variety of feedback models exists.

At the top of the current governance system (or hierarchy) is the Svalbard Treaty, but in relation to the environment it is the Svalbard Environmental Protection Act. Besides being a framework for environmental governing of the islands, the act constitutes a warning: if the industrial sectors do not act responsibly, the governor will intervene. This message had in fact been given before and had resulted in a rather strong culture of self-regulation and co-governance in terms of tourism development on Svalbard. However, the law also modified the principle governing terrestrial travel on the islands, from everything being legal if not explicitly forbidden to everything being forbidden if not subject to exception within a regulation. The tourism industry was involved in the legal process, had a member in the national committee that produced the law proposal, and also participated in hearings on the guidelines (*forskrifter*) that were produced to make the law operational. The law as such can be seen as a type of meta-governance, representing the environmental frames for tourism development and governance arrangements. In terms of implementation, all actors have to follow the law; nevertheless,

Table 1. Governance of the tourism-environmental nexus on Svalbard and academic involvement in the processes.

Governance type	Policy-making (and documents)	Implementing bodies/means	Monitoring/Control	Academic involvement
Hierarchy	Tourist Guideline (1990)	Governor's Office (GO)	Governor's Office (police)	Unknown
	Management plan (1991)	Governor's Office	Norwegian Polar Research Institute (NPolar)	In staff (during creation)
	Tourism management plan (2004)	Governor's Office	Governor's Office	Hearing
	Tourist Tax	Airlines/Svalbard Environmental Fund	Governor's Office	Represented in the Board
Self-governance	Snowmobile guidelines (2000)	Tourist operators Svalbard Tourism	Yearly reports from Svalbard Tourism	None
	Tourism quality assessment (1995–2006)	Svalbard Tourism	Visitor surveys 1995, 1997, 2000, 2006	Undertaken by research institutes
	Tourism development evaluation (2004)	Svalbard Tourism	Assessment of tourism development 2004 (Svalbard Tourism)	Conducted by a tourism researcher at a University College
Co-governance	Association of Arctic Expedition Cruise (2003) (AECO) Guidelines	AECO	AECO	Diverse
	Tourism Development Plan (1994)	Info-Svalbard (later called Svalbard Tourism)	Revision in 1997 by Svalbard Tourism, assessment in 2004 by Svalbard Tourism	In Staff. The 2004 assessment conducted by a hired tourism researcher
	Development of the Svalbard Environmental Protection Act (SEPA) for Svalbard	Governor's Office Following a normal law process	NPolar: Mosj Governor's Office (police)	As normal for law processes involving different types of expertises
	Regulating guidelines under SEPA	Governor's Office	NPolar: Mosj Governor's Office (police)	As normal for regulation processes
	Svalbard Common Sense Guidelines (a tourist code of conduct)	The tourism industry	Governor's Office	None
	Cruise guidelines	The cruise industry	Unknown	Npolar
	Statistics report system	Svalbard Tourism and Governor's Office	Statistics Norway	Statistics Norway
Svalbard Nature Guide	University Studies on Svalbard (UNIS) / Finnmark University College	Unknown	In all stages of project	
Metagovernance	The Svalbard Treaty	Government, Governor's Office	Governor's Office, international community (signing countries)	Scientists such as Adolf Hoel
	SEPA – a frame for environmental governance	Governor's Office	Governor's Office	
	Central authorities; Whitepapers	Ministries of Environment, Industrial Affairs or Justice	Ministries of Environment, Industrial Affairs or Justice	Diverse
	Local authorities	Longyearbyen Local steering Committee	Longyearbyen Local steering Committee	Demanding research and assessment
	Yearly budgets	Norwegian Parliament	Governor's Office, Ministries	

negotiations, interpretations and networking take place in implementation processes and practices. However, these aspects have yet to be studied.

Concerning self-governance, the most significant factor is that the local tourism industry stepped forward as responsible actors: in the production of the tourism development plan (1994), creating environmental strategies (1997), establishing guidelines (2000), undertaking a project aimed at improving the environmental practices of the tourism industry (1998), and in assessing tourism development (Svalbard Tourism 2004). In addition, Svalbard Tourism has also been running a training and certification program for tour guides for several years (for other examples see Table 1). However, many of the initiatives taken by Svalbard Tourism tend to be realised in cooperation with the authorities, as this is often a way to gain funding, and thus constitutes an example of co-governance.

A premise for governance is feedback. There are different systems for this. A system of statistics has been developed and occasional assessment projects undertaken. In terms of the environment, monitoring is best taken care of by a web-based system called 'Mosj' [Miljøovervåkning av Svalbard og Jan Mayen]. This is an information system containing 230 environmental indicators. There are several measures related to tourism volume and change, and the environment is measured according to the factors that influence it. Among these are tourism, climate, fauna, flora and heritage (Norwegian Polar Institute 2010). In principle it is an impressive system, but there is little information about its efficiency. It is probably also predominately a warning system, providing information about changes to and standards for the indicators chosen. (For more on the limitations of such systems see Goodall and Stabler 1997).

Most of what is presented here tends to take the form of 'soft' management, for example information, guidelines, educational interpretation and guiding (Mason 2005). This is in contrast to hard management, which Mason characterises as 'regulatory' (Mason 2005: 175), normally of the hierarchical type; enforced regulation such as restrictions on use, physical means, policing or taxing. Mason argues that hard approaches can be difficult to apply in the Arctic (as well as in Antarctica), and seems to have more faith in soft and interpretative management (Mason 2005: 188). This is also more in line with modern governance thinking; governing in collaboration with the governed.

Academic involvement

Academics taking part

Concerning tourism development in Longyearbyen in the 1990s, tourism academics were involved from the very beginning. University college personnel were recruited to create a tourism development plan. They came up with models and documents that did not meet their employer's

expectations and were subsequently dismissed. Looking for someone to take over, the company in charge, Svalbard Industrial Development, decided to produce the plan in-house. The author joined the team as a member of academic staff from another university college; experts and academics were hired for the planning process to perform analyses of the economic significance of tourism, the solidity of existing tourism companies, and, in a study that included use of the Delphi technique, an interactive forecasting tool based on a panel of experts, to reveal marketing strategies (Svalbard Industrial Development 1994).

One of the regulations in the early 1990s was the recreation and tourism management plan produced at the governor's office. The executive officer was a geographer trained in the USA who was familiar with modern research-oriented management models (see below). The process related to Arctic guidelines for tourism, managed by the World Wildlife Fund (WWF), was academically very weighty. Environmental and tourism specialists from all over the world took part (Mason 1996), including employees from the Norwegian Polar Institute, and academics from universities in New Zealand, UK, USA, Canada, Germany and Norway. However, locally, scepticism towards both these projects was apparent, particularly from local nature enthusiasts who regarded the projects as a form of 'cultural imperialism' and 'academism' that curtailed their recreational freedom. As mentioned, the local community at the time was opposed to decisions imposed on them (Kaltenborn 1996: 104). Locally, the WWF project was also seen as a paradox, many people travelled thousands of kilometres to Svalbard for a two-day seminar aimed at protecting the environment. Another paradox is that locally on Svalbard these guidelines have never been used. The reluctance was also probably related to the fact that the WWF had been active in hindering the construction of a road between Longyearbyen and Svea (a distance of 90 kilometres) a couple of years earlier, an issue which divided the local community and the tourism industry.

Promoting values and attitudes

Before 1990, academics would from time to time take on different roles in Longyearbyen, for instance in the school, the mining company and at the governor's office, but essentially it was a town for mining and miners, not particularly involved in environmental politics, but strongly focussed on preserving opportunities for a minimally-regulated outdoor life, for instance travel by snowmobile was unrestricted. Thus, for decades, natural scientists constituted the only academic stakeholder group on Svalbard (although they did not live there) that was genuinely environmentally oriented. The scientists were sceptical to industrial development in general. And not without reason; throughout history there have been several incidents of environmental damage related to human intrusion in the north, first and foremost whale

hunting, and some mining activities. In addition, tourist polar bear hunts in the post-war period were highly questioned and a treaty that protects this animal was signed in 1973. Most of the strict regulations enforced over the years have been based on scientific evidence of environmental problems or risks, but nonetheless, a white paper stated that tourism was still expected to increase (Norway Ministry of Justice 1974). Obviously this was seen as an inevitable occurrence. Nevertheless a restrictive policy towards tourism was followed for another 15 years. The Brundtland Report, presented in 1987, represented new paradigms in terms of environmental problems and solutions. It was based on the idea of ecological modernisation, simply interpreted as development through problem solving (Hajer 1995); in general, most environmental problems can be transformed into economic opportunities. For tourism this may mean that development, brought about in combination with environmental concern and conservation measures, is a productive relationship. In the wake of this philosophical change, the authorities converted to a proactive tourism policy on Svalbard and new research fields and professions entered the scene, among these environmental officers and tourism employees. With the new regime, the academic milieu changed in Longyearbyen. Those involved in tourism and those involved in environmental conservation had similar academic and professional backgrounds. They had the same values, spoke the same 'language', were parts of same social networks, and had the same ideas about how tourism should be developed and the environment protected (Viken 1998). This may also be seen as a diffusion of values, partly related to educational policies and programmes, partly to more general societal adoption of prevalent values (Eder 1996). Thus, as has been argued (Viken 1998), in Longyearbyen, in the late 1990s there were more impetuses for collaboration than for antagonism in terms of tourism development.

The tourism activities of the early 1990s increased pro-environmental sentiment in the town. The major impacts of the tourism development plan and its environmental focus as well as those of the recreation and tourism management plan and the WWF guideline project, were probably precautionary; creating a clearer environmental awareness both within the tourism industry and the community in general. For instance, in a strategic follow-up of the tourism development plan in 1997, the environmental aspects and aims formed a major perspective. The mining company also adopted environmental concern in its rhetoric, and is currently proclaiming its support for the Government's aims concerning preservation and management (Store Norske Spitsbergen Kullcompagni 2010). In addition, there are watchdogs with high academic profiles; in 2004 WWF produced a report on the environmental impacts and threats of cruise tourism, and Greenpeace regularly patrols the area, relying heavily on internationally renowned specialists in their work.

An explanation for the strong environmental focus of tourism development in the early 1990s can also be traced back to the fact that several of the early tour operators in Longyearbyen had academic backgrounds or backgrounds as environmentalists and outdoor enthusiasts. Two of the operators were minor players, a third became the biggest local tour operator for many years, and a fourth entered the scene some years later as a well-known eco-tourism company with a high academic profile in their operations elsewhere. Some of these companies also dominated the local tourism development agenda. However, this description cannot be applied to all parties; some ship-owners, trappers and adventure tour operators were not part of the group, but were passive players in developing processes. Thus there was also a strong environmental drive within the tourism industry, and most employers were in favour of governed tourism development.

Following the book

In the Svalbard Tourism Development Plan, finalised in 1994, well known models from planning theory were followed; most notably what has been called a social learning model (Reid 2003). It was a clearly expressed goal, through a planning process, to produce an improved mutual understanding of the tourism business for key actors. The planning process implied interaction between different stakeholders, with discussion of values and the knowledge base, and was a process led by a task oriented action group, all vital aspects of a social learning planning process, according to Reid (2003: 125). The plan was launched in September 1994 at an open conference. Although, the planning process was open (Viken and Jørgensen 1997), few people showed interest, and the lack of interest made it difficult to follow good models and intentions.

The content of the Svalbard Tourism Plan from 1994 reflects some of the major theories and trends of the time. Books such as those by Mill and Morrison (1992), Mathiesen and Wall (1982), and Wall and Mathiesen (2006) on tourism resources and impacts, as well as Leiper's (1990) model of attraction systems were followed, although this was only apparent to those familiar with these theories (Svalbard Industrial Development 1994: 31–36). A resource-product analysis including regulating constraints was presented. The term 'eco-tourism' was intentionally not used within the plan (compare Viken 2006), but one of the goals was that tourism should be 'ecologically sustainable' (Svalbard Industrial Development 1994). The plan corresponds well with the recommendations of Page and Dowling (2002) regarding analyses of future product opportunities, resource base, logistical problems and the need for information strategies, but also their recommendations for networking, and maintenance of close connections with the authorities; in general, a transparent process was followed.

The Governor of Svalbard also 'followed the book'. In the recreation and tourism plan for Svalbard from 1994 (Norway Ministry of Environment 1995), a management plan, the models recreation opportunity spectre (ROS) and limits of acceptable change (LAC) were applied (Clark and Stankey 1979; Anderson and others 1993). They were however 'strongly modified to suit Norwegian conditions' (Kaltenborn 1996: 102). One of the ideas of the ROS model is to dedicate different zones to different types of recreation. In the process, four types of recreational zone were suggested; nature reserves, national parks, a recreational zone and a tourism zone (Viken and Jørgensen 1997). In the process behind the plan, four groups of tourists were identified, ranging from those who do not demand any form of commercial service (traditionalists), to those who are pragmatic in terms of environmental questions, commercialisation and governance, and prioritise the acquisition of experience (Kaltenborn 1996: 101–102). To cater to potentially conflicting recreation and tourist interests, two zones were designated snowmobile-free.

Heritage on Svalbard is also widely protected. In principle all material remnants from 1945 or earlier are protected. In developing this policy, close relationships between the governor's office, the Norwegian Polar Institute and several Norwegian universities have been established. Also here it is possible to pinpoint central actors. There are two types of actor, local laypeople that for years worked towards the creation of a museum, and their professional allies. In the process of creating the new museum, several sketches and plans were produced involving different types of expertise. In terms of historic documentation and heritage production and protection, distinguished academics have been involved in many of the processes, sometimes for several decades and, most importantly, creating an understanding of the values and rationale behind heritage protection.

In the Svalbard Environmental Protection Act some well known principles for environmental management (Goodall and Stabler 1997) are introduced in the governing of Svalbard. One principle is a duty of care. 'Any person who is staying in or operates an undertaking in Svalbard shall show due consideration and exercise the caution required to avoid unnecessary damage or disturbance to the natural environment or cultural heritage' (paragraph 5). The 'precautionary principle' (paragraph 7) states that if an authority lacks information regarding the environmental impacts of a plan or action, they can force the actors in question to provide them with this knowledge. The law also states that '[a]ny activity that is started in Svalbard shall be assessed on the basis of the overall pressure on the natural environment and cultural heritage that would result' (paragraph 8), introduces the 'polluter pays' principle (paragraph 9), and affirms that 'activities in Svalbard shall make use of the technology that puts the least possible pressure on the environment' (paragraph 10). There are other paragraphs dealing with

specific areas, and the law is elaborated in several sets of regulations or guidelines.

A symbiotic triangle: tourism, research and governance

The outline above shows many, frequently strong relationships between the major actors in what this article has called the TRG-triangle: tourism, research and governing institutions. Since the 1990s, the TRG sectors on Svalbard have emerged as the three most significant 'industries' in addition to mining, and have formed a base for an encompassing (fifth) service sector. There is reason to believe in synergies and spiralling development; it is widely acknowledged that success in one sector creates growth in the others (Koh 2002). A virtual doubling of the population in Longyearbyen in ten years is indicative of a dynamic community. However, what are the mechanisms turning relationships into symbiosis?

The symbiosis argument is partially related to the complexity of modern society and tourism (McDonald 2009). As a modern industry, tourism is dependent on trained staff, research based documentation and assessment, modern technology and information systems. To be socially viable and avoid conflicts with other sectors and local communities, tourism must be governed; there are requirements in terms of policies, political frames and standards for sustainable development that the tourism industry cannot fulfil on its own. Such governing implies restrictions, but also has positive impacts; for instance, for the tourism industry, formal protection of a site also brings about useful documentaries, public attention and status (Viken 2007). The Norwegian authorities, on the other hand, need industrial activities to legitimate their claim to the islands and to demonstrate environmentally responsible governing. And all industrial activities generate work for governing bodies. Thus, stimulation and development of tourism is a way of demonstrating the legitimacy of governmental offices. And, as in the research sector, industrial activities such as tourism create demand for assessment and documentation, and knowledge of tourism development. Governing is based on knowledge and research. The symbiosis is somewhat apparent, but is not necessarily a very solid construct.

Thus, to avoid 'waste', or as it is normally called in relation to tourism on Svalbard, 'environmental problems', there is work generation for all the TRG parties. The situation is, as Mirata and Emtairah (2005: 997) have observed for other industries, a symbiosis characterised by 'collective problem definition and innovation activities' and the search for solutions 'at the inter-sectoral interface'; what goes on are 'inter-organisational interactions in environmental problem-solving networks.' On Svalbard, the collective problem definition is nature and heritage protection and a viable community, the solutions are to be found in collaborative acts between tourism

(industrial activities), research (documentation) and government (steering and control). However, as Desrochers (2002: 51) claims, awareness of the symbiosis is not always present, even among key actors, although the collaborative culture is highly valued. And as observed elsewhere, incidents occur (McDonald 2009:468) that challenge the established patterns.

The viability of symbiotic milieus is debated, most notably in an account by McManus and Gibbs (2008). One of the aspects discussed by them is symbiosis as a matter of evolution and maturation; it takes time to set up a culture. From this perspective, the 15–20 years that this study covers (although earlier observations were also made) is not a very long period of time. A second, related point is ‘symbiotic learning’ (Lundevall and Johnson 1994). In governing processes the TRG stakeholder groups on Svalbard have learned by interacting, for instance how modern governing take place, that is the governance culture. Learning can also appear as ‘uncovering’ pre-existing industrial symbioses and investing in them, according to Chertow (2007: 20). It took some time before the governance climate was the norm on Svalbard, and it is still not universally recognised. Nonetheless, many acknowledge that the collaborative climate has long been the dominant pattern. A third aspect of symbiotic systems, as discussed by McManus and Gibbs, is trust and vulnerability (2008: 536). Tourism and environmental management on Svalbard is an example; the movement from distrust to trust between the three TRG parties from the mid 1990s to the late 2000s. However, when such established patterns are deviated from, its vulnerability is demonstrated. In January 2010, the tourism industry protested about not being included in discussions concerning shipping route regulations for the eastern part of the archipelago. This also relates to a fourth point McManus and Gibbs (2006) make; a symbiosis should to some extent be balanced. A problem on Svalbard is a lack of balance between the many fields of research; in 2009, a group of tourism researchers were denied access to Ny-Ålesund, a research station, for environmental reasons, when in actual fact many natural scientists, politicians and media personnel meet there regularly. There is reason to believe that the natural sciences carry a higher status. To sustain this there should be some kind of reciprocal involvement in a governance system. This has in fact become part of the culture on Svalbard. There is an impetus to involve the other parties, and to accept other stakeholders’ points of view. Tourism, research and the authorities all comprise a whole. The more one sector involves the other, the more likely it is that all will gain. The TRG symbiosis is a win-win situation. With non-participating and unbalanced parties it is not.

Two more factors should be added to this list, both relating to local circumstances. The fifth is the fact that it is difficult for a culture to be sustained on Svalbard. People are on time limited contracts, the governor’s office, research and tourism included (Viken 2008). New

actors are continually becoming involved, often without backgrounds in or knowledge of the culture, and often with a wish to leave their mark. Thus, a good symbiosis one year can be followed by a flawed one the next. A sixth destabilising factor is the high level of media attention that Svalbard, its environment and its tourism attract. This seems to make it more vulnerable to ‘iconic’ decisions and policies. Sometimes, it seems as though the governor’s office has to reassert its authority and make decisions that attract the attention of the media. However, even when the symbiosis is contested, as in high-profile cases, the protests are modest; obedience generally reduces the level of hierarchical governing and pays off in the long run.

Conclusion

This article has shown how tourism on Svalbard is involved in research and governance systems. The analysis leads to a conclusion that a symbiosis exists, that the three sectors in the so-called TRG-triangle, tourism, research and government are interwoven and both support and challenge each other. This is a relationship that is probably both innovative, environmentally preventive, and a guarantee of sustainable development on Svalbard. As the article has shown, such links have existed since the time of the Arctic explorers.

There may also be a missing link in this analysis. There is a fourth group of stakeholders that could be taken into consideration; the media. In the beginning of this article Riffenburgh’s (1993) writing on explorers in the 1800s was quoted. He shows the significance of the media in supporting, both financially and by providing publicity, the explorers of the era. A parallel probably exists today, with the media’s importance in terms of publicising tourism, environmental challenges, for research and governance. However this link has not been the subject of research.

A standard conclusion of an article such as this one is that there is a need for more research. Certainly this conclusion could also be drawn here. Here, timely coincidents and relationships have been unveiled, but how important these ties have been for those involved has not been analysed, nor the nature of attendant power relations. There is a need for more thorough documentation. There is reason to believe that the three sectors in the TRG-triangle are not equally important or powerful. This has to do with the hegemonies on Svalbard; the relationship between natural sciences and governmental bodies is still a matter for negotiation, tourism being an outsider, and these stakeholders would probably object to dependency on tourism as has been argued for here. Within the tourism industry, some would say that the governors are making trouble for them. Maybe the best way to create a power balance is more extensive tourism research, since among the TRG sectors on these islands, research probably holds the highest status.

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