

Deliberative democracy and co-management of natural resources: snowmobile regulation in western Sweden

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Abstract: Deliberation is an understudied aspect of co-management institutions and common pool theory that can be improved by a closer connection to deliberative democratic theory. Analyses of co-management arrangements provide needed empirical insights to deliberative democratic theory, although such arrangements are group-based and not readily accepted as examples of deliberative democracy. A framework is developed to analyze to what degree co-management arrangements incorporate deliberative elements and how they contribute to improved decision-making. To test its usefulness, a case study of a co-management process in Sweden is analyzed. In Funäsdalsfjällen, a mountainous area of western Sweden, a conflict-ridden situation caused by expanded use of snowmobiles eventually led to the establishment of a municipal regulation area. Central and regional authorities initially failed to resolve the conflict, but when the municipality started working directly with relevant interest groups, agreement was reached. Deliberative elements are shown to have been central to the success of the co-management process, and it is concluded that co-management and deliberative democratic approaches cross-fertilize one another.

Keywords: accountability, co-management, deliberation, deliberative democracy, mountain commons, snowmobiling, Sweden

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I. Introduction

A case study from Funäsdalsfjällen, situated in the western-most part of Sweden, will be used to explore the usefulness of integrating deliberative democratic theory into the discussion of co-management. Most cases of co-management, “a collaborative and participatory process of regulatory decision-making between representatives of user-groups, government agencies, research institutions, and other stakeholders” (Jentoft 2003, 3), also provide opportunities to explore whether deliberative democracy is well suited to solve complex, multi-faceted problems characterized by value conflicts and may in this way contribute to deliberative democratic theory.

There is increasing emphasis on deliberation in natural resource literature but few references are made to deliberative democratic theory (Parkins and Mitchell 2005). As a result, deliberation is not treated as a specific quality but as more or less synonymous with communication within a participatory setting (see for instance Konisky and Beierle 2001; Schusler et al. 2003; Stern 2005). However, deliberation is one particular kind of participation that is both deliberative and democratic, and therefore not all participatory practices correspond to this ideal (Meadowcroft 2004, 190). Deliberation has also been pointed out as a “key understudied issue” (Stern et al. 2002, 470) within the study of the commons to which co-management theory belongs.

Deliberative democratic theory is particularly stressed within green political thought, where it has been argued that public deliberative processes are required to achieve sustainable development. Sustainability, which is a normative concept, requires deliberation since it is first of all about ethical considerations and only secondarily about technical expertise. This is due to the indeterminacy and uncertainty entailed by sustainability and the complex and multi-faceted environmental problems it is supposed to meet (Barry 1996, 118). Meadowcroft (2004) believes that society’s capacity to manage the environment would be significantly increased by an extension of deliberative democratic practices in environment and natural resource policy, due to their promises for deepened understanding of collective problems, construction of shared visions and adjustment of preferences. Deliberation may in this respect be seen as a conflict resolution mechanism (Dietz et al. 2003), and it is considered particularly important to solve value conflicts (Barry 1996). These claims are rarely, however, tested empirically, which is why also deliberative democratic theory may benefit from co-management studies.

One example of such a value conflict over complex issues within the framework of co-management is the process in Funäsdalsfjällen. A co-management arrangement was initiated when local snowmobile regulations were established following a decade-long effort in the local community to resolve severe conflicts between snowmobilers, land owners and skiers. Snowmobiling has been viewed as an example of a ‘tragedy of the commons’ (Pedersen 1993; Hultkrantz and Mortazavi 1998). A commons is characterized

by non-excludability and subtractability (Ostrom 1990, 32). In Sweden, non-excludability was introduced in 1975 when snowmobiles gained legal access to nearly all snow-covered land. Since then there has been more or less open access for snowmobiles both on public and private land. If there were regulations, surveillance costs would be high due to the sparsely populated and vast landscape. Subtractability prevails as different appropriation activities interfere with one another causing negative externalities; snowmobiles cause increased costs for forestry and disturb skiers. Those interferences often erupt into conflict between different appropriators, as happened in Funäsdalsfjällen. The local co-management regulation system that resulted is unusual, at least in the Swedish context (Vail and Heldt 2004; see also Dustin and Schneider 2005). The following analysis explores to what degree the Funäsdalen snowmobile regulation area is a real world example of deliberative democracy and how deliberative mechanisms contributed to the resolution of conflicts.

2. Methods

This single-case study analyzes the development eventually leading to the establishment of a municipal snowmobile regulation area. Focus is on the last phase where conflicts were actually solved. The main empirical material is therefore a set of 11 interviews conducted with key informants who formally represented the stakeholders involved in the last phase of the process: the project coordinator and a ranger representing the County Administrative Board of Jämtland (CAB), an official of the municipality, a municipal politician and landowner, a board member of the local branch of the Swedish Society for Nature Conservation (SSNC), a board member of the tourist business association, the chair of the snowmobile track company, reindeer herders from the two Sami communities, the former chair of the snowmobile club, and a snowmobile merchant. The interviews were conducted in spring 2004 with the purpose of understanding the process – which mechanisms were at work – and its context. They covered personal aspects (roles and positions of the informants), motives to participate, and process characteristics (division of responsibilities, decision-making procedures, feedback mechanisms, etc.). The informants were identified by the list of project participants and by cross-checks with everyone interviewed. The last project phase consisted of four working groups; almost all project participants involved in the two working groups discussing snowmobiling were interviewed (about a fourth of the total number of participants). A total of 11 semi-structured interviews were carried out face to face, recorded and transcribed. To assess how the process and its results were perceived by those not directly involved, a survey presented in an undergraduate thesis was also used together with articles in local newspapers. Other written material, such as official project reports, Government Commission Reports, and archive material from the CAB, aided understanding the background and context of the process. Project meeting minutes supplemented the interviews in analyzing how deliberative the process was.

3. Deliberative democracy and co-management

3.1. The preconditions of deliberative democracy

Deliberation is “debate and discussion aimed at producing reasonable, well-informed opinions in which participants are willing to revise preferences in light of discussion, new information, and claims made by fellow participants” (Chambers 2003, 309). Most theorists set up three procedural preconditions for deliberative democracy: reason, publicity, and equality. Bohman (1996) adds a fourth one, non-tyranny, that will also be taken into account here. Reason implies that the guiding principle in political procedures is some form of inter-personal reasoning, where participants “are required to state their reasons for advancing proposals, supporting them, or criticizing them” (Cohen 1997, 74). Collective choices are thus not based on blind acceptance of the views of authorities, by deals concluded among vested interests, or by recourse to intimidation (Meadowcroft 2004, 184). The second precondition is that of publicity: the acts of giving, weighing, accepting or rejecting arguments (or reasons) are made in public, which forces participants to justify their arguments by appealing to common interests and the common good (Benhabib 1996; Bohman 1996; Cohen 1997). The third precondition concerns equality and inclusion: all affected parties should have the same chances to put issues on the agenda, to question, to interrogate, to propose solutions and to employ the full range of expressions that are available (Benhabib 1996, 70; Bohman 1996, 36–7; Cohen 1997, 74). Finally, non-tyranny, the fourth precondition, assumes “institutional requirements for constraining the distribution of power and is typically achieved via separation of powers or via legally guaranteed rights” (Bohman 1996, 35). I interpret this as recognition of the multi-layered nature of societal decision-making and support for deliberation from the institutional framework.

3.2. Does co-management theory incorporate deliberative elements?

As mentioned above, deliberation is increasingly stressed in co-management studies, but does it correspond to the above-stated preconditions set up by deliberative democratic scholars? In co-management theory, there is not much mention of reason, the first and most distinctive feature of deliberative democracy, although the three other preconditions are incorporated. Publicity is stressed as co-management implies collective, and thus public, practices to find common solutions (Berkes 1994; Wilson et al. 2003). Most co-management theorists have interpreted this as shared decision-making power between the state and local users (Jentoft 2003; Berkes 2007), which implies a certain degree of equality and non-tyranny. Power sharing is, however, not the starting point but the result of a continuous problem-solving process (Carlsson and Berkes 2005; Armitage et al. 2007). When discussing co-management involving indigenous peoples, aspects such as under what conditions indigenous representatives are able to express themselves are particularly important (Natcher et al. 2005). Non-tyranny

is stressed through the necessary multi-level character of co-management (Berkes 2007), entailing not only day-to-day operational rights but also higher-level collective choice rights (Pinkerton 2003).

Accordingly, the co-management literature seems to discuss most of the core issues of deliberative democracy. In deliberative democratic theory, these are discussed in close relation to the causal mechanisms they are believed to entail, which enhances the understanding of what makes deliberative democracy so promising. Are these mechanisms spelled out in co-management theory as well?

First of all, advocates of deliberative democracy believe that it has a 'civic virtue' (Pellizzoni 2001, 66) due to its public and reasonable character. Deliberative democracy produces citizens who are more informed, active, responsible, open to the arguments of others, co-operative, and fair. Consequently, deliberation has a community-generating power stemming from the very process of expressing an opinion in public. An individual wishing to convince others to concur must find reasons that will appeal to them (Benhabib 1996, 71–2), which means that the discussion will necessarily be focussed on the common good (Cohen 1997, 77). The same mechanism is advanced by co-management advocates, but it is often phrased as a conflict-resolving effect due to its community-generating power (e.g. Pinkerton 1989, 29) leading to changes in how stakeholders understand each other (Poncelet 2001). To develop a common vision of the desired future is essential for successful co-management (Natcher et al. 2005; Borrini-Feyerabend et al. 2007). The reference to reason is still lacking, however, as is its link to publicity that creates the focus on the common good. Instead there is debate on the role of consensus, which also exists among deliberative democratic theorists.

The second mechanism of deliberative democracy is its 'governance virtue' (Pellizzoni 2001, 66), which gives greater legitimacy to decisions. This rises from the preconditions within deliberative democratic theory for publicity, equality and non-tyranny. Decisions made under these conditions, under open and fair discussion, are more likely to be respected. The claim that outcomes are legitimate, to the extent that they are accepted in authentic deliberation, actually belong to the core of deliberative theory (Dryzek 2001, 651). This is one of the main arguments for co-management as well; in the process of meeting face to face a higher degree of trust is created between user representatives and government officials. The increased trust improves the ability to implement and enforce regulations as the users are more likely to perceive them as appropriate and legitimate (Pinkerton 1989, 30; Berkes et al. 1991, 30; Jentoft 1998, 9).

Finally, proponents put forward a 'cognitive virtue' (Pellizzoni 2001, 66–7) of deliberative democracy that is related to publicity, reasonableness and equality. When opinions and preferences are not established from the beginning, deliberation may contribute to the development of new or more fully articulated viewpoints, which may enhance the quality of decisions. Nobody can possess all the information relevant to take a decision affecting everyone, and nobody can foresee all arguments that others may find important (Benhabib 1996, 71).

Therefore deliberation is a way to produce the information required to take a collectively advantageous decision. In co-management literature, there is a different twist to this issue as it stresses that co-management brings together actors possessing different kinds of knowledge, which make management processes more flexible and adaptable (Berkes 2007). Government officials bring in scientific knowledge while local users have local ecological knowledge based on practical experiences. This wider range of knowledge and information sources is believed to contribute to better management decisions (Pinkerton 1989; Berkes and Folke 1998).

From the above, it seems as if deliberative democratic and co-management theories make similar promises. The theory of deliberative democracy employs the preconditions of equality, publicity, reason and non-tyranny as mechanisms to attain civic, governance and cognitive virtues. These virtues, or outcomes, are emphasized in co-management literature too, but it has not yet in detail clarified the mechanisms to attain them. Co-management theory discusses in particular power issues that can be paired with the equality and non-tyranny preconditions of deliberative democracy. However, the mechanisms of publicity and, in particular, reasonableness are relatively undeveloped. The primary added value of bringing deliberative democratic theory into co-management is therefore a deeper understanding of how these mechanisms may contribute to successful conflict resolution and improved decision-making. Cross-fertilization is also possible: deliberative democratic theory is often criticized for lacking empirical studies, which is the strength of co-management studies.

3.3. 'Group-based' deliberative democracy?

Co-management arrangements do not resemble the most common ways of imagining deliberative democracy, which are at the 'politico-constitutional' and 'societal' levels (Meadowcroft 2004, 187–88). The first focuses on how core political institutions, such as the legislature and the courts, should be reformed to enhance their deliberative character. The second view regards the deliberative character of public debate at large, e.g. deliberation as public discourses across society such as the sustainable development discourse (Dryzek 2000) or how deliberation could be improved by the media, within associations, and among the citizenry.

Meadowcroft, however, adds a third view by concentrating on the 'meso' level that includes the arenas of both the first view (the elected bodies) and the second (the public), but also the bureaucratic side of the state, and may encompass co-management. The 'meso' level involves "the deliberative interactions at the interface between state and society" (2004, 188). In his view, more formal deliberative fora at this level, in particular group-based ones such as negotiated regulation, mediation and environmental covenants, may enhance social outcomes in environmental policy. Such fora are to gather "interested actors from government, business, and civil society to address specific problems" (ibid,

181). Bohman (1996, 189–90) has a similar view when arguing that deliberative democracy requires complex interchanges between public and political institutions of all sorts. Bureaucracies which lack public accountability need to develop a ‘public sphere’ around them, by giving room for public hearings and local meetings as well as ‘oversight bodies’. According to Bohman, this would constitute a more ‘cooperative form of problem-solving’ to ensure influence. Also Parkinson imagines “deliberative forums as being embedded in a wider deliberative system” (2003, 191), where the interlinkages of communication and representation, authorisation and accountability create legitimacy.

Co-management, as defined by Jentoft (2003, 3), could also be described as group-based interactions between representatives of the state, the business and user groups addressing a specific management area or object. Thus, if deliberative democratic theory will embrace this third way of realizing its ideal, co-management studies offer many empirical examples. The preconditions of deliberative democracy outlined above could be used to develop a framework by which to analyze the degree to which decision-making bodies (such as co-management arrangements) incorporate deliberative elements. Table 1 summarizes the preconditions that together with a range of questions given by Meadowcroft (2004) constitute this framework. The rest of the paper will employ the framework to analyze (1) to what degree the Funäsdalen snowmobile regulation area serves as a real world example of deliberative democracy and (2) how deliberative mechanisms contributed to solving conflicts.

Table 1. *Preconditions for deliberative democracy.*

Preconditions for deliberative democracy	Explanation	Relevant questions (Meadowcroft 2004)
<i>Equality</i> (Benhabib 1996; Bohman 1996; Cohen 1997; Young 2000)	All have the same chance to put issues on the agenda, to question, to interrogate, to propose solutions and to employ the full range of expressions available to everyone else. All have equal access to all relevant arenas.	Who actually participates in the deliberative interaction? Do all interested parties have an equal opportunity to express their views and influence proceedings?
<i>Publicity</i> (Benhabib 1996; Bohman 1996; Cohen 1997; Young 2000)	The acts of giving, weighing, accepting or rejecting arguments are public so that all have a chance to judge them. Arguments must be formulated in such a way that all can understand them and potentially accept them.	Is the encounter structured to encourage the emergence of shared understandings and new solutions? Is the process open to scrutiny by affected interests who cannot take part directly?
<i>Reason(ableness)</i> (Bohman 1996; Cohen 1997; Young 2000)	Deliberators must state their reasons for advancing proposals, supporting them, or criticizing them.	Is the encounter structured to facilitate reasoned analysis, to give careful attention to expert opinions?
<i>Non-tyranny</i> (Bohman 1996)	To constrain the distribution of power there are institutional requirements, usually separation of powers or legally guaranteed rights.	Which formal requirements constrain the distribution of power? How is the collective output linked to any broader decisional process?

4. Snowmobile regulation in Funäsdalsfjällen

4.1. Conflicts in Funäsdalsfjällen and central regulation efforts

Funäsdalsfjällen consists of eight villages with a total population of about 2100. Tourism, agriculture, forestry, reindeer herding and public services provide employment. By far the most important economic sector is tourism and it indirectly sustains the public services in the area. Every winter the area counts around 650,000 overnight stays, and about half are cross country skiers. Ten thousand snowmobilers visit the area per year. Forestry and agriculture are also substantial activities, often in combination, even though their economic contribution is not currently considerable. Nonetheless they uphold traditions that date back several hundred years. The same is true for reindeer herding, which is still being carried out by the indigenous Sami population (Alexandersson 2000). This overview shows that the community of Funäsdalsfjällen is largely dependent on the resource system.

The area of Funäsdalsfjällen is a small and compact high mountain area of about 20 km between two valleys. This mountain landscape is the base of all essential economic activities, and some of them have negative impacts on one another, which cause conflicts between snowmobiling on the one hand and forestry/agriculture and cross-country skiing on the other. Snowmobiling has negative impacts on forestry in several ways, for instance by increasing the costs of snow clearance of forest roads, damaging tree seedlings and prolonging the length of the ground frost period (SOU 1994, 16). Cross-country skiers are disturbed by the presence of snowmobiles, which interfere with their expected experience of wilderness and silence, primarily because of the smell and the noise of snowmobiles (Lindberg et al. 2001).

Five interest groups were directly affected by the conflicts: landowners, the tourist and snowmobile businesses, reindeer herders, snowmobilers, nature conservationists and the authorities. Landowners were very active during the entire conflict resolution process out of a concern for their own future, which was perceived as threatened due to structural changes in agricultural policy. They saw snowmobiling in its current form as an intrusion but at the same time as a potential economic opportunity. The tourism sector used private land for snowmobile safaris yet did not pay landowners. The landowners wanted to change this by finding a win-win solution. The tourist and snowmobile business was primarily concerned that their most important visitor group, cross-country skiers, was disturbed by snowmobiling, which could lead to economic losses. In addition, new regulations combined with a high-quality system of trails could eventually lead to new employment opportunities, a common goal of both snowmobile renters and sellers. The reindeer herders had no concerns regarding snowmobiles. Their lands are mostly under direct management of the regional authorities and snowmobiling was already banned there. The snowmobilers strongly opposed any regulations. Instead they wanted to control snowmobiling through voluntary efforts. The local nature conservationists wanted to regulate snowmobiling to

protect the environment. Finally, the municipal and regional authorities, as well as certain local politicians, participated actively in the process to deal with the unfolding conflict and to work for the development of the area.

Even though there are different interest groups in Funäsdalsfjällen, the interviews reveal a high degree of trust and open communication. Relations between landowners and reindeer herders are strained from time to time, but communication is always continued. There also is a long history of organised cooperation through the joint enterprise Funäsdalsfjäll AB, which regroups 150 companies such as hotels, ski lifts, touring arrangers, supermarkets and snowmobile shops (Funäsdalsfjäll AB 2004), as well as through the joint organ of the village associations.

Politically, snowmobiling has been a 'hot issue' during the past several decades in Sweden, and central authorities have been demanding more strict regulations. In 1991, the CAB attempted to regulate 'pleasure snowmobiling' in Funäsdalsfjällen by force, but failed due to strong local protests. Instead the mission to find a solution based on voluntary efforts was delegated to the municipality. A local committee based on voluntary efforts was set up with representatives from most interest groups. At about the same time the government initiated a commission called the 'noise investigation' (SOU 1993, 51) which dealt with how to reduce noise in recreation areas. The committee was also charged to integrate the snowmobile issue into the municipal planning process. However, an agreement was not reached. In the next government commission report, the 'snowmobile investigation' (SOU 1994, 16), Funäsdalsfjällen was also named as the location for testing methods on how local planning could incorporate snowmobiling. The same committee thus continued their work, with some changes in representation, such as inclusion of the local nature conservationists.

During the same period there was a national debate about the perceived degradation of the environment of the entire mountain region, supposedly due to erosion and vegetation changes caused by reindeer herding and tourism. One of the most cited examples of such degradation was the region of Funäsdalsfjällen (e.g. Löfvenhaft 1994). This alarmed people in the area. A local Agenda 21 project, called the Mountain Agenda, was initiated to discuss environmental and land use issues including snowmobiling. The municipality decided to apply for funding and the work continued in an extended project reference group. Finally, in 1997, funding was granted and the last phase of the process started. The participants were organised into four working groups according to previously defined problem areas: trails, private-owned land, reindeer herding areas and development of local agriculture. The groups involved in the snowmobile discussion were primarily the trail group and the private-owned land group (Alexandersson 2000).

4.2. The creation of a municipal snowmobile regulation area

When the Mountain Agenda project was formally concluded in the end of 1998, the groups had agreed to: (1) ban snowmobiling except on trails, with the exception of landowners and local inhabitants who may use snowmobiles to go to a destination decided beforehand, (2) keep the trails at high international standard (with bridges,

grooming by piste machines, etc.), (3) charge fees for using the trails, (4) give economic compensation to the landowners for agreeing to have trails on their land, and (5) start a company to run the trails, including the administration of fees and compensation to landowners (Alexandersson 2001). This implied, in practice, that the new system of trails would be attractive and well-maintained, while at the same time designed not to harm skiers, vegetation or wildlife. It would also be beneficial to the landowners who would receive economic compensation for the trails on their lands. They would, in addition, own 51% of the 'track company' and thus have a high degree of responsibility for the system. The other 49% would be owned by a range of private enterprises and the snowmobile club.

The final decision to establish the municipal regulation area in accordance with the proposal from the working groups had to be made by the municipality, as by law a regulation area can be established only by municipalities or CABs. The proposal was adopted after harsh debates, where politicians from other parts of the larger municipality questioned why inhabitants in Funäsdalsfjällen would have more rights than other citizens. Applications for additional funding to construct the trails were thus handed in to the regional authorities, the Swedish Environmental Protection Agency (SEPA), and the European Union (EU). Almost 7.5 million SEK (~800,000 euros) was allocated for the project. The money guaranteed an exceptionally high standard on the snowmobile trails, which satisfied even snowmobilers.

Two employees (later reduced to one) were given the responsibility of informing people, ensuring that fees had been paid and monitoring the need for grooming. The police supervises enforcement but does not have enough resources to manage this task properly. Rule-breaking is punished with fines. Informal supervision, performed by the community members themselves, seems to exist to a certain extent. In economic terms, the company runs with a small profit that is reinvested in the system. For the community as a whole there are positive economic effects since more snowmobiles are sold, more snowmobile tourists visit, and new enterprises for renting snowmobiles and arranging snowmobile safaris have been established. Most people in Funäsdalsfjällen appear satisfied with the arrangement according to the informants, including snowmobilers (Johansson 2003). Informants representing SSNC and reindeer herders, as well as articles in local newspapers, point out that rule infringements do occur (see for instance Persson 2002) and some ski tourists still complain (Persson 2004).

4.3. How deliberative was the "Mountain Agenda"?

Below, the Mountain Agenda project is analyzed using the framework discussed above.

4.4. Equality

First, who actually participated in the deliberative interaction? All locally based interests were represented in each group of the Mountain Agenda process as verified by the project reports (Alexandersson 2000, 2001) and meeting minutes, but tourists

and owners of second homes were not directly involved in any sense. Informants considered that all relevant stakeholders participated. The representatives were designated by their respective organisations, and meeting minutes show that presence was not biased; almost all interests were present at almost all meetings.

Second, did all interested parties have an equal opportunity to express their views and influence proceedings? Decision-making was based on consensus according to nine of the eleven informants. One representative description was made by the regional ranger:

It was locally based altogether. Otherwise it would never work. Then we worked in such a way that everyone in this group had to agree, if we take a trail stretch or ... So nine people couldn't run over the tenth ... If anyone said no, we tried all the time to find [alternative] stretches ... I even think that some stretches were never realized because we couldn't reach agreement.

The reindeer herders were more hesitant in their evaluation. One of them viewed the process as a negotiation, where one could get through some issues but be forced to give up on others. Even so, his overall impression was that the process was positive. The other reindeer herder was more sceptical about the extent to which the group made decisions at all:

[W]e could decide where the trails should be. If a trail was going over where we had the reindeers just then, it could be closed ... [T]he group didn't really make any decisions, however. It was rather the landowners who [made decisions] ... or they were made at public meetings ...

Consensus does, however, not seem to be a guarantee for *equal level of influence*. This is due to existing legislation to some extent; landowners (including the state on state-owned land) have veto right on their own land as a consequence of their property right. As one of the reindeer herders noted, "*They couldn't go over somebody else's property and just take it.*". One of the landowners discussed this:

Ultimately then it's the landowner who decides the exact location for the snowmobile trail on his property, but the rough features were outlined and decided in this group by the parties who participated and had an opinion on this. They together decided and compromised ... It was discussed until we had consensus about that.

Even though landowner veto power existed, representatives of the snowmobile club and the nature conservationists felt that they were also able to influence the process to their benefit.

4.5. Publicity

First, was the encounter structured to encourage the emergence of shared understandings and new solutions through publicity? Since the work in Funäsdalsfjällen was divided into four different thematic groups with

representatives from all interests, issues were treated in a cross-boundary manner, which forced the actors to ultimately appeal to common interests. According to almost all informants, the atmosphere was characterised by compromise, and everybody's opinion was respected. This resulted in a high degree of understanding among all participants and in a common vision of a joint solution beneficial for all. The importance of this was emphasized by nearly all informants. For instance a municipal politician and landowner said:

[W]e had a clear objective; we put up goals and visions and we agreed on what we wanted to accomplish with this project. That is essential ... We had to emphasize this over and over again. Because when we got stuck, we went back to this "but it is this we want to achieve – a joint solution".

Second, was the process open to scrutiny by affected interests who could not take part directly? The designated representatives worked hard to bring back issues to their constituencies and to hold open meetings so that everyone in Funäsdalsfjällen had the possibility to scrutinise what happened. The process was not very open for the excluded group of tourists and second home owners, even though they could formally participate in the open meetings, as meeting minutes were not public.

4.6. Reasonableness

First, was the encounter structured to facilitate reasoned analysis? The thematic division of groups with representatives of all stakeholders in all groups gave participants a chance to learn from each other and ensure reasoned analysis. This means that the process was evidence-driven, in the sense that the working groups tried to establish the merits of all perspectives. One of the landowners outlined what happened:

Every stakeholder described what their land use involved, what needs they had and how they experienced disturbances from others, and then we did it from all different angles. You got both increased knowledge about what the others are dealing with, and also an understanding of how your own land use may affect others.

In addition, a wide range of communicative approaches (Young 2001, 688; Hajer 2005, 643) was employed. Maps were used extensively in the working groups to visualize the different proposals and thus facilitate more structured comparisons. In the track group, maps were employed to draw up and change trails according to the preferences of the actors. The participants of the track group also did field trips to test snowmobiling along proposed stretches to get a hands-on experience. The representative of the tourism entrepreneurs was one of several who mentioned how they worked with maps:

Just this with drawing tracks ... I don't know how many maps we used up to draw wishes. There it was good for snowmobiling, and there it wasn't good,

and there it was flowers and there it was eagles and there the reindeers came early in March sometimes and there ... But it was a lot of giving and taking ... and you have to respect the others' opinions.

Further, was the encounter structured to give careful attention to expert opinions? Experts from the academia, the national administration and higher levels of the financially and organizationally more powerful interest groups were invited to resolve issues where the views differed considerably. Their role was to open up locked positions on contentious issues. Several informants mentioned how important this was; for example a local politician and landowner stated:

[E]xternal expertise was called in, the Mountain Research Institute who did inventory work on vegetation effects ... We brought people from the SEPA who cleared out the right of public access [allemansträtten] ... This bringing in external people, I think it opened up [the discussion] a lot of times.

In particular, the participation of the Mountain Research Institute was appreciated since the researchers were perceived as being neutral. Their assessment of the effects on the vegetation in Funäsdalsfjällen showed that, in general, there was no detectable degradation (Van den Brink and Vikman 2000).

4.7. Non-tyranny

First, which formal requirements constrained the distribution of power? The process in Funäsdalsfjällen was required to involve multiple administrative levels: municipal, regional, and even national. Even if the working groups were active at a sub-municipal level, the municipality and the CAB were represented in the groups which guaranteed multi-level checks and balances. The project coordinator explained their different roles:

The CAB has had a relatively subordinate role in this. The municipality has been very active and sort of the motor in all this process ... It's a good cooperation between the municipality, associations and enterprises in this area who together have worked this out. The CAB has of course been there where they needed to be, but they didn't have a leading role, even though they were formal project owners. It was more of an administrative base.

The municipality coordinated and made the formal decision. The CAB is formally charged with monitoring snowmobile and nature conservation regulations, as well as implementing reindeer herding policy, and it participated more or less like one of the interested parties in the process. In addition, because of their property rights the land owners had a particular role deciding which issues were or were not negotiable. The national level was involved even though no representative of the national administration participated in the working groups. For example, when the discussions in Funäsdalsfjällen started, it was not possible to establish municipal snowmobile regulation areas. The government also turned down an appeal against

the snowmobile regulations coming from other parts of the municipality. Further, the national SEPA was involved in funding the projects together with the EU. The success of the process is, according to most participants, strongly connected to the funds that were granted from the EU, the SEPA, and the municipality.

The second question to explore the issue of non-tyranny is how the collective output is linked to any broader decisional process. The work in Funäsdalsfjällen was linked (even *interlinked*) to a broad discussion of the future of free snowmobiling, as shown in the background description of several government commission reports (SOU 1993, 51; 1994, 16). The issue of snowmobiling is important not only for recreation but also for business in the Swedish mountain region, as pointed out by the snowmobile business representative.

5. Discussion

The results above show how the process of establishing a snowmobile regulation area in Funäsdalsfjällen corresponded to the deliberative democratic ideal. To begin with the equality precondition and who actually participated, it was established that visitors (tourists and second home owners) were not included in the process. Should visitors have the same influence as the population in the area, which have much more at stake? When a community, like Funäsdalsfjällen, is dependent on external interests, these might be crucial to involve directly, but how can those who are not organised be involved? Opportunities to express views and influence proceedings were more or less equal; informants generally thought that their opinions had been respected, in particular when their own interests were at stake. But these equal opportunities did not translate into equal levels of decision-making power, as landowners had a veto right on their land. The deliberative framework prescribes equal opportunities, not the equal decision-making powers which are often stressed in co-management.

Regarding publicity, it was shown that the organization of thematic working groups led to increased understanding for other's land use, as well as a focus on the common good and the development of a vision that everyone supported. This vision seems to have been absolutely essential in bringing the work forward, as emphasized in other co-management studies. The process was open to scrutiny by the inhabitants of Funäsdalsfjällen, through their representatives and open meetings, but again it was not very transparent to others such as tourists and second home owners. That the directly involved constituencies (such as landowners and snowmobilers) designated their representatives contributed to this intense interaction and made participants accountable to their respective constituencies. Publicity was thus well fulfilled within the project, among the participating stakeholder organizations, and in the community as a whole.

The precondition of reasonableness prescribes an evidence-based process where reasons are always given to explain viewpoints. In Funäsdalsfjällen, this was largely achieved through thematic groups where the merits of all perspectives were established. The evidence-based process was further facilitated by the extensive

use of maps and field trips, which proved to be a good way to illustrate and solve difficult issues. In addition, the process was structured to give careful attention to experts, who were invited and who helped solving contentious issues.

Finally, the results on non-tyranny emphasize how the involvement of multiple administrative levels guaranteed a system of checks and balances. For instance, the municipal decision to create the regulation area was challenged when an appeal was addressed to the government. However, the unequal access to funds augmented the influence of the national (and supra-national) level. Most informants stressed the importance of the funding in making the regulation acceptable, as it made a trail system of exceptionally high standard possible. This implies that advocates of regulation had a great advantage in that they could provide money for development. The process clearly was not tyrannical, although it did not completely constrain the exercise of power.

The case of Funäsdalsfjällen incorporated many deliberative elements and thus approaches the deliberative democratic ideal. It therefore serves well as an empirical example of deliberative democracy, even though it is a group-based arrangement. However, group-based means representation and the consequences of imagining deliberative democracy as representative need to be stressed. In particular, it becomes central to discuss accountability; with group-based arrangements there is a risk of creating a 'tyranny of the organized' (Meadowcroft 2004). Accountability towards the citizenry as a whole must be secured when organized interest groups are being accorded a privileged role (Lane 2003). In Funäsdalsfjällen, accountability rests where it traditionally was – with elected politicians – since the co-management arrangement was a complement to the normal decision-making process. The details were worked out locally, but the formal decision was made by the municipality. In this way, an important possible deficiency of group-based arrangements – privatization of decision-making – was avoided since all citizens may hold the responsible politicians accountable in the next elections. At the same time, the benefits of deliberation could be employed at the local level to solve conflicts.

The question is then whether the deliberative elements contributed to create the virtues of deliberative democracy? Publicity and reasonableness together produced the civic virtue – more cooperative citizens – and helped end the bitter conflict. Publicity should also, together with equality, produce the governance virtue which is supposed to result in legitimacy and rule compliance. The process in Funäsdalsfjällen is widely accepted, but there are problems with rule violations. However, according to some informants, it is visitors who do not respect the regulations. If that is true, the situation could still be in line with the theory, since visitors were excluded from the process. This second, instrumental dimension of legitimacy is often ignored by deliberative democratic scholars but stressed in commons theory. More information and supervision are examples of practical actions that might improve rule compliance, but the use of such means can be decided by any kind of regime. Deliberation is thus not the only important aspect of a decision-making process; one also has to consider results and how rule

enforcement is upheld. Further, the third and last virtue implies that improved and/or more efficient information gathering and sharing leads to better quality decisions. The informants emphasized that their knowledge about other activities in the area was significantly improved through the process. The vision of finding a joint solution beneficial to all (resulting from publicity), and the emphasis on a reasoned debate motivated the invitation of experts, tests of possible new stretches of snowmobile trails, and simply investigating the issues from all angles. This should have contributed to a 'better' decision. The fact that there have been few protests against the trails since their opening agrees with this.

Deliberative democracy stresses procedural aspects of a process, while commons theory has traditionally focused on how contextual or exogenous variables affect the possibilities to achieve a particular outcome. This is why co-management studies provide excellent opportunities to explore under which conditions deliberative mechanisms may contribute beneficially. As the description of Funäsdalsfjällen shows, the small community was highly dependent on tourism (and thus the mountain landscape) and had a rather high degree of social capital due to a long history of organized cooperation. The small and compact resource system was considered as over-used, which together with the strong dependence on tourism created a feeling of urgency. External political forces were also favourable; Funäsdalsfjällen was used as a pilot project in two government official reports, expertise from central authorities and organisations provided assistance and important financial contributions came from the SEPA and the EU. Further, the process went on for about 10 years, which is a substantial length of time that corresponds with results from other co-management studies (Singleton 2002; Napier et al. 2005). This also highlights co-management as a continuous process of social learning, which is probably true for deliberative democracy as well. Under these favourable conditions, deliberative mechanisms helped settling the conflict.

6. Conclusions

The present study shows that cross-fertilization between co-management and deliberative democratic theory is possible. First of all, the understanding of what makes co-management work is advanced when the deliberative democratic emphasis on reason is stressed. It aids in the understanding of how practical measures can facilitate a process, as shown by the case study where mixed stakeholder groups, visual means and experts contributed to a reasoned discussion. Further, deliberative democratic theory sheds light on the mechanisms that create the virtues of co-management and deliberation. For instance, the common understanding emphasized in co-management studies is created through public and reasoned discussions. Secondly, the case study confirmed that co-management arrangements can be considered as examples of deliberative democracy and that studying such arrangements may advance deliberative democratic theory. Analysis of the process in Funäsdalsfjällen strengthens the claim that deliberative

democracy is required to deal with conflicts over how to solve complex and multi-faceted environmental challenges. With more careful design, co-management arrangements provide excellent opportunities to further explore under which conditions deliberative mechanisms are important. Co-management theory also contributes an emphasis on the instrumental dimension of legitimacy; the actual result of a decision-making process is often ignored in deliberative democratic theory. The case of Funäsdalsfjällen depicts how important this aspect is: the process is considered fair and just even though regulations are still not respected by everybody. To conclude, research on co-management can be more widely used for further theorizing about how deliberative democracy can be achieved in the real world, and deliberative democratic theory can be used to improve the design of co-management arrangements.

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