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Making sense of the social: human-nonhuman constellations and the wicked road to sustainability

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Social questions become especially tangible in the context of human-nonhuman interrelations. This article focuses on coexistential practices in the context of management, protection, and production and it clarifies how the social in particular empirical cases is enacted. The work is based on three empirical case studies. We explore the conflicts in forestry and urban planning caused by the Siberian flying squirrel; the increased presence of the grey wolf; and the paradox of the domestic pig—a clever animal that is treated harshly by factory-farming practices. As our cases indicate, the social is not a group of people living in a certain setting according to certain norms and traditions. The social is a contingent, activated constellation of interagentivities that emerges together with a shared concern that particular customs and habits are not serving the purpose they are expected to serve. The cases challenge efforts to adopt a human-centered view of the social as the basis for developing the concept of sustainability. They also indicate that there is no one social sustainability, but rather many articulations of the concept.

KEYWORDS: human-environment relationship, environmental sociology, conflict resolution, animal welfare, wildlife management, case studies

Introduction

The notion of sustainable development is usually divided into the economic, environmental, and social pillars, implying that a practice cannot be fully sustainable until all these three dimensions are fulfilled (Littig & Grießler, 2005; Casula Vifell & Soneryd, 2010). Social sustainability covers broad societal issues, such as democracy, social justice, welfare, and cultural identity. It is often defined through the underlying questions of what sustainable societal goals are and whether they are socially acceptable or not. Further, from the communal viewpoint, social sustainability has been defined as the ability of society itself, or its manifestation as a local community, to sustain and reproduce itself at an acceptable level (Dempsey et al. 2011).

The question concerning the social becomes especially tangible in the context of human-nonhuman interrelations.¹ Humans and nonhumans encounter each other in complex ways in certain environments and everyday practices. Animals are the most prominent nonhumans. During the twentieth century, the

relationship between humans and animals underwent a profound set of transformations (Macnaghten, 2004). The move has been from the categorical distinction between humans and animals toward new forms of empathy and codwelling. This move covers cats, dogs, horses, and other pets, but also, and perhaps in more radical ways, particular cases of wild animals and production animals. Currently, social scientific studies aim to address the animal question even though animals still remain largely invisible in social science texts (Barron 2003; Tovey, 2003; Hobson, 2007). As Hobson-West (2007) has noted, boundary-drawing as an activity of making sense of the world goes far beyond the human-animal dichotomy. It can be found in institutional rules that allow certain activities and prohibit others, in dichotomies such as nature/culture and, say, binaries of good and bad taste. However, a partial deconstruction of the cultural boundary between human and animal may be seen as a part of the broader postmodern (re)blurring of dichotomies.

Hobson (2007) has pointed out that most often when animals do become visible in social scientific studies, it is as objects in a struggle for resources. Yet, research that conceptualizes animals as part of specific political configurations—as subjects, not objects—enables a broader conceptualization of how the “political” is constituted in human-animal rela-

¹ On basic societal understandings of human-nonhuman interrelations, see, for instance, Knight, 2000; Philo & Wilber, 2000; Franklin & White, 2001; Alger & Alger, 2003; Buller & Morris, 2003; Tovey, 2003; and Shapiro & DeMello, 2010.

tions. In fact, animals are already subjects of, and subject to, social and political practices, since they intersect human daily lives, for instance, as food, pets, amusement, game, wildlife, and helpers, and thus constitute a pivotal part of socialities and political economies (Hobson, 2007). Animals should thus be brought into theorizations of how specific political spaces are constructed, relying not on contentious ideas of humanness and rights, but simply through an appreciation that agency is a dynamic but contingently stable relation between an organism and its environment (Hobson, 2007; see also Light, 2004; Hobson-West, 2007; Johnston, 2008).

The view that our encounters with animals are intrinsically social poses the question of how we should live with them. People are accustomed to seeking normative recipes for these encounters. Yet, normative rules or basic categories of human-animal encounters are not enough. They reveal some of the diversity and new choices of living together, but they do not make explicit enough that the nonhuman world has no *fixed* ontological properties. To explore the social from the ontological point of view, we continue pragmatic reasoning regarding animals as constituents of social and political life and their relative agency in emerging social and political spaces. The purpose of our article is to explore how the social in particular empirical cases is enacted. Our approach is normative in the ethical sense as we study the interactions through which the social and its functioning—sustainable or not—are created, maintained, and altered. The main question is: How is the social in human-nonhuman interrelations constituted?

We present three empirical case studies from Finland that illustrate the interest in human-nonhuman coexistence and development. These cases analyze the conflicts in forestry and urban planning caused by the *Siberian flying squirrel*; the increased presence of the *grey wolf*; and the paradox of the *domestic pig*—a clever animal that is treated harshly by factory-farming practices. In all cases, the empirical data and analyses are qualitative by nature. In the cases of the flying squirrel and the wolf, the empirical material has been gathered by participant observation and thematic interviews, whereas the case study on swine welfare is based on newspaper data.²

² Material in the case of the wolf is derived from 21 thematic interviews with stakeholders conducted during 2009–2010, seven field interviews with local residents living around wolf attack areas in 2009, and formal documents of the Infringement Proceedings between the European Commission and the Finnish government on Finnish wolf policy in 2005–2007. The case of the flying squirrel (see Haila et al. 2007; Jokinen et al. 2009) is based on a long-term interdisciplinary research project in the Tampere city region (300,000 inhabitants) carried out between 2004 and 2010 using the action research approach and multisource data gathered from planning documents, decision-making material, media material, inter-

The Social in the Context of Human-Nonhuman Interrelations

What is the Social?

We explore the social from the viewpoint of socioecological systems. We build our ontological conception of such systems on ecological and cognitive views. The key feature of the social according to the ecological conception becomes clear in an excerpt from the dictionary of the Stockholm Resilience Centre (2010). Social-ecological systems are:

[L]inked systems of people and nature. The term emphasizes that humans must be seen as a part of, not apart from, nature—that the delineation between social and ecological systems is artificial and arbitrary. Scholars have also used concepts like “coupled human-environment systems,” “ecosocial systems,” and “socioecological systems” to illustrate the interplay between social and ecological systems.

The Resilience Centre (e.g., Berkes & Folke, 2000; Berkes et al. 2003; Folke, 2006) holds that humans (authorities or environmental managers) must understand humans as part of nature. This observation suggests that it may well be that humans are not part of nature or, at least, they are not part of it the same way as the rest of nature is. Nevertheless, humans have an obligation to act as if they were part of nature. We see that even though the relationship between the ecological and the social is explicitly ethical, the understanding about the functioning of social-ecological systems is primarily grounded in ecology and secondarily in the social. It is a task of science—systems theory and modeling—to unfold the gap or the interplay between social and ecological systems for the sake of providing better tools for sustainable environmental and resource policy and management (e.g., Berkes & Folke, 2000; Folke, 2006; Ernstson et al. 2008; Galaz et al. 2008).

The cognitive view of the social-ecological expands the above conception. For example, Hukkinen (2008; 2010) uses the theory of embodied cognition to explain how humans and their environments are interconnected. For Hukkinen (2008), social-ecological systems are always constituted by the underlying ecosystem and the resources derived from it according to needs guided and controlled by the features of the social system, such as resource users and

views, dialogue workshops and seminars, and ethnographic observation of conservation and knowledge practices. The case of the pig is predicated on news and articles in *Helsingin Sanomat* between December 2007 and December 2009. The primary analysis is based on 46 news reports and articles.

their traditions, rules of the game, and physical infrastructure. This view of social-ecological systems, which builds on the work of Ostrom (1990), Lakoff & Johnson (1999), and Fauconnier & Turner (2002), is multifaceted and expands the understanding of the social compared to the ecological model. Hukkinen (2008) identifies two sets of the social: while one is local, lived, and traditional, constituting community life, the other is public, bureaucratic, and calculated. Hukkinen (2008) further suggests that social sustainability calls for a new kind of understanding about the interplay of the two dimensions of the social and the production of knowledge within particular social-ecological systems.

We continue in the same general field of research, but take a stronger position and argue that there are no gaps or interplays between the social and the ecological because there are no such separate systems in the first place. According to our ontological view, customs and habits constitute not only the social of the socioecological but the socioecological itself. For this concept, we lean on John Dewey (1988), who states this point succinctly: “But to a larger extent customs persist because individuals form their personal habits under conditions set by prior customs.” He continues, “Habits incorporate an environment within themselves. They are adjustments of the environment, not merely to it” (emphasis in the original). This environment as a fabric of customs habitually and deliberately undergone and enacted by human and nonhuman animals is what we call the social. Human and nonhuman animals develop and change habits in continuous organism-environment transactions. In particularly problematic situations, these adjustments tie humans and nonhumans together (see, e.g., McKenna, 2004; Johnson, 2010).

Ingold (1997) has elaborated this further, using the term “interagentivity” to describe the sphere of the social, asking whether there is “some region beyond the edge of nature, in which human beings live distinctively social lives.” He calls such a position an illusion. Through habits and customs, humans have continuous social interaction with the rest of nature. If there is life in nature, there are also human-nonhuman interactions. The human-nonhuman social life is not only interaction but covers a vast array of reciprocal relationships and different forms of life. Cultural variations of gardening and keeping domestic animals are well-known examples. Both humans and nonhumans can create and maintain social relations, and the differences between them in this regard are not absolute but relative. As Ingold (1997) claims, whatever we do to others is embedded in the context of our relationships with them. Life is being

engaged in relations with others, and the process of growth produces new forms of life.

This pragmatically oriented socioecological view helps us to understand that the social is not a separate realm beyond the individual, the public, and environmental settings, but that the social emerges and disappears contingently in dynamic habit-custom-law transactions. Therefore, research must focus on how people (individuals and groups) habitually and deliberately live with and encounter animals in their environments, and on what kind of productive and managerial practices are created when humans and nonhumans interact. The proper unit of analysis is then shared bodies of practical knowledge and embodied understanding that constitute particular customs and habits (i.e., social practices) (e.g., Wallace, 2009). Law (2004) and Law & Urry (2004) have extended this view with their version of ontological politics. Their important addition is that the social sciences are interactive: sciences in general, but social sciences in particular, do not examine the social that is out there, but rather participate in its constitution.

Three Case Studies on Human-Nonhuman Interrelations

Siberian Flying Squirrels in Forestry and Urban Planning

Since its origin in the 1980s, the notion of biodiversity has described the multitude of biospheric life. In political discourse, biodiversity is often used as a concept that tries to catch the contextual conditions of human life and its dependence on living nature, thus implicitly including the vitally important human-nonhuman relationships. Intensive efforts of biodiversity conservation make these relationships visible and create new relationships resulting from specific practices of conservation. One of the most comprehensive efforts of biodiversity preservation is the European Union’s (EU) Habitats Directive of 1992 - a conservation system with many similarities to the Endangered Species Act of 1973 in the United States. The Habitats Directive has given rise to severe implementation problems all over Europe both on local and national levels. This is because translating the general-level normative principle of conservation into practical governance procedures is a highly complicated matter (Haila et al. 2007; see also Durant et al. 2004; Jokinen et al. 2009). The Directive interferes with short-term economic interests, local cultural values, as well as understandings of ecological sustainability. Consequently, the conflicts triggered by the Directive are unpredictable and vary from case to case. It is hard to anticipate what kind of sociocultural consequences conservation decisions will have (Hiedanpää, 2002; Haila et al. 2007).

Conservation conflicts with the Siberian flying squirrel (*Pteromys volans*) began in Finland in the late 1990s after it was included among the most strictly protected species of the Habitats Directive. The Directive prohibits deterioration and destruction of any of the flying squirrel's breeding sites or resting places, with the aim of reaching the normative goal formulated as "favorable conservation status." Land-use conflicts have been problematic for years, but particularly so in growing urban areas where flying squirrels have cancelled development projects and slowed down planning. While having an extremely high conservation status resulting from the diminishing population trend due to forestry activities, the flying squirrel is fairly common in many areas in southern and central Finland (Hanski, 2006). The animal is nocturnal and only a few people have seen it in the forest. Flying squirrels can be detected only on the basis of their droppings in spring time. They can be found under big trees in mature spruce-dominated forests. In urban areas, flying squirrels inhabit parks, forested recreation areas, and even private gardens as part of their home range, as long as the habitat as a whole is large enough. As flying squirrels are entangled with many human activities in complicated ways (Jokinen et al. 2007), the case provides an excellent opportunity to study how the human-nonhuman aspect of the social becomes visible through conservation efforts. The social emerges as interagentivities (Ingold, 1997) in which humans and flying squirrels become inherent constituents of new practices and constantly determine each other's positions in new ways.

First, flying squirrels dwell in the same forests used by people. Their response to landscape changes indicates adaptation to forest management, but the problem in conservation is the quality and size of habitats in commercial and urban forests. Young flying squirrels searching for an empty habitat settle only in mature forests close to final felling, which today entails "squirrel rotation" in forest management, meaning that professionals and forest owners cannot avoid the possibility of squirrel presence but must be conscious of it. The invisibility of the flying squirrel—actually its simultaneous presence and absence—has been problematic for professionals and has raised conflicts in forest management. Illegal cuttings in flying squirrel habitats have triggered police interrogations, but guidelines by the responsible ministries have diminished the conflicts.

Second, the old image of the flying squirrel as an animal of remote wilderness areas has faded. The flying squirrel has become a player in urban development and a nightmare for planners. Due to their movements across urban landscapes, flying squirrels have intermingled with the whole planning process,

from master planning and building projects to the management of green areas, including lay-expert tensions in planning and civic mobilization against building projects. The presence of the flying squirrel may lead to significant economic consequences both for public and private building projects. Public confidence in institutions has diminished due to governance problems; and planners, organizations of land owners, forestry lobbyists, and leading politicians have requested that the flying squirrel be removed from the Habitats Directive, but without success.

Third, the Directive created an urgent need in urban planning to inventory flying squirrels. There was no such profession as flying squirrel surveyor, but some skillful citizens emerged from the forest to take the job. They were amateur ecologists with long experience observing hawks and owls, and, as a by-product, flying squirrels.

Finally, putting nest boxes for birds in the forest has been a common Finnish activity for at least a century, originating in an early national awakening of nature conservation in the late nineteenth century. This civic virtue has now been contested because flying squirrels have inhabited nest boxes in areas under development, making nest boxes mediators between developers and civil society. Also, flying squirrel droppings have become mediating artifacts, because the animal itself is not generally visible.

As a result of strict conservation, the flying squirrel has been embedded very broadly and tightly in the practices of land use and forest management, and also in the everyday life of citizens. As the descriptions above show, the human-squirrel relationship was not in fact completely new—flying squirrels have lived together with humans for a long period of time. The point is that strict conservation rulings made the human-nonhuman relations apparent and reorganized them into new practices among urban dwellers, amateur ecologists, planners, nature surveyors, and forestry experts. This has happened under conditions where top-down policy implementation works together with local policy formulation. New human-squirrel ecologies with particular influence on the socioecological system were born as a result of the reorganization. Human-squirrel interaction also has improvisational dimensions, which is an important feature of the social. For instance, many individual flying squirrels have adopted urban environments, nest boxes, and even buildings for nesting places. In conservation the tension remains: there are anxieties about restrictions resulting from conservation but also about the survival of the flying squirrel population.

Wolf Attacks in Southwestern Finland

The grey wolf (*Canis lupus*) is strictly protected by the EU's Habitats Directive. Since Finland joined the EU, the Finnish wolf population has increased and spread from the eastern to the western part of the country.³ However, the process of recovery has been so slow that the European Commission initiated first infringement proceedings in 2001 and then called the case to the European Court of Justice (ECJ) in 2005. The Commission claimed that: (1) the wolf's conservation status in Finland was not favorable; (2) Finland had not honored the principle of strict protection; and (3) Finland had not adequately explored feasible alternatives for wolf predation to reduce losses to livestock. Following an investigation into the allegations, the ECJ rendered its judgment in June 2007. Finland was found to be at fault on the second charge, but not on the other first or third. The ECJ ordered the government of Finland to rectify its failure to offer strict protection to wolves. In practice, the ECJ judged that the issuance of the killing licenses must be based on robust, Directive-based reasons.

Already at the beginning of the infringement proceedings, Finland sought to situate the wolf in the context of Finnish society and culture, particularly with respect to livelihoods and public safety in the country's rural regions. The government's position was that the people of Finland have a contentious relationship with the wolf, since the species represents a historic threat to perceptions of safety in rural parts of the country. The Finnish government argued that the Commission is obligated to acknowledge the pertinence of social, economic, and cultural aspects of this particular biodiversity challenge and let Finland practice its wolf policy in a way suited to national conditions and needs. The Commission asserted that it is "normal for wolves to avoid people" and that Article 3 of the Habitats Directive—calling attention to the importance of "social, economic, and cultural aspects to biodiversity"—could not be used to justify derogation from strict protection (Hiedanpää & Bromley, 2011).⁴

In August 2008, wolves attacked sheep on four pastures in the town of Köyliö in southwestern Finland and caused the death of 65 animals. Rumors spread that also the communities of neighboring southern Pyhäjärvi region were surrounded by around 25 wolves. Local hunters organized a census, which verified the number. The official estimates provided

by the Finnish Game and Fisheries Research Institute (FGFRI) were lower, but strict numbers could not be provided. Concerned, insecure, and afraid, people adjusted their habits, walking less in the forests and keeping their dogs indoors overnight. Sheep farmers did not use dangerous grazing fields, key pastures were electrically fenced, and children were driven to school by taxis. Four characteristics show the adjustments in the face of the sudden reappearance of wolves: (1) people were surprised and afraid; (2) the presence of the wolves was bodily experienced, that is, it affected everyday activities; (3) the effects of the wolf presence were felt collectively: surprise, fear, and consequent adjustments were shared with community members; and (4) in a time of adjustments, primary emotions (of surprise and fear) joined with social emotions (of, say, anger and frustration) and contributed to an emotional landscape hostile to wolves.

From the communal perspective, it is interesting that in 2009 only one or two wolf sightings occurred, while in the previous year, continuous observations were made. There were no wolf attacks on sheep or other domestic animals. The wolves were gone. According to FGFRI, there were no biological reasons for their disappearance: the roe deer and moose populations were sufficiently dense and there were no signs of lethal diseases. Apparently, wolves were illegally poached. It seems that local people and communities in Köyliö and its surrounding areas "fixed" the "wolf problem." Communities showed vigor and resilience, that is, social sustainability.⁵ But this social sustainability was not the ecologically helpful kind that the Commission or Finnish national authorities promote.

Consequently, the Commission initiated an informal discussion on illegal hunting with Finnish authorities in late 2009. The Commission interpreted the situation as the case of ill-fitted enforcement of the Habitats Directive. Finland agreed and acted accordingly. It continued tightening the institutional setup of large carnivore protection. This process had been ongoing since Finland's accession to the EU in 1995, but especially after the ECJ judgment. As a response to the immediate wolf situation, Finland centralized decision making concerning the derogation from strict protection to the Finnish Wildlife Agency in March, 2011. The purpose was to separate wildlife politics from authoritative decision making. The Ministry of Agriculture and Forestry has initiated two other legal adjustments: to increase the nominal value of large carnivores and to introduce a new criminal category, "severe hunting crime." The latter

³ There are several critical studies of Finnish wolf policy. See, for example, Bisi et al. (2007) and Ratamäki (2008).

⁴ Finland referred to Article 2§3 of the Habitats Directive. The Commission referred to an ECJ ruling (C-247/85 Commission vs. Belgium), according to which, Article 2§3 of the Habitats Directive could not override an obligation to strict protection.

⁵ The same acts of resilience seemed to take place elsewhere in Finland (Anon., 2009).

came into force in April, 2011. According to the renewed law, the telemonitoring of suspects by the police is allowed, and a conviction leads to a prison term of four months to four years. One of the purposes of the adjustments is to communicate to the Commission that the Finnish government takes declining wolf numbers seriously.

From the perspective of rural communities, will people really find these regulatory measures reasonable as a way to come to terms with the wolf presence? With regard to the reactions in Köyliö, the workability of the plans put forth by the EU and the Finnish government concerning how to mitigate the wolf-related socioecological problems seems highly questionable, especially from the point of view of the social. Do these measures alleviate the concerns? Do they return the feeling of security, or help people to live with the wolf presence? Perhaps not. These measures focus on mechanical causes behind the wolf decline and not on purposes and emotions particular to cherished habits and customs. The measures taken will probably also widen the gap between the social and the public, working contrary to intentions.

The Politicization of Swine Welfare

Finnish farm-animal production has recently undergone profound structural changes. During 1995-2008, the number of animal farms was halved, with the number of pig farms falling from 6,250 to 2,300, but the number of pigs (and the production of pork) have not decreased (Tike, 2009). Rather, the average unit size has expanded rapidly as Finland has turned increasingly to industrial-scale pig farming. Under these circumstances, Finnish consumers are becoming more distanced from meat production and their personal relations to farming are unavoidably becoming reduced (Jokinen et al. 2011).

The drastic change in animal farming brings up the issue of the welfare of farm animals. In basic terms, animal welfare is a normative principle related to what animals need to have a good life. Attempts to improve animal welfare have commonly centered on three broad objectives: to ensure good physical health and functioning of animals; to minimize unpleasant affective states, such as pain and fear, and allow animals normal pleasures; and to let animals develop and live in ways that are natural for the species (Fraser, 2008). However, in public discussion animal welfare is a contested concept loaded with disagreements, for instance, on the moral value of animals and on the justification of animal farming.

In November, 2007 and again in December, 2009, a Finnish animal rights organization, *Oikeutta Eläimille (Rights for Animals)*, publicized films shot secretly in pig farms across the country. The films reported, for instance, on dirty pigsties, sick and in-

jured animals, and dead animals in the sties. In 2007, the Finnish Minister of Agriculture and Forestry and the Farmers' Union denied the existence of any animal welfare problems. Instead, they claimed that the pictures were not from Finnish farms at all (i.e., the activists' campaign was labeled a con). The Minister further declared that if any problems did exist, the situation would immediately be improved. Two years later, video clips taken secretly by the same organization indicated again the mistreatment of pigs. This time the problems were not denied and, for instance, the Farmers' Union, condemned animal welfare violations. Yet, both times, the agricultural policy players argued that animal welfare problems are related only to individual farms, not to the food system or the industrial mode of animal farming.

Contrary to what the central agricultural policy players may have expected, the action of the animal rights organization spurred public debate on animal welfare. The films revealed serious weaknesses in the operational conditions of Finnish pig farms, and the public seemed no longer convinced that animal welfare was adequately addressed. In official terms, the maneuvers resulted in police enquiries; the farmers were suspected of violating the animal welfare legislation and the animal rights activists were suspected of intrusions into farmers' homes (as the pig-rearing facilities are considered part of the family farm). Some cases also led to the consideration of charges. The public debate also had policy consequences. For instance, the state introduced new forms of agricultural subsidies, such as animal welfare payments and financial support for farm investments promoting animal welfare.

Superficially, the politicization of swine welfare seems a veterinary and an economic issue. However, when examined more closely, it also appears, for several reasons, to be a social issue. In public discussion, the agricultural policy players explained the violations of the animal welfare legislation by the heavy workload in farming and the bureaucratic practices of agricultural policy which are exhausting farmers. The mistreatment of pigs was also justified by the strenuous competition and weak profitability associated with current farming practices. Pigs were thus labeled as the victims of the global market and the agricultural treadmill. Further, it was noted that farmers lack adequate social support networks to help them manage the economic pressure that they face. Interestingly, this lack of assistance is actually a consequence of the industrialization of animal farming: the business is increasingly hidden away in large factory farms that operate with a smaller and smaller workforce. Consumers, rural inhabitants, and even fellow farmers, are becoming distanced from animal farming, which means that the countryside is steadily

becoming disconnected from agricultural production. The case of Finnish swine suggests that farm animal welfare is tightly bound to the welfare of farmers. This seems to corroborate Hobson's (2007) view that (animal) political spaces are constructed through relational agency.

How is the Social Constituted in these Cases?

As our cases indicate, the social is not a group of people living in certain settings according to predetermined norms and traditions. The social is a contingent, activated constellation of interagentivities that emerges together with a shared concern that particular customs and habits are not serving their expected purposes. In our cases, expectations are disturbed by concerns over the habits and livelihoods of the flying squirrel, wolf, and pig. Ontologically, the social is mediated and mediating. But what is this social, and, more importantly, what does it do and why?

First, the social as a contingent, activated, and emergent constellation of interagentivities shows that understanding human-nonhuman temporalities and their emergent nature is essential in defining social sustainability. We argue that without recognizing the critical temporalities in a given socioecological system, it is not possible to understand the social. The temporal features of our various case studies are very different. The current reappearance of wolves in southwestern Finland reveals that for a hundred years wolves were nonexistent there due to hunting. Their reappearance has activated the cultural memory of the wolf's presence. Sentiments associated with old agrarian lifestyles have been brought forth; people are aware of the stories that wolves allegedly kill sheep, and reportedly threaten human babies. It seems that the disturbed agricultural customs trigger stories and sentiments, even though productive practices are now very different from the earlier era. The governmental bodies are blind to the underlying customs and the socioecological fabric that sustain expectations and give reasons for action. This causes social restlessness despite the impressive efforts of developing adaptive wolf management.

A kind of temporal dislocation helps us recognize the social in pig farming. As the structural change of Finnish agriculture has been extremely rapid, the prevailing public image of domestic food production does not necessarily correspond to reality. The idyllic image of family farming is not up-to-date, since factory farming is distancing itself both from consumers and local communities. The family farm is a social and cultural institution believed to be sustainable: the farm is the farmer's home, not a factory. Contrary to reality, people seem willing to ignore the production side of farming in favor of the idyll

(Boogaard et al. 2010). We call this process a cultural gap. To understand how images of animal farming—and the gap between the picture of rural idyll and the reality of factory farming—are constructed, it is important to consider the embeddedness of people's experience and the social context in which their beliefs and expectations are formed. Most people today have little personal knowledge or experience of farming and are therefore regarded as lay persons: the customs and habits they live by are very different from what had traditionally been the case. Yet, animal farming is a strong example of such sociotechnical controversies where public debate would be highly instructive.

Flying squirrel conservation is an exemplar of socioecological potentials. Much more adaptive activities were ongoing during the implementation than could be expected on the basis of the formal rules of conservation. A complex constellation of actors and interactions were at play, and this emerging social activation cannot be explained by cultural memory or cultural gap. Instead, there were latent skills, capacities, and practices of living with flying squirrels, and these had been developed gradually among amateur ecologists since the 1960s. Such readiness among forestry and planning professionals did not develop until several years after the legal rules of conservation had come into force, and even then it was not well internalized. However, the professionals' experience and practical working habits in local environments helped them adopt the new practices. The case indicates that the judicial implementation of nature conservation does not work properly without a reorganization of the social among local actors and their environments. Reorganization happens within socioecological systems and customary livelihoods therein, and local residents may be a critical resource.

Second, and related to our first point concerning temporalities, when the social is activated and under reorganization, it affects social order by making certain socioecological properties visible and hiding others. In the case of swine welfare, for instance, the activists tried to make the problems in animal farming apparent to the public. The films shot secretly in the pig farms clearly showed malpractices that indicated problems in broader practices of meat production and gave swine a critical public existence. In contrast, even though the activists aimed at polarizing the population's attitudes, public confidence in the system of Finnish food production and agrarian routines has remained surprisingly strong so far (e.g., Jokinen et al. 2011).

In the wolf case, the wolf activated the community. Almost all human constituents of the social, it seems, became active in trying to make the presence of the wolf visible by, for instance, revealing some

critical features of its life patterns and habits. Hunters counted the number of wolves from the tracks, local people reported wolf sightings, sheep farmers built stronger fences, local newspapers wrote extensively about the wolf, civil servants and authorities across multiple scales of governance were alarmed and concerned, and, also, wolf researchers appeared in communities and tried either to put radio collars on the animals or interview local people. The presence of the wolf became almost like a carnival and spectacle. The wolf became visible for part of the community as people reacted to its presence in various ways. Local wolf activists (nature conservationists) tried to understate or tone down the discussion concerning the significance of the increasing presence of the wolf.

The emergence of new forms of human-squirrel life eroded the whole idea of nature conservation. The conventional practice of conservation until then was to delineate areas for plants and animals to keep them outside human disturbance. This does not work with flying squirrels. Here, the essence of conservation is that flying squirrels are entangled in human activities. The burning question for several years was how to conserve an animal constantly living in the close vicinity of humans and intermingling with all productive practices related to modification of the forest. The Prime Minister of Finland then claimed that the EU was on the wrong track since there are flying squirrels behind the Russian border, thus questioning the national responsibility for conservation. On one hand, the current conservation standard followed in forestry fits the squirrel presence and makes public representations of the sites. On the other hand, it is known that forest-machine drivers make spontaneous overnight observations of flying squirrels against the light when working, but nobody knows how dutifully they save the sites from cutting. These examples show that the social is constituted by very diverse human-squirrel ecologies, discourses, and encounters, and therefore only part of it is publicly shared and visible at a time.

Third, the social also works to produce and reproduce boundaries between an organism and its environment. This characteristic of the social has several manifestations. Basically, it is about how positions, agencies, and powers are created, shifted, assigned, and removed. It goes beyond the above-mentioned historical sensitivity by bringing items into discourse or foreclosing them from it. For instance, the special feature of the wolf's presence is that the wolf comes very close. The wolf penetrates the sphere of the private: it comes for the dog or sheep, makes children feel anxious on their way to school, and makes people fear it. It is not only a matter of feeling. The wolf, in fact, is superior to rural people. The wolf's habits are protected while

the habits of the people are not. The life of the wolf is secured by law, and unlike some legal prohibitions, this one is tightly enforced. Hence, the wolf does not respect human privacy, but rural people must respect the privacy of the wolf. Many people consider these EU-compelled relations unfair. As such, the presence of the wolf is grudgingly accepted but people believe that wolves should stay where they naturally belong, in wilderness. Rural people feel that their basic rights have been violated and, therefore, it seems, the social operates against this particular feature of communal environment, the wolf.

In a similar way, serious conflicts about the privileging of flying squirrel conservation over economically significant private and public development projects have given rise to rumors of flying squirrels being spotted here and there, somebody planting squirrel droppings in sites under development, or some dubious profiteers bagging droppings to sell to those who need. These are not only anecdotes in the customary sense but an important part of collective sense-making in a situation where authorities, professionals, and citizens do not know how to proceed. Sense-making is needed for collective awareness, preparedness, and action, and it is the social which makes it possible. In the case of swine, the animal activists, more or less purposefully, redefined the boundary between the private and public space. Yet, the strong cultural support for family farming entirely maintains farming in the private space, which, once again, can be seen as a partial failure in making consumers more attentive to meat production and animal rights.

Conclusion

Social sustainability is often defined as a wide-ranging multidimensional concept. Our case studies have sought to provide new perspectives to co-existential practices in the context of management, protection, and production. The cases challenge efforts to adopt a human-centered view of the social as the basis for developing the concept of sustainability. The one-sidedly human view of the social is unrealistic and unfair, and it tends to lead to atemporal definitions of social sustainability in contested political processes. Even though the examples that we present indicated perpetuity, cultural continuity, nostalgia, and cultural or political inertia in the social sphere, they were also dominated by rapid changes and reorganization of the social, suggesting the importance of resilience and capacities to adopt changes.

These cases have also emphasized the embodied nature of the social and how the social gains communicative significance and force when under disturb-

ance. The societal change—diverging customs and practices—has challenged the traditional human-animal bonds even though politicians seem to dwell on the nostalgia of agrarian practical virtues in legitimating industrial animal farming, principles of wolf management, or cohabitating the forests with flying squirrels. As our cases indicate, there is no one social sustainability, but many—at least as many as there are significant contesting customs in relation to the disturbance practices and images to which the contestation gives rise. What follows is a potent question: how should we define sustainability from the social perspective if there are no ethically sustainable human-nonhuman relations left?

If the social contingently emerges with disturbed socioecological settings, or environments, as Dewey would put it, and if disturbances of various kinds are perpetual, then the challenge of social sustainability is how human-nonhuman constellations allow and enable disturbed customs and habits to revive and renew themselves. Our flying squirrel entanglements, wolf packs, and swine activists are like nomadic movements that activate the social. This contingent constellation calls for agonistic respect for one another in the changing context of interagentivity.

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