

Framing of environmental issues in voluntary sport organizations

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ABSTRACT

This explorative study draws on content analysis of the environmental policy documents of voluntary sport organizations in Denmark, Norway and Sweden. We develop a typology of ways in which sport organizations frame environmental problems and find four ideal typical frames: (1) a general non-committal frame; (2) a sport-specific technical frame; (3) a growth-oriented opportunity frame; and (4) a crisis frame viewing environmental issues as an existential crisis for sport. We then explain the emergence of these frames. To this task, we discuss how materialities, institutional mechanisms and wider environmental discourses matter for environmental framing in voluntary sport organizations.

KEYWORDS Sport; voluntary organizations; framing; discourse; institutions; materialities

Introduction

This article asks how voluntary sport organizations in Denmark, Norway and Sweden address environmental issues. First, drawing on framing theory and content analysis of the environmental policy documents of three national sport associations (governing ‘all’ sports) and 41 sport federations (governing specific sports), we study how the organizations diagnose problems, describe solutions and articulate motives for action. Second, we aim to explain why the organizations address environmental issues as they do.

Sport involve a great number of people who, as part of their sport activity, use resource-intensive facilities and travel, eat and consume in ways detrimental to the environment (McCullough *et al.* 2020, Wicker 2019). From populations of 5.8, 5.4 and 10.2 million respectively, Denmark has approximately 11500 sport clubs with 2500000 members (DIF 2022), Norway 9 500 clubs with 1900000 members (NIF 2021), and Sweden 18500 clubs with 335000 members (RF 2020). The numbers provide a glimpse of the size of

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the ecological footprint of the sport sector. Sport organizations' solutions to environmental problems matter quantitatively, making a study of their environmental policies important and timely.

Beyond their sheer size, voluntary sport organizations share several characteristics that make them a particularly interesting case for a study of environmental framing. One key characteristic is sport's materiality. Some sports are played indoors or in urban outdoor spaces, others take place in the deep forest, at sea, on rivers or lakes; some depend on snow or ice, some on water, others on asphalt, gravel or grass (natural or artificial). The different materialities imply that sports confront the environment differently: with different material problems (e.g. greenhouse gas emissions, land use, pollution) and different problem experiences (e.g. some 'not affected' by climate change, others experiencing it as an 'existential threat'). Materialities need interpretations to have organizational bearings but nevertheless matter for how environmental issues are understood and acted upon. Thus, a study of sport organizations can offer rich insight into how materialities matter for environmental framing.

Other vital characteristics relate to the fact that Scandinavian sport belongs to the voluntary sector, and, self-evidently, most people join sport clubs in order to play or facilitate sport. Voluntary sport organizations are, however, regularly expected to fulfil 'non-sportive social functions' such as contributing to public health and integration but instructing members to do more than organizing sport is both difficult and risky. Members' incentives to follow such instructions are typically weak, and too much focus on out-of-sport policies could lower the motivation for taking part in sport (Fahlén *et al.* 2015, Seippel 2020). For organizations to successfully realize non-sportive social functions, it is critical that these functions reflect the values and interests of members and are not seen as opposed to the organizations' core function: sport. Relatedly, leadership in voluntary organizations typically depends more upon normative incentives (values, trust and emotions) than in other types of organizations (Knoke and Prenskey 1984, Thiel and Mayer 2009 and Boezeman and Ellemers 2014). Whereas business managers, for example, pay employees to follow instructions, managers of voluntary organizations rely on their authority and the normative acceptance of their volunteers to lead effectively. Thus, effective environmental policy in voluntary sport organizations depends upon successful framing to give leaders the necessary authority and to motivate volunteers.

Sport is diverse, the natural environment is complex and following an early study set in Sweden (Book and Carlsson 2011), ours is among the first to address environmental policies in voluntary sport organizations. Thus, our approach is exploratory and broad, including both national sport associations and the federations of numerous different sports, allowing us to study a wide scope of frames responding to a wide scope of environmental

issues. To explore how voluntary sport organizations might understand and respond to environmental issues, we use this empirical width to develop a typology of frames and explain the emergence of these ideal types.

In the following, we position our study in the context of earlier research before we outline a theoretical framework built around framing theory. Then, we introduce a set of elements from ecological discourses to guide our empirical analyses. We then delineate the study's methodological features, before we present the results: The organizations' four ways to frame the environment. We wind up the article with a discussion of why sport organizations address environmental problems in the ways they do.

Earlier research and theoretical perspectives

Research on sport and the natural environment can be divided into four groups. First, there is a growing body of literature on how specific sports, sport facilities, sport events and sport tourism impact the environment (McCullough *et al.* 2020). Second, recent research has turned attention to how the sport sector is impacted by changes to the environment (Orr and Inoue 2019, Orr 2020). A third branch of research focuses on the effect of sport organizations' environmental initiatives, mostly in the United States or in connection to the Olympic Games (Trendafilova and McCullough 2018).

Lastly, there is a growing body of research into the processes through which sport organizations develop and implement environmental policies. Here, studies have looked at the policy efforts of actors ranging from individual teams or facility owners to major sporting leagues in the North American context (Kellison and Kim 2014, Kellison and Hong 2015), and, internationally, the IOC and the local organizing committees of specific Olympic Games (Mol 2010, Karamichas 2013, Kim and Chung 2018, Lesjø and Gulbrandsen 2018, Millington *et al.* 2018). A common theme in this literature is that environmental policy in sport tends to be motivated by reputation and revenue (e.g. realizing gains such as 'community goodwill', 'fan engagement' or 'Olympic legacy') and largely focused on technological 'fixes', especially concerning facilities and stadium design. Regarding how sport organizations frame environmental issues, the Olympic games have attracted most attention from researchers. Case studies of Beijing 2008, Rio 2016 and PyeongChang 2018, show that the policies and public communication of Olympic organizing committees typically follow the conventions of ecological modernization discourse (Kim and Chung 2018, Millington *et al.* 2018, Mol 2010; see also Karamichas 2013).

Beyond these case studies, research into the processes through which sport organizations define environmental problems, prescribe solutions and eventually institutionalize environmental action is scarce. In order to grasp how such processes might play out in voluntary sport organizations,

we draw on a theoretical framework building on the concept of framing. This framework takes departure in Goffman's (1974, p. 21) conceptualization of frames as 'schemata of interpretation'. Faced with the task of establishing the meaning of a phenomenon, groups and individuals have at their disposal several frames providing answers to questions such as: What does this mean? And how should I (or we) act or respond?' (Snow *et al.* 2019, p. 393). The verb framing describes the interactive process through which a shared understanding of a phenomenon develops.

The *political* framing perspective originates in social movement theory (Benford and Snow 2000). Drawing on this literature, organizational theorists use framing as a lens to understand the microprocesses of strategy making, politics and institutionalization within an organization (Kaplan 2008, Cornelissen and Werner 2014). Framing theory has been shown fruitful in the study of sport organizations and sport politics (Seippel *et al.* 2018) and is widely employed in the context of environmental issues (Hoffman 2011, Seippel and Strandbu 2012, Wetts 2019, Soderstrom and Weber 2020).

Three framing tasks are crucial to successful framing: providing a diagnosis, a prognosis, and a motive for action (Benford and Snow 2000). Diagnostic framing entails two aspects: the diagnosis of something as problematic and in need of repair or change (e.g. the energy usage of sporting facilities); and the attribution of blame or responsibility for this problem. Prognostic framing proposes solutions to the problem (e.g. changing from incandescent to LED lightning). Motivational framing involves 'the construction of "vocabularies of motives"' that 'go beyond the diagnosis and prognosis to accentuate the severity of the problem; the moral priority of taking action or the urgency of taking action now rather than later' (Snow *et al.* 2019, p. 396). Such vocabularies of motives are not restricted to rationales for action but can also work to mobilize emotions (anger, sadness, etc.) (McAdam 2017, Anspach and Draguljic 2019).

Our main ambition is to describe and typologize Scandinavian sport organizations' environmental policies based on their diagnoses, prognoses and articulations of motives. A second ambition is to explain, through a set of four explanatory factors, why these ideal typical frames emerge.

First, while framing is part of a tradition emphasizing the cultural or ideational aspects of social phenomena, the material side of environmental problems is important for individual and organizational responses (Haney 2021). Thus, as a start, we consider how frames might emerge in sport organizations as responses to concrete problems concerning the environment in which different sporting activities take place. For example, warmer winters are more likely to trigger framing processes around climate change in snow sports than in other sports.

Second, frames can emerge from institutionalization. Thus, combining frame analysis with an institutional perspective provides a further means for analytically capturing the complexity of framing processes (Bjørnehed and Erikson 2018, Purdy *et al.* 2019). Here, we use the concept of institutional isomorphism (DiMaggio and Powell 1983). Coercive isomorphism occurs when an organization adjusts to laws and rules. Normative isomorphism describes processes where actors respond to pressures or more informal constraints in the institutional field. Mimetic isomorphism takes place when an organization imitates another organization's structures.

Frames do not exist in an ideational vacuum but relate to other frames both in a horizontal sense (alignment with other issue frames in the organization) and in a vertical sense (alignment with overarching frames that serve as general rubrics for specific frames). Our third explanatory factor draws on the concept of frame extension, which captures the horizontal aspect of frame alignment. Extension occurs when the boundaries of a frame are extended to include other, often already established organizational goals. For example, one assumption is that that voluntary sport organizations are likely to extend environmental issue frames to align with established goals such as the facilitation of sport activity, organizational finances, or recruitment of volunteers.

Fourthly, and capturing the vertical aspect of frame alignment, the term master frames refers to generic collective action frames that are wider in scope and influence than context-specific frames, and provide the latter with rubrics for problem descriptions, blame attribution, types of solutions and motives for action. The articulations and attributions of a master frame is sufficiently elastic for various organizations to adopt it in different contexts (Lindstedt 2018). We find it useful to grasp the influence on sport organizations' environmental issue frames of wider ecological discourses, understood as master frames.

Ecological discourses

There are many ways to categorize ecological discourses. One might distinguish between their historical roots, their focus on different environmental issues (nature conservation, pollution, climate issues, biodiversity, etc.) or more ideological topics (gender, justice, social class, socialism, fascism, capitalism, etc.). Moreover, discourses tend to propose various and more or less radical solutions. We present a selection of ecological discourse elements we think could operate as master frames to the context-specific frames of sport organizations.

A first wave of environmental concerns focuses on nature conservation (Jamison *et al.* 1990, Seippel 2008). This tradition has taken on various expressions: from concern for single small areas or specific species, to

protection of ecosystems and maintenance of biological diversity. We expect the discursive elements of nature conservation to be relevant for sports played in close connection to nature, and especially so in sports associated with specific natural areas (e.g. skiing and mountains, orienteering and forests) or natural elements (e.g. skiing and snow, canoeing and water).

A second phase of environmentalism moves beyond the conservation discourse. Seminal contributions to this wave of ecological discourses are Carson's *Silent Spring* (Carson 1963), the *Limits to Growth* report (Meadows 1974) and Beck's *Risk Society* (1992). The events sparking these publications and the discourses they trigger imply the 'end of nature' (McKibben 1990) and point to the shortcomings of seeing nature as something external to human societies, simply in need of protection.

In a more recent attempt to categorize the main ecological discourses that developed in this second phase, Dryzek (2013) distinguishes between radical and reformist discourses, and between imaginative and prosaic ones. Discourses of what Dryzek (2013) calls 'green radicalism' problematize the existing order in terms of both causes of environmental problems and its potential for delivering solutions. Green transformation is envisioned through radical changes to the political and economic system, as well as to people's general mindset which, in some representations, transform into a form of 'green consciousness' (Hysing *et al.* 2016).

Among the reformists, prosaic discourses assume the existing political and economic framework as given but recognize the need to address environmental problems rationally, piece-by-piece and retroactively as they occur (Eckersley 2021, Dryzek 2013). The discourse of administrative rationalism involves a reliance on expert knowledge and expert problem-solving carried out in formal institutions, by way of technological solutions and infrastructure. We expect discursive elements of administrative rationalism to be present, particularly in the policies of organizations that face technical problems and technological solutions (e.g. concerning rubber granulate emissions, oil spillages from motor bikes) that might appear somewhat isolated from any wider, systemic issues.

The more imaginative but still reformist discourse of ecological modernization recognizes causes of environmental problems in the existing order yet endorses this order as the basis from which reform begins (Warner 2010, Dryzek 2013). In sport, ecological modernization is linked to the idea that sport organizations can benefit from 'going green' through economic incentives and political regulations to change action. The discourse is characterized by optimism with regards to technological solutions and, correspondingly, sport organizations' participation in research and development.

Methods and data

To understand how voluntary sport organizations might frame environmental problems, one approach is to analyse the organizations' written environmental policies. To explore the depths, dynamics and diversity of the frames mobilized in such policies, we will develop a typology that identifies the most common and characteristic frames in our data.

For this purpose, we scrutinized the web pages of three national sport associations (the National Olympic Committee and Sports Confederation of Denmark (DIF), the Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF), and the Swedish Sports Confederation (RF) as well as the 62 Danish, 55 Norwegian, and 72 Swedish associated sport federations for publicly available environmental policy documents. We included a broad spectre of documents. First, we took the term policy to include documents that were presented by the organizations as 'policy', 'strategy', 'guidelines', 'rules', etc., and, in one case (Norwegian orienteering), 'law'. Second, we included documents limited to specific environmental issues (e.g. climate policies or policies for handling of rubber granules in artificial playing turf (Norwegian football)). The resulting data set is diverse: documents vary greatly in terms of both content and volume. Whilst the longest document is around 12,000 words (38 pages), the shortest is 77 words (less than one full page).

In total, the data set consists of the environmental policy documents of each of the three national sport associations and of 41 sport federations (16 Danish, 10 Norwegian, 15 Swedish) (Table 1). These were the 41 federations that had environmental policy documents accessible online as of May 2021, amounting to 26% of Danish, 18% of Norwegian and 21% of Swedish federations. Motor sport, football, sailing and golf were the only sports where federations in all three countries had such documents accessible. 23 documents were published between 2018 and 2021, 13 between 2010 and 2017, four before 2010 and four were undated.

Documents were sorted into the MAXQDA software and analysed in two steps. First, the documents were coded according to the three core framing tasks: diagnostic, prognostic, and motivational framing. For this purpose, we developed a codebook with predetermined sub-categories. For example, coding of diagnostic frames distinguished between various environmental problems (e.g. biodiversity, climate change, etc.) and problematized aspects of sport (e.g. facilities, transport, etc.). A few subcategories emerged throughout the process and the codebook was revised accordingly. For example, we included sub-categories for vague, unclear and general problem descriptions, as well as a distinction between sport-specific and non-sport-specific diagnoses.

Second, we developed typologies of frames based on the first step. We looked for patterns in how the documents employed diagnostic, prognostic and motivational frames, for example searching for connections between ways of

Table 1. Environmental policy documents included in the analysis

Organization	Publication year	Primary framing type	Secondary framing type
<i>National sport associations</i>			
National Olympic Committee and Sports Confederation of Denmark	2012	3	
Norwegian Olympic and Paralympic Committee and Confederation of Sports	2018	2T	3
Swedish Sports Confederation	2010	1	
<i>Sport federations</i>			
Danish Skydiving	2020	1	
Danish Football	NA	1	
Danish Golf	2014	3	2N
Danish Hang- and Paragliding	2016	1	
Danish Equestrian Sports	2020	1	
Danish Canoeing	NA	1	
Danish Climbing	NA	1	
Danish Miniature Golf	2018	1	
Danish Modern Pentathlon	2018	1	2T
Danish Motor Sports	2018	2T	
Danish Automobile Sports	2020	2T	3
Danish Rowing	2018	1	
Danish Sailing	2020	1	
Danish Surf & Rafting	2018	1	
Danish Gliding	2012	1	2T
Danish Triathlon	2020	1	2N
Norwegian American Sports	2020	1	
Norwegian Diving	2020	2N	
Norwegian Football	2020	2T	
Norwegian Athletics	2021	1	
Norwegian Golf	2002	3	2N
Norwegian Air Sports	2019	1	
Norwegian Motor Sports	2020	2T	
Norwegian Orienteering	1989	2N	
Norwegian Paddling	NA	1	
Norwegian Sailing	2020	1	
Swedish Bandy	2007	1	
Swedish Automobile Sports	2020	1	
Swedish Air Sports	2010	1	
Swedish Football	2019	2T	
Swedish Golf	2021	1	
Swedish Equestrian Sports	2016	2T	
Swedish Ice Hockey	2014	1	
Swedish Climbing	2001	1	
Swedish Figure Skating	2018	1	2T
Swedish Motorcycle and snowmobile Sports	2012	1	2T
Swedish Orienteering	2014	2N	
Swedish Powerboat Sports	2019	1	2T
Swedish Sailing	2015	1	2N
Swedish Skiing	2010	4	
Swedish Shooting	2010	1	

problematizing an issue and ways of articulating motives for action. Where the first step was of a deductive, theory-driven nature, the second step was a more abductive process as we moved back and forth between our data, categorizations, and theoretical interpretations. Four general frames emerged as salient and the documents were coded again according to these. For this purpose, a second

codebook was developed. Each frame was defined as a combination of categories of diagnostic, prognostic and motivational framings. For instance, we applied the categories 'sport-specific', 'non-sport-specific' and 'none' to both diagnoses and prognoses, and for motivational framing our categories included 'concern with nature', 'societal responsibility', 'economic incentives', 'concern with the future of the sport' and 'none'. Based on the combination of codes, each document was categorized within a primary frame whereas eleven documents were categorized within a secondary frame as well.

Both authors coded all documents in the second step. We used a Krippendorff's Alpha test (Krippendorff 2004) for inter-reliability, which resulted in 92% correspondence. Divergences were discussed until agreement was reached.

Four environmental issue frames

We studied Scandinavian sport organizations' environmental policies to develop a typology of how they frame environmental issues. It should be noted at the outset, as a key finding, that most sport federations in all three countries did not have such policies available. Among those who had, the four types of frames (Table 2) are: (1) the very general non-committal frame; (2) the sport-specific technical frame; (3) the growth-oriented opportunity frame; and (4) the crisis frame, viewing environmental issues as an existential crisis for sport.

1: The non-committal frame

The non-committal frame is most salient in the data material and a primary frame for 29 organizations. It presents sport's environmental responsibility, prosaically and briefly, as following from two conditions: the existence of general environmental problems, and a socio-political context that increasingly demands environmental action. Most documents lack specific diagnoses. The references to general problems and socio-political context are often implicit or articulated in general terms. RF's *Environment and climate policy* is an example:

Over the last hundred years, global temperature has increased with 0,8 degrees according to the UN Panel on Climate Change. The EU has prescribed that the temperature cannot increase with more than two degrees compared with pre-industrial times. [...] Humanity's increased impact on the environment and its resources require cooperative work. As a private person and as part of the sport movement everyone can contribute to reduce our environmental impact.

The non-committal frame does not indicate a specific responsibility for sport beyond that which follows from being part of a society with general environmental problems, where all activity is potentially problematic, and every social actor somewhat culpable

Table 2. Four types of environmental frames

	1: The non-committal frame	2: The technical frame	3: The opportunity frame	4: The crisis frame
Diagnosis	Common problems beyond sport (e.g. climate change, marine plastics) and shared, societal responsibility. Elements of disavowal of responsibility.	Sport-specific, detailed, technical problems and sport-specific responsibility. A 'technology sub-frame' describing technological problems (and solutions), and a 'nature conservation sub-frame' describing conservation problems and conservation solutions.	No problems, only political, economic and 'natural' possibilities. Sport positioned to realize those possibilities.	Existential crisis for ski sports. Ski sports responsible for mitigating climate change and saving their future.
Prognosis	No specific solutions.	Sport-specific, detailed, technical solutions.	Political initiative, sport organizations as driving force, technoscientific ventures.	Sport-specific, technical solutions.
Motivation	No specific rationale for action.	Acting to reduce risk and avoid loss: Economic loss, reduced activity levels, loss of the quality of/access to 'the natural playground'.	Economic and political gain. Improving the natural environment.	Saving the sport. Saving the sport, saving members' identities as skiers. Moral priority.
Environmental Discourse type	Elements of skepticism.	Administrative rationalism, elements of nature conservation.	Ecological modernization.	Elements of green radicalism, elements of administrative rationalism.

The prognostic structure of the frame has two core characteristics: lack of detail and use of non-committal language. Both characteristics are exemplified in the Norwegian motor sport federation's *Environmental policy*:

All motor sport and related activity shall be considerate of the environment and to a large a degree as it is appropriate reduce negative impacts on: Climate; Nature's species diversity, biotopes and species occurrence; Natural and cultural landscapes; Cultural heritage and cultural environments; Outdoor recreation; Local environments.

Characteristically, what to be done is described in brief (e.g. ‘reduce negative impacts’) and non-committal (e.g. ‘to a large a degree as it is appropriate’) terms, without detailing how it is to be done or by whom. Motivational framing is all but absent from the non-committal frame.

Among Danish and Swedish federations, documents employing this frame are typically very similar – a finding which in the Danish case traces back to minimum requirements of an environmental certification system initiated by DIF. Being shallow and lacking in detail, it is difficult to see that the non-committal frame aligns with any wider, ecological discourse.

2: The technical frame

The technical frame is a primary frame in ten organizations – including three in motor sport, two in football and two in orienteering – that address environmental problems specific to their sports: problems associated either with technologies (e.g. engines, playing surfaces, etc.) or with how practitioners of the sport interact with nature (e.g. running on and off-trail in orienteering). In contrast to the non-committal frame, the diagnostic and prognostic structures of this frame are sport-specific rather than general and richer on detail. For example, the Danish motor sport federation details more than twenty separate environmental concerns with their activities, falling within three specific problem areas: ‘noise’, ‘circuit design’ and ‘reduction of other types of pollution’. The section on noise is introduced as follows:

Sound is a measurable phenomenon which is created when a source, e.g. a motor bike engine, causes the air to vibrate. In a contrasting understanding, sound is an individual interpretation of the effect of the sound. A sound can be enjoyed by one person but for another person the same sound can be a disturbance. Motor bikes with a high sound level will almost always be considered very noisy. The environmental official must understand the difference between these two perceptions and similarly understand how sound is measured and perceived.

The main point here is the level of specificity and technical detail of the problem description and in the prescription of its solutions that follow.

The technical frame typically proposes expert solutions. Most common are technological solutions, including for example noise measurement technologies or biofuels in motor sport and infrastructure to reduce emissions of environmentally harmful rubber granulates from artificial football pitches. Some nature sport federations describe solutions requiring expert knowledge in fields as diverse as nature conservation legislation (e.g. to increase awareness of the law among orienteering runners or sailors) and natural sciences (e.g. expertise in marine biology to educate sport divers in marine conservation and restoration). In terms of motivational framing, the technical frame is characterized by the

use of loss frames emphasizing the importance of environmental action in order to mitigate risks associated with inaction. Below, the Swedish equestrian federation details risks associated with not taking environmental responsibility:

The rapid pace of transformation concerning environmental questions [...] means that Swedish equestrian sport needs to support its members and the sector in handling the risks and possibilities that transformation entails. An example of risk is that environmental regulations will continue to increase, entailing risk for additional expenses.

The federation proceeds to prescribe technological means for energy self-sufficiency in clubs and stalls as a risk-reductive and cost-reductive measure. Other documents describe reduced activity levels and falling interest in the sport as a potential effect of environmental inaction. For example, the *Energy and environment-policy for Swedish football* reads:

Swedish football is leading in many contexts and now what matters is to take an increased responsibility for energy and the environment, primarily concerning our facilities. Today, many youths are concerned with the environment and in order to meet future demands, not least from them, Swedish football needs a policy for energy and environment.

The policies of some nature sport federations indicate a connection between loss of nature and organizational loss. Illustratively, the policy of the Swedish sailing federation reads that:

there are organizations the activities of which are entirely dependent on the conservation and development of marine and freshwater environments, such as our own sport federation. [...] Oceans and lakes are to a large degree the arena of sailing sport and sailing activities. Therefore, a particular interest should be devoted to this water environment.

With references to protection of eco-systems and specific natural environments, the nature sports mobilizing the technical frame draw on a traditional nature conservation discourse. However, even if the notion of nature conservation is a salient part of the motivational structure, it is not clearly reflected in problem descriptions and solutions. The prognoses of the technical frame are more consistent with administrative rationalism, relying on expert knowledge and technology to solve specific and isolated problems.

3: *The opportunity frame*

The opportunity frame is a primary frame in three organizations, including its main proponent: DIF. The frame presents sport organizations' environmental initiatives as a partly realized/partly unrealized opportunity for economic growth, political influence, and even for improvements to the natural environment. The opportunity frame is characterized by an absence of

diagnostic framing, and by prognostic and motivational structures communicating that sport organizations can, and do, benefit from environmental action

DIF presents environmental issues as a field where Danish sport can have a central and influential role in international sport politics through positions and work within the IOC and, as the following quotation illustrates, through the hosting of environmentally responsible international events: '[...] environmental concern in relation to sport events can create Danish goodwill abroad and the events can prepare the ground for Danish export initiatives in the environmental field.' Similarly, the document presents environmental initiatives as an opportunity for sport to influence Danish national and regional politics and contribute to national economic growth:

DIF considers sport an active player with regards to the government goals of constructively approaching the imminent climate and environment challenges and via innovation and foresight create sustainable solutions that can secure growth and jobs in Denmark.

The strong optimism of the opportunity frame also concerns the natural environment itself. DIF, as well as both the Danish and the Norwegian golf federations, describe sport facilities as potential improvements to the environment: aesthetically and ecologically. According to the Danish Golf Union, for example, golf courses 'contain good opportunities for increasing biological diversity and improve outdoor recreation for golfers as well as other users of nature'.

Besides exerting influence on international, national and local environmental politics, the opportunity frame, mirroring the technical frame, prescribes technological solutions to sport-specific problems. For instance, DIF points to previous projects where Danish sport federations have been involved in researching and developing eco-friendlier technologies in sailing (bottom paint) as well as golf and football (grass fertilizers). Contrasting the technical frame, where these solutions are framed prosaically as concrete fixes to concrete problems, the opportunity frame highlights technological ventures as a potential avenue to wider organizational gains.

Describing solutions, organizations employing the opportunity frame typically focus as much on what they have already done as on what they intend to do in the future. More explicitly than the others, the opportunity frame seems to build on a need for legitimization. For the golf federations, legitimization efforts presumably trace back to intense public debate and critique of golf courses' environmental impact surrounding the organizations' rapid expansion in the 1990s and 2000s (Millington and Wilson 2016).

Mirroring the findings of studies on the environmental policies of the IOC and local organizing committees of the Olympic Games (Kim and Chung 2018, Lesjø and Gulbrandsen 2018, Millington *et al.* 2018), the opportunity frame clearly aligns with the discourse of ecological modernization. Environmental action is incentivized by organizational gains and the toolset needed to realize this symbiosis is available in the existing frameworks of the organization and the surrounding socio-political context. The legitimization rationale also follows a logic core to ecological modernization, having to do with incentive structures for environmental action: achieving the gains associated with environmental action is partly a matter of showcasing one's actions to a wider audience.

4: *The crisis frame*

The crisis frame is mobilized by one organization—the Swedish skiing federation (SSF)—and takes as its focal point the impact of climate change on ski sports. The federation's *Climate policy* describes the problem as follows:

... one of the greatest [challenges] for ski sport concerns the future conditions for everyone to ski in every part of our country. The later years' uncertain skiing winters have dramatically changed these conditions. ... We will probably experience cold winters with natural snow even in the future, but they will be increasingly rare. Thus, one of the most important concerns for the future of Swedish ski sport will be the work on all levels to secure the ski and snowboard sports' continued existence in all parts of the country.

The document leaves no doubt about the federation's stakes in the problem of climate change: When it comes to environment and climate issues, there shall be no doubt at all about SSF's political intention'. Similar to the technical frame and the opportunity frame, and perhaps surprisingly given the frame's notion of crisis, the prognoses of the existential crisis frame are constrained to concrete fixes to concrete problems. The document focuses on two areas of greenhouse gas emission reduction in Swedish ski sport: travels and facilities. Each area is expanded upon with more detailed problem descriptions and with corresponding solutions, as here, in the case of transport:

What is important is that travel and transport is given high priority in all planning of different types of activities, competitions, practice, training camps and different types of bigger "conventions" ... This implies: as far as it is possible, train should be chosen over plain/car; in choice of venue for competition, camp, practice, etc. the struggle should always be to achieve as energy efficient transport and travel as possible.

In short, the message is to keep travelling, but in more eco-friendly ways. Regarding facilities, SSF's climate policy focuses on opportunities for reducing energy usage associated with production of artificial snow. The framing of snow production is interesting because the technology can potentially be understood as both a contributor and an adaptation to the climate crisis. In SSF's crisis frame, snow production figures exclusively as a problem. Nevertheless, the prognosis is the same as with regards to travelling: Keep producing snow, but in more eco-friendly ways.

In terms of motivational framing, the crisis frame communicates the severity and urgency of the problem clearly and forcefully, referring to 'dramatic change' that threatens the 'continued existence of the sport'. Whereas the technical frame and the opportunity frame rely on instrumental rationales for action, the crisis frame seeks to mobilize emotions, identity ownership over the issue, and a sense of moral priority of action:

That skiing is a cultural heritage that should be preserved, and that skiing contributes to a good public health is undoubtable. The enthusiasts who stubbornly fight against green winters year in and year out must increase in number through encouragement, dissemination of knowledge, information aimed at preserving the belief in the future of our sport!

The frame is ambiguous regarding alignment with wider ecological discourses. Both its diagnostic and especially its motivational elements carry elements of green radicalism. The latter excerpt can be interpreted as envisioning an alternative 'green consciousness' to secure the future of the sport. In other passages, the frame's prognostic structure does not rely on radical change but piece-by-piece technological fixes, more resembling of administrative rationalism.

Discussion

Voluntary Scandinavian sport organizations frame environmental issues in four distinct ways mobilizing, respectively, (1) the very general non-committal frame, (2) the sport-specific technical frame, (3) the growth-oriented opportunity frame, and (4) the crisis frame.

Framing processes take place within a material and institutional context influencing both the emergence and the structure of a frame. Separating framing mechanisms from contextual mechanisms—whilst also seeing how they work together—can help us explain the emergence of our four frame types, and create a basis for understanding how environmental framing processes play out in voluntary sport organizations.

Most sport federations in all three countries did not have environmental policies. Most existent policies were general, non-committal and brief. For these key findings, absence of specific 'problem materialities' and of

institutional pressures offer reasonable explanations. Most federations do not experience urgent environmental problems of direct consequence for their activities and are not required or expected to engage in environmental action. This absence provides a leeway to either ignore or cursorily address the environment as a policy area

The technical frame, the opportunity frame and the crisis frame exemplify four ways in which materialities can spark and shape environmental framing: Some sports experiencing 'isolated' technological problems have developed policies for technological fixes; some nature sports have developed nature conservation policies; some golf federations have proposed to improve the natural quality of the land appropriated for golf courses; and one sport experiencing and expecting shorter seasons and worsening conditions due to climate change, have developed a prognosis and a rationale for action based on the notion of existential crisis

Materialities can help explain the emergence and structure of frames in some organizations and shed light on differences in environmental policies between different sports. Unsurprisingly, our analysis indicates that materialities and institutional mechanisms can work together so that organizations confronted with concrete material problems face laws, regulations and normative pressures requiring response. Some solutions (e.g. noise reduction in motor sport or rubber granulate management in football) characteristic of the technical frame are at least partly responses to law. Some organizations employing the technical frame (e.g. Swedish football) make explicit reference to pressures from members and surrounding society.

Among the three countries included in the study, Denmark offers the clearest example of institutionalization in DIF's certification system 'Green Federation'. 'Green Federation' encompasses 14 federations that have satisfied certain requirements, including the development of an environmental policy. However, that most federations are not certified and that 12 of the 14 certified mobilize the non-committal frame, indicate that the certification system itself remains a relatively weak incentive. Among the sports studied, motor sport and golf stand out as sports where environmental issues and environmental framing are institutionalized to a larger degree than in other sports. The frames employed by motor sport federations (mostly technical frames) and golf federations (mostly opportunity frames but also salient technical elements) are reflective of institutional fields that, internationally, are characterized by environmental issues being on the agenda for decades, producing extensive research and development and various profit and non-profit organizations working to advance environmental solutions (Dingle 2009, Miller 2016, Millington and Wilson 2016). In this way, the policies of the motor sport and golf federations in our data include elements of mimetic isomorphism.

Materialities and institutional mechanisms partly explain the emergence and structure of frames in some organizations but not all, and do not account for differences between organizations in similar material and institutional contexts. Thus, we return to our main theoretical building block and the concepts of frame extension and master frames

Our data contains three salient frame extension strategies. For the crisis frame, environmental issues extend to organizations' primary function and *raison d'être*: to facilitate sporting activity. The technical frame is extended by way of incorporating other issues core to the organization—finances, membership rates, voluntarism—that are at risk of losing out in the absence of environmental action. These loss-oriented strategies can be understood in relation to voluntary organizations' dependencies on resources such as members, volunteers and financial funding: Organizations that are vulnerable to decreasing interest and support are more likely to identify the potential losses associated with inaction as a problem.

In the opportunity frame, extension is not a matter of avoiding loss but realizing potential: through environmental action, sport organizations can gain political capital, contribute to economic growth, or even offer improvements to the natural environment. Where the loss-oriented extension strategy reflects organizational dependencies, the gain-oriented frame relates to organizations' capacities to realize the potential for gain (Pfeffer and Salancik 2003).

As a last explanatory factor, ecological discourses, understood as master frames, enable and legitimize general, coherent ways of understanding environmental problems and solutions. Discourses of administrative rationalism and particularly ecological modernization have a strong presence in the Scandinavian countries (Lidskog and Elander 2012, Dryzek 2013, Wettergren and Soneryd 2017) as well as in the Olympic movement (Mol 2010, Wilson 2012, Kim and Chung 2018, Millington *et al.* 2018) and in some national and international federations (Millington and Wilson 2016). As readily available master frames to actors in Scandinavian sport, these discourses make possible and provide rubrics for the technical frame's focus on isolated problems with isolated solutions as well as the opportunity frame's orientation toward possibilities and growth.

The technical frames of some nature sport federations carry some elements of nature conservation discourses, but the influence of these discourses overall seems limited. The non-committal frame and the crisis frame do not to the same degree as the other two align with broader ecological discourses. In some respects, the non-committal frame mobilizes a sort of environmental scepticism. The crisis frame carries a blend of green radicalism and administrative rationalism. Particularly interesting is how, in the crisis frame, relatively radical diagnoses and articulations of motives do not translate into correspondingly radical prognoses.

Discourses of green radicalism have a relatively weak, but perhaps emerging position in Scandinavian societies, apparently with a stronger influence on problem descriptions than on prospective solutions (Bolin 2016, Wettergren and Soneryd 2017). Despite notable intellectual efforts inspired by the deep ecology of the Norwegian philosopher Arne Næss (Loland 2006, Breivik 2019), radical, ecological critiques of sport rarely gain traction. Together, these conditions narrow the possibilities for sport organizations' environmental policies to take on a very radical form.

Concluding thoughts

This explorative study looks at environmental framing in voluntary sport organizations in Denmark, Norway and Sweden by way of content analysis of environmental policy documents. The study offers insight into how materialities, institutional mechanisms, and discourses matter for environmental framing

The variety of environmental materialities confronting different sports spark a diverse set of framing processes. In our typology, the crisis frame comes closest to an apparently direct response to a concrete environmental problem. However, this materiality has a significantly stronger bearing on some aspects of the framing process than others: In this frame, problem descriptions and motives for action communicate that climate change constitute an existential crisis for ski sport, whereas proposed solutions are more prosaic and less reflective of a crisis. The technical frame and the opportunity frame exemplify how materialities matter more indirectly, as organizations confronted with concrete environmental problems are more likely to face institutional pressures and shape their responses accordingly. However—except for golf and motor sport federations—these pressures are relatively weak

In the relative absence of materialities or institutions dictating organizational responses, mechanisms internal to the framing process are more important. Here, frame alignment is key. Vertically, we have found that organizations align environmental frames with dominant ecological discourses in Scandinavian societies. For the technical frame and the opportunity frame, discourses of administrative rationalism and ecological modernization offer powerful rubrics. In a horizontal sense, organizations align environmental frames with other salient frames in the organizations, focusing either on avoiding loss (e.g. in membership, voluntarism, finances) or securing gain (e.g. in political capital, finances, nature quality). In this process of frame extension—lies the perhaps most significant challenge for environmental framing—and environmental action—in voluntary sport organizations

In the introduction, we alluded to the point that environmental action is besides a sport organization's core function. Motivating voluntary members for tasks beyond sport is difficult and requires successful framing. Our study shows that the framing process is sensitive to this challenge. In different ways, organizations employing the more elaborate technical, opportunity and crisis frames, align environmental action with their primary purpose of facilitating sport. To some degree, environmental materialities can constitute a link between environmental action and provision of sport but, again, not even in the crisis frame, where this link is clearly elaborated, do materialities have notable bearing on proposed solutions

This apparent necessity of provision of sport/environmental action alignment points to a challenge in environmental framing in sport and in the voluntary sector, but also beyond (Luhmann 1989). Solutions to environmental problems involving radical changes to an organizations' core, are a difficult sell. If, for example, smaller facilities, tougher environmental restrictions, more moderate events, or shorter seasons are the answer, voluntary sport organizations are typically not the ones posing the question.

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