

Høyem, J. (2020). Outdoor recreation and environmentally responsible behavior. *Journal of Outdoor Recreation and Tourism*, 31, Artikkel 100317. <http://dx.doi.org/10.1016/j.jort.2020.100317>

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Title page

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Outdoor recreation and environmentally responsible behavior

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Keywords

Environmental attitudes, environmentally responsible behavior, *friluftsliv*, outdoor recreation.

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Abstract

Outdoor recreation is widely believed to promote environmentally responsible behavior. However, based on qualitative interviews with trekkers in Jotunheimen National Park, a mountainous area in Norway, this study questions that notion. The study finds that environmentally responsible behavior is preconditioned by reflection on the relationship between people and nature, and that outdoor recreation alone does not necessarily promote reflection. The results suggest that it is important to distinguish between outdoor recreation and reflection on the human–nature relationship, where only the latter is related to environmentally responsible behavior.

Management implications

This study has highlighted some key issues important to future management:

- Outdoor recreation alone does not necessarily promote reflection. Environmentally responsible behavior is preconditioned by reflection on the relationship between people and nature.
- It is important to distinguish between outdoor recreation and reflection on the human–nature relationship, where only the latter is related to environmentally responsible behavior.
- Outdoor recreation can be the basis for the development of an understanding of the interaction between humans and nature.
- Management for sustainable outdoor recreation should facilitate reflection on the human-nature relationship.

Outdoor recreation and environmentally responsible behavior

Introduction

It is widely believed that outdoor recreationists connect with nature, a connection that in turn leads to aspirations to protect the environment (Porter & Bright, 2003; Ministry of Environment, 2016). The main objectives of Norway's policies on outdoor recreation are to improve public health and contribute to sustainable development (Ministry of the Environment, 2001, 2016). The health benefits of fresh air and physical activity are well documented (Kurze, Eikemo, & Hem, 2009; Laukkanen, 2010; Mygind, Hartmeyer, Kjeldsted, Mygind, & Bentsen, 2018). However, research is not equally clear on whether outdoor recreation actually promotes environmentally responsible behavior (Dunlap & Heffernan, 1975; Gillett, Thomas, Skok, & McLaughlin, 1991; Theodori, Luloff, & Willits, 1998; Porter & Bright, 2003; Martin, 2004a; Grimwood, Haberer, & Legault, 2014). Outdoor recreation is often pointed to as a means to understand current environmental issues (Sandell & Sörlin, 2000; Hille, Aall, & Klepp, 2007; Beery, 2013; Grimwood et al., 2014). However, this connection remains undocumented, and scholars have suggested that there is a need for more knowledge about the relationship between leisure activities and environmentally responsible behavior (Porter & Bright, 2003; Bjerke, Thrane, & Kleiven, 2006; Chawla & Cushing, 2007).

Many facilitators of outdoor recreation activities assert that outdoor education can be linked to environmental consciousness or environmentally responsible behavior (Jackson, 1986; Martin, 2004a, Williams & Chawla, 2015). Most research on this relationship is related to organized outdoor activities in the context of environmental education (Lugg, 2008), even though researchers stress that environmental consciousness is formed as a result of life experiences rather than by any specific program designed to change attitudes (Newhouse, 1990; Chawla & Cushing, 2007; Chawla, 2007).

Several disciplines, as architecture, geography, anthropology, psychology and philosophy, based on different theoretical traditions, contributes with research which

widens our perspective on relations between humans, nature and culture (for instance Næss, 1973; Nordberg-Schulz, 1992; Gifford, 1997; Ingold, 2000; Jones, 2003; Bischoff, 2012). Bischoff (2012) describes how different approaches to nature influence our experiences when hiking. Svarstad (2010) find concepts of rationality and reflexivity useful for interpretation of the meaning hikers attach to their own activity, and assess that hiking provides ‘a rational response to central features of modern society’ (p. 106). Lumber, Richardson & Sheffield (2017) indicate pathways for improving nature connectedness. They stress that “the desire to protect nature may not be a result of connectedness solely, but serves as a route to connectedness” (p. 5), and emphasize the need for more research about nature connection to help understand what leads to pro-environmental behavior.

Norwegian outdoor policies mainly relate to unorganized outdoor activities. The distinction between outdoor recreation and outdoor education is significant for understanding the basis of this study, which focuses on the former. The purpose of the study is to explore the widely accepted assumption that outdoor recreation promotes environmental consciousness and environmentally responsible behavior. The study calls into question the claim that people who practice outdoor activities in their leisure time develop environmental attitudes and environmentally responsible behavior.

The context of this study is Norwegian *friluftsliv* [“life in the open air” in Norwegian]. However, this study uses the term outdoor recreation rather than *friluftsliv*, as the practice is arguably universal rather than a Norwegian phenomenon. Currently, there are multiple discourses and views on the notion of *friluftsliv* (Reed & Rothenberg, 1993; Gelter, 2000; Tordsson, 2003; Gurholt, 2008), but this article will not take part in those discourses.

Outdoor recreation and environmentally responsible behavior

Environmental attitudes are, according to Gifford (1997, p. 47), “an individual’s concern for the physical environment as something that is worthy of protection, understanding or enhancement,” and this description of the concept will form the

basis for this study. Other scholars, such as Thompson and Barton (1994), have referred to environmental attitudes as a problematic term. The theoretical ambiguity is also evident from the several methods that have been developed to measure it (Dunlap, Van Liere, Mertig, & Jones, 2000). This study does not seek to identify measurable categories of environmental consciousness but rather to find descriptions of the phenomenon to provide background for understanding, interpreting, and elaborating our understanding of environmental attitudes.

In the research literature, *environmentally responsible behavior* is an equally ambiguous term. Methodologically as well as theoretically, it makes sense to approach it as a multi-dimensional term (Axelrod & Lehman, 1993; Strumse, 1998). Actions in different aspects of life may be environment-related, and each of these actions will have different predictors. For instance, participation in environmental non-governmental organizations (NGOs) may be explained by membership benefits as much as by environmental concerns (Strumse, 1998). In his analyses of psychosocial predictors for environment-related behavior, Strumse (1998) highlights four main categories of environmentally responsible behavior: environmentally friendly consumption, environmental engagement, waste-reducing behavior, and transportation behavior (translated from Norwegian). His categories of behavior will be adopted in this study to describe the environmentally responsible behavior of the informants and will be elaborated on in the results section.

Previous studies suggest a positive, although weak or moderate, causal relationship between environmental attitudes and actual or reported environmentally responsible behavior (Stern, 2000). This corresponds to the results of social psychological studies on the relationship between attitudes and behavior in other fields. Attitudes often become less significant as a predictor if there are high costs or inconvenience related to environmentally responsible behavior (Vermeir & Verbeke, 2006). It is worth noting that research indicate that the association between concern and behavior is stronger among individuals and societies with higher levels of trust (Tam & Chan, 2018), like the Nordic countries (Nannestad, 2008).

Research design and methodology

The approach in this study is qualitative, based on the aim to develop understanding of individuals' everyday attitudes and actions in their natural context. Reality is perceived as a social construction that is continuously changing and inseparable from those who perceive it (Postholm, 2010). In practice, qualitative research involves a close working relationship between the researcher and the research participants (Merriam, 2002). Its primary goal is to describe some of the complexity of a phenomenon associated with the research question and to understand and assess the participants' perspective (Creswell, 1998; Merriam, 2002).

Qualitative interviews were utilized so that the researcher had the opportunity to listen to how the interviewees expressed their perceptions and opinions about the topics in their own words. In addition to documenting what was said, the meanings of their statements were interpreted and examined in relation to the context. In this work, researchers must adhere to their own and to the interviewees' pre-understandings through a process called the hermeneutic spiral (Gadamer, 2004).

A cabin belonging to the Norwegian Trekking Association, the self-service cabin *Olavsbu* at an altitude of 1,440 meters in Jotunheimen, was used as a base for the interviews. This mountainous area in southern Norway includes the highest peaks in North Europe and was conserved as a National Park in 1980. The approach to the cabin requires a few hours' walk from the nearest road. Jotunheimen is popular in both summer and winter, and the mountain area features a well-developed network of cabins and marked trails, ranging from easy to more demanding. Hence, the area attracts cabin-to-cabin trekkers and mountain climbers alike, and the context has a rich information potential. All interviews were carried out inside the cabin in the evenings. The interior of the cabin and the surroundings, as well as the fresh personal outdoor experiences, provided associations with the topic, and the atmosphere encouraged conversation.

The research question formed the starting point for establishing the inclusion criteria for interviewees, along with the need to find people who were willing to talk about their everyday lives and leisure time. The respondents' frequency and duration of outdoor recreation had to be of a certain level, and the choice of location contributed

to the selection in this respect. The participants were selected randomly by choosing every first and third hiker walking through the door of the cabin each day over a three-week period. Of these, 13 persons were selected as interviewees, including two for pilot interviews, based on criteria described in the following sections.

Preliminary conversations with the respondents gave an impression of their experience with outdoor recreation and provided a basis for assuming that the interviewees participated in outdoor activities relatively frequently. This study does not quantify a measure of active outdoor recreation. The following interviews resulted in better knowledge of the participants' outdoor habits. It was important to keep in mind that there is greater uncertainty in the estimates of frequency than in those regarding participation (Vorkinn, Vittersøe, & Riese, 2000).

Adult individuals were selected because they (unlike children) have real choices in regard to, for instance, transport and leisure activities. They are also better at expressing their attitudes and talking about their behavior. The minimum age was set at 20 years. No maximum age was set.

All respondents were Norwegians to reduce the possibility of cross-cultural and linguistic misunderstandings. In an interview situation, the language is the means the researcher has to obtain understanding of how the interviewees experience the phenomenon discussed. The language provides opportunities to take part in another's life world, but it also sets limits. These limits would be further reinforced if the selection were expanded to include foreign-language respondents.

According to Kvale (2009), the number of interviewees in current interview studies is based on a combination of how much time and resources are available and how the outcomes of additional interviews suffer with each new interview conducted. No additional interviews are conducted when the most recent interview fails to provide significant new knowledge (Kvale, 2009). In this study, two pilot interviews and 11 full interviews were conducted, following a prepared semi-structured interview guide. The pilot interviews provided useful experience in how to handle the interview situation. After the pilot interviews, two questions that functioned badly were deleted, one question was added, and the wording was changed in some of the questions.

Afterwards, the same interview guide was used during all the interviews. The interviews were audio-taped and transcribed.

Six women and five men were interviewed. Through variation in the sample, the information content of interviews can be increased, and this forms the basis for a deeper and more complete understanding (Gilje & Grimen, 1993). Previous studies have shown tendencies of differences in environmental attitudes between the sexes (Gifford, 1997). Equal gender distribution in the sample was sought, but the sample was too small to draw any conclusions regarding similarities and differences in this regard. All respondents had education beyond high school, which is not surprising in light of Odden's (2008) study of the characteristics of Norwegian outdoor recreationists in the last few decades.

When completing the interview guide and during the interviews, it was important to assess the extent to which respondents were involved in the issues and analytical perspectives. The question has both ethical and methodological aspects. Information disclosure is an important principle of research ethics, particularly if the respondents are in a situation of dependence when they give their consent (Repstad, 2007). Conversely, if the respondents have access to all analytical cards, the interviewer can run the risk that the respondents will respond strategically (Repstad, 2007). In this study, the questions were not regarded as very sensitive. However, it was important at the start of the interview that the respondents did not know the topic of the study, as this would likely influence their responses.

Repstad (2007) recommends the use of many approaches and varying degrees of specification in the interview to get a variety in the answers. To triangulate between different methods, a questionnaire concerning specific environmentally responsible behavioral variables was used. The questionnaire included 20 questions, where the respondents were to select one of five possible answers ranging from very often to never. This questionnaire was piloted along with the interviews. The form was presented to the interviewees at the end of the interview. Data from the questionnaires were used as a supplement to the interview data.

The analysis in a qualitative research project begins at the first meeting with the interviewees and occurs continuously. Notes and impressions from the interviews and transcriptions were thus included in the analysis along with the questionnaires. The results have been influenced by the researcher, the individual respondents, and the specific context and cannot be reproduced. However, the pilot interviews, interview guide, and questionnaire contributed to similarities between the interviews, thus enhancing reliability.

In an interview situation, the researcher must be aware of the opportunities to influence the results. As the interview is intended to cover a particular problem area, all interview questions set guidelines for the answers, to a certain extent. The researcher's sensitivity, combined with knowledge of the topic of the interview, provides an opportunity to go in depth into subjects perceived important while steering clear of minor issues. It is essential that the researcher know the codes, language, and symbols within the topic researched to understand the meanings interviewees put in their answers. The researcher's knowledge must therefore be regarded as a resource in an interview situation.

By focusing on a single group, that is, Norwegians trekking in Jotunheimen in September, the study could potentially be limited by its scope. Thus, this study should be regarded as one piece in a larger puzzle of understanding of people in nature. The results say something about the group interviewed, and they are the truth for those who spoke them. There is no basis for concluding that this is how Norwegian outdoor recreationists think and act in general. However, that was not the aim of the study.

Results

Based on data from the interviews and questionnaires, this study explores whether outdoor recreation promotes environmental attitudes and environmentally responsible behavior. The results are grouped into five sections, following the focus of the interviews. These sections are motivation for, and personal gains from, outdoor recreation; reflections on relationship with nature; relationship with nature and environmental concerns; socialization and outdoor recreation; and environmentally

responsible behavior. All informants have been anonymized in the presentation, and they are given fictitious names.

Motivation for, and personal gains from, outdoor recreation

Two of the respondents, Jonas and Ellen, express their reflection on their relationship with nature and need for being in nature, indicating that they therefore seek the mountains for trekking:

I have a fundamental love for nature, I think. [...] So, I believe, I think it's there as a basis all the time... Nature is very important for me. The silence, the challenges, the beauty, the savagery... To go hiking in the mountains and to feel that I am a tiny, little person who has subsumed to nature, I think that is really good for me! Maybe I am one of those Norwegians who see nature as a kind of God. (Ellen)

This understanding of sense of inclusion in nature is referred to as our "ecological identity or self" (Næss, 1973).

These two respondents express environmental attitudes to a larger degree than, for example, Ivar and Cecilie, who explain that they go hiking from habit and describe nature as a context for activities and being together with others:

Well ... It gives satisfaction in a certain way, that you've been outside and ... But it's hard to put into words. Because there's probably been a reason once because I like to be out, but I do not remember it anymore. Because it has been, right ... Now it's just a habit. (Ivar)

They express little concern for the environment as something that is worthy of protection, understanding, or enhancement. Despite the similarity in actions and activities among the respondents, the way they describe the purpose of their actions varies, as does the expressed degree of awareness of meaning embedded in the activity. This corresponds with the results of earlier research (e.g., Dunlap & Heffernan, 1975; Geisler, Martinson, & Wilkening, 1977; Geelmuyden, 1998).

The same activity may take on different meanings for different individuals (Gibson, 1986; Svarstad, 2010), and for environmental concern, this may be more important than choice of activity (Van Liere & Noe, 1981). Svarstad (2010) identified three categories of meaning constructions among Norwegian hikers in her study: 'a

recreation category, a category of the simple outdoors discourse, and a belonging category' (p. 91). She asserts that hiking can be seen as a traditional action that Norwegians 'just do' (p.106), but that nevertheless rationality and reflexivity is a central feature of why people devote their leisure time to hiking. It is worth noting that the contributors in Svarstad's study constituted a self-selected group of people, while this study, although limited in selection as well, included informants which probably had less experience in reflecting on, and expressing, their own relationship to nature and rationale for friluftsliv.

The results from this study are in line with Svarstad's assessments by highlighting that the informants have different approaches to and perspectives on their outdoor recreation. It appears in this study that it is not the informants choice of activity (trekking) that is connected to their environmental attitudes, but rather their approach to the chosen activity. Porter and Bright (2003, p. 263) found that "outdoor recreation meaning was a better predictor of environmental concern than measures of participation." However, their results suggest that the relationship was not particularly strong, and meaning is one of many factors that might influence environmental concern.

Based on this, a continuum can be drawn from those who participate in outdoor recreation from habit to those who have consciously chosen to be in the outdoors as an important part of their leisure time (Figure 1). Those who hike from habit seem to have begun participating in outdoor recreation because there was nothing else to do. They do not seem to construct other categories of meaning into their friluftsliv. Those who describe their outdoor recreation as meaningful are most often socialized into outdoor recreation by parents or friends who deliberately wanted to pass on their interest in outdoor recreation. The latter group has, to a much larger degree than the former, reflected on the benefits of outdoor recreation. They argue that outdoor recreation is linked to their quality of life. When they reflect on their friluftsliv, they can fall into all three categories of meaning constructions (Svarstad, 2010) and construct hiking as a rational response to challenges of life in the modern society. These differences exist despite the fact that their level of education is quite uniform.

Reflections on relationship with nature

When invited to describe their relationship with nature, the participants' replies demonstrated that they had reflected on such a relationship to various degrees. They all seemed more capable of describing their relationship with outdoor recreation than with nature, as evidenced by the comments below. Outdoor recreation allowed them to meet nature and relate to it, and accordingly, the respondents linked their relationship with nature to their outdoor activities. Half of the respondents merely answered the question by describing their activities. Cecilie, for instance, responded:

I'm not an extremist, to put it that way. [...] I have more of an exercise kind of relationship with nature. (Cecilie).

Thus, it appears it is not nature that is their focus, but the possibility of doing those activities in nature. They have a relationship of some sort, but it is one in which nature is a playground.

Conversely, the respondents who expressed that they had reflected on their personal gain from outdoor recreation, as described in the last section, also seemed to have reflected on their relationship with nature:

I believe I love nature very much. That wraps up much of it. I depend on nature. I can't make it without it, actually. It's a big part of my life. Has always been. [...] I guess I have a fundamental love for nature. (Ellen)

All eleven respondents were asked how they would describe their relationship with nature. The analysis focuses on the individuals' personal reflections on their affiliation with nature and how these can be interpreted. Only three respondents in this study felt able to express what it means to have a relationship with nature. Most found it difficult to describe their relationship with nature in depth, as they had not reflected on it previously. As shown in Figure 1, there is also a continuum between a low and high degree of reflection about one's own relationship with nature. Martin (2004b) asserts that an inability to express such a relationship may be explained by two factors: first, the complexity of the concept of nature, and second, a lack of appropriate terminology to describe relationships, as can be seen in the use of language describing relations between humans (Josselson, 1996, as cited in Martin, 2004b).

Relationship with nature and environmental concern

All the respondents in the study asserted that having a relationship with nature involved being environmentally concerned on a general level. This was true regardless of their descriptions of their own environmentally responsible behavior, as expressed both in the questionnaires and interviews, and regardless of their ability to express awareness of their own relationship with nature:

How would you describe your relationship with nature?

With nature itself... I really support the conservation of... everything. All nature.

What do you mean by that?

Environmental conservation... No, I don't have a relationship. What are you getting at? My relationship with nature – how I use it, or what? (Erik)

The preceding quote is an example of the outdoor recreationists who have not reflected on whether they have a relationship with or feel related to nature. It might also be possible that they do not understand the question or lack the language to express how they feel. However, all the respondents stated that having a relationship with nature was equivalent to being environmentally conscious. Those informants who had reflected upon their relationship with nature—and were able to express it—linked this relationship with what Gifford (1997) describes as environmental attitudes. Indeed, their relationship with nature prompted a desire to preserve it:

...I have a very strong relationship with nature. I'm very concerned about nature, really. As a result, I have a relationship with it, you can't take nature for granted. You have to appreciate immensely that there is wilderness in Norway. [...] It's so valuable, and that makes me think about how I can contribute to preserve it. (Jonas)

Nature offers Jonas something, and he wants to give something back. Jonas' interaction with nature, through outdoor recreation, prompts his intention of environmentally responsible behavior. His conscious relationship with nature and his reflections about outdoor recreation are affected by his outdoor recreation. Hence, the data set from the interviews supports the assertion that there may be a correlation between outdoor recreation and environmentally responsible behavior seems plausible, but only under certain conditions. The interview data indicate that awareness-building does not follow automatically from outdoor recreation: awareness requires that the outdoor recreationist be reflective. This reflexivity, like Svarstad (2010) describes, construct hiking as a rational response or solution to the challenges

or problems of life in the modern society. Environmental attitudes might also be a motivation for outdoor recreation. This notion is in line with the research of William and Chawla (2015) on environmental life history.

Socialization and outdoor recreation

This study further demonstrates the possible value of outdoor recreation and childhood outdoor experiences as a formative agent of environmental attitudes. The participants' introduction to outdoor recreation, as well as their motivation, varied greatly. In respect to socialization and motivation, two main categories emerged. One category includes those who are outdoor recreationists because they have always frequented the outdoors, such as Ivar:

Your parents took you out a lot [in your childhood]?

[...]

Yes, that was kind of normal. It wasn't our hobby in one way or another. [...] It is this you do. Yes. This is what I want to do right now. And, right.... It was no thoughts on, how to phrase it?... out in nature, friluftsliv and all that. It was nothing like that in the fifties. It was just like that. No deliberations, so to say... (Ivar)

Both Ivar and Erik say that they were often outdoors because there was nothing else to do. They have little or no memory of parents or peers who brought them along, and they have not reflected on why they are outdoor recreationists. They cannot describe their motivations or utility value from outdoor recreation.

In the other category are those who find outdoor recreation to be important and who can describe how they benefit from their activities. These people were often introduced to the outdoors by family or friends and have an impression of why they were introduced to outdoor activities. Hence, their socialization to outdoor recreation has followed carefully reasoned choices:

I had parents who were very concerned about going for hikes on Sundays. Sunday was a mandatory trip day. [...] That has made me continue going for hikes. And I did the same towards my own children, they had to join hikes.

Therefore, I am really excited to see that they still go outdoors today...I think that is something I have managed to contribute with. (Dagny)

Dagny and Ellen speak of parents who brought them outdoors, and they suggest that their mothers and fathers had a clear purpose in doing so. Both Ellen and Dagny have passed on this awareness to their own children and are pleased to see that the younger generations are actively pursuing outdoor recreation. Dagny also puts outdoor recreation into a cultural context, while Ellen's words paints a picture of her parents', and later her own, awareness of relationship with nature. The respondents in this category have reflected on the benefits of outdoor recreation and how it improves their quality of life. Therefore, they have a clear motivation for outdoor recreation. They show, in line with Svarstad's (2010) categories of reflexivity on hiking, aspects of both recreation, hiking as a way of living out an alternative to society, and a way to create belonging in nature and in human history.

Parents and peers are role models, and thus outdoor recreation behavior during childhood is often copied later in life (Vorkinn, Vittersø, & Riese, 2000; Bixler, Floyd, & Hammitt, 2002). Thompson, Aspinall, and Montarzino (2008) find that outdoor recreation in childhood is a significant predictor of later adult visits to green areas. Referring to previous research, Ewert, Place, and Sibthorp (2005) describe how childhood experiences in the outdoors are a key factor for forming environmental beliefs. Chawla (2007) confirms that growing evidence shows that active care for the environment in adulthood is frequently associated with positive experiences of nature as a child, along with childhood role models appreciating nature. Awareness of the natural world may form a basis for identification with the world of environmental action; however, this occurs in a positive feedback system, where action in this cultural world, in turn, may also increase nature's salience (Williams & Chawla, 2015).

Environmentally responsible behavior

The respondents' *environmentally responsible behavior*, as indicated through the interviews and the questionnaires, also differed, and the theoretical ambiguities of this concept have been confirmed by this study.

The *waste-reducing behavior* of the respondents generally seemed responsible, judging from the answers in the survey and the interviews, and there were no noticeable differences in how they behaved in their everyday lives. This observation has also been made by Hines, Hungerford, and Tomera (1987), who find that motivation for waste-reducing behavior is less determined by an intention to act than by the context. Waste-reducing behavior was the behavior that most respondents immediately associated with environmental responsibility. The differences between the respondents were far more significant in other kinds of environmentally responsible behavior.

Environmentally friendly consumption does not seem to have been established as a social norm among the respondents in the same way. This may be explained by the fact that consumption is an individual responsibility, and reduction in consumption requires a radical choice. In this study, the two respondents who were most conscious of their personal relationship with nature had also reflected on—and tried to reduce—their consumption. The other interviewees at *Olavsbu* had few or no opinions on environmentally friendly consumption.

Transportation behavior among the respondents was largely determined by convenience. Those who have been assigned to one end of the axis as reflective outdoor recreationists described their own choice of public transportation and bicycles as environmentally responsible, although the choices of transportation were usually determined by the context. The respondents chose their means of transport, for example, to trail heads, out of convenience more than as environmentally responsible behavior, and outdoor recreation in more proximate outdoor recreation settings was not prioritized over outdoor recreation in more remote areas that depended on transportation.

All the respondents seemed to be traveling safely. Apart from these similarities, there were great variations in their *environmental engagement*. The recreationists-out-of-old-habit could reflect on environmental consciousness more easily if it related to their immediate surroundings, and particularly to the area they had experienced the same day or outdoor recreation settings close to home. They seemed to be more committed to the preservation of the natural areas they seek as outdoor recreationists

than to environmental protection in general. The reflective respondents had a wider perspective on environmental issues. The study does not have data to assess whether gender or education are significant factors in these differences.

In general, the informants are more concerned about environmental problems in areas where they have participated in outdoor recreation (e.g., Jotunheimen, where this study was conducted) than to environmental challenges in general. This suggests that outdoor recreationists are more concerned about environmental problems if they affect their ability to participate in outdoor recreation. While the relationship between outdoor recreation participation and environmental attitudes or behavior has been shown to exist in regard to local environmental issues, such as concern for local forests or other natural resources, evidence of this relationship weakens when the environmental issues are broader, such as environmental pollution (Dunlap & Van Liere, 1978; Williams, Patterson, & Roggenbruck, 1992; Porter & Bright, 2003). In this study, the informants relate environmental concern in general, and the conservation of nature in particular, to the areas they visit as outdoor recreationists:

No... I'm not environmentally conscious. But I'm very concerned about the nature here. If someone said that they were going to make a E6 [highway] through Jotunheimen, and you had asked for my signature in some kind of rally, I would have signed 20 times. Yeah! If that is an environmental question, or... environment... when it comes to environment... ozone layer and what have you. I'm not very committed, no. It's not part of my everyday life. (Kristine)

All the informants associated environmental consciousness with conservation of their outdoor recreation areas to a larger degree than with environmental conservation in general. Erik may be used for illustration:

You mentioned conservation. Are you concerned about the protection of wilderness?

Yeah. This place is special, since there are so few traces of human activities. The place is just like it has always been. (Erik)

The specific issues that were mentioned during the interviews were related to the conservation of Jotunheimen as well as recreational areas near the participants' homes or holiday homes. Their references to Jotunheimen would be natural due to the

context of the study. Ghimire, Green, Poudyal, and Cordel (2014) explain how outdoor recreation can increase participants' attachment to the areas where they recreate. Personal experience often leads to greater understanding and appreciation of natural resources (Tarrant & Green, 1999, as cited in Ghimire et al. (s2014)) and can offer learning opportunities. However, it seems that differences in consciousness relate to differences in reflections on environmental issues as much as on situational factors. This is related to relationship development (Martin, 2004b, 2005). The emotional ties to outdoor recreational settings are more distinct among reflective outdoor recreationists (Williams et. al., 1992). This is in line with the concluding remarks of the review of Restall and Conrad (2015) on connectedness to nature and its potential for environmental management. They suggest that researchers interested in understanding or influencing people's attitudes and behaviors toward the natural world may "benefit from CNT [connectedness to nature] concepts and measures that assess the subjective experience of ecological self and the interconnectedness of humans with nature" (p. 273). This is supported by Lumber, Richardson and Sheffield (2017) who identify how contact, emotion, compassion, meaning and beauty can be both indicators of and pathways to nature connection.

Outline of a continuum

Indeed, the data from the interviews can be distributed along a line or a continuum—or a set of interrelated continuums. Most respondents can be grouped at or near one end of the continuum, while some could be placed at or around the center. The continuum describes the following, running from low to high:

- Awareness of one's own motivation for outdoor recreation
- Awareness of one's own personal gains from outdoor recreation
- Degree of reflection about one's own relationship with nature
- Exposure to intended socialization to outdoor recreation

[Insert figure 1]

Figure 1: The continuum describes the outdoor recreationists in this study.

As expected, the distinction between the two main groups of respondents is not definite, and any general conclusions from this study must be drawn with caution. Through the interviews and the questionnaire, it has been possible to relate both the environmental attitudes and environmentally responsible behavior of the respondents to the continuums outlined above. These continuums will be used as the framework of the following discussion.

Discussion

This study questions the often-asserted link between outdoor recreation and environmentally responsible behavior. The results distribute the respondents along a continuum, although most of them are placed close to one of the ends of the continuum. At one end of the continuum are outdoor recreationists with high awareness of their own motivation for being in nature and a vocabulary to describe their personal gains from outdoor recreation. They show a high degree of reflection about their personal relationship with nature and manage to separate this from their relationship with outdoor recreation. Concepts of rationality and reflexivity (Svarstad, 2010) can be useful for interpretation of the meaning contents they assign to their friluftsliv. At the other end of the continuum are people who are less able to express their motivation for outdoor recreation or what they see as the benefits of this leisure activity. They frequent the outdoors because they have always done so, and they are not able to express why they started. According to this group, having a relationship with nature can be seen as the same as having a relationship with outdoor recreation, and they lack the language to describe it.

The distinction between these two main groups is not as distinct when it comes to environmental attitudes. However, the reflective outdoor recreationist seems to bond emotionally to nature—and develop environmental attitudes accordingly—more easily than the respondent at the other end of the continuum. Environmentally responsible behavior can more easily be related to the axis than to expressed environmental attitudes. Waste-reducing behavior is largely determined by situational factors. Environmentally friendly consumption appears to be a peripheral issue to most of the informants, although the most reflective respondents aim at reducing their consumption. For all the respondents, transportation behavior seems to be determined

by convenience, notwithstanding the fact that the choice of public transport and bicycle is perceived as environmentally responsible. Environmental engagement is the dimension of environmentally responsible behavior that most clearly expresses the contrasts of the axis. Based on their relationship with nature, the respondents who can be placed at the “high” end of the continuum have a larger intention to act environmentally responsibly than the people at the “low” end, and this intention to act seems to influence their behavior.

In general, the respondents in this study show a greater sense of responsibility for protecting areas used for outdoor recreation than other areas. This could be related to the respondents’ knowledge of the issues through closeness rather than their personality and experience of personal responsibility.

[Insert Figure 2]

Conclusion

Outdoor recreation is a way of meeting nature. It implies a temporary interaction with nature, but these temporary interactions can contribute to a permanent relationship. The results of this study suggest that the practice of outdoor life provides an opportunity to build up a conscious relationship with nature, but it requires reflection on the topic. Outdoor recreation can be a context and a meaning system that forms the basis for the interpretation of nature and environmental challenges. Outdoor recreation does not create environmental consciousness itself but can be a basis for developing this type of thinking by supporting the establishment of a conscious relationship with nature.

Outdoor recreation is widely believed to promote environmentally responsible behavior, and the interviews indicate that the respondents hold this belief as well. This conviction is actually independent of their actual environmental attitudes and environmentally responsible behavior, as shown by the interviews and surveys. The claimed relationship seems more idealistic than based on rational assessment and personal experience.

The results indicate that individuals, and organizations, who aim at increasing environmentally responsible behavior should facilitate outdoor recreation, which will lead to more reflection on the human–nature relationship. Outdoor recreation cannot be idealized as the only or best way to environmental consciousness. In any event, the outdoors is a good learning environment for choosing and prioritizing different values through reflection, and outdoor recreation can be the basis for the development of an understanding of the interaction between humans and nature. How to induce this reflection and build the awareness of outdoor recreationists—and thus make *friluftsliv* a path toward environmentally responsible behavior—should be a subject of future research.

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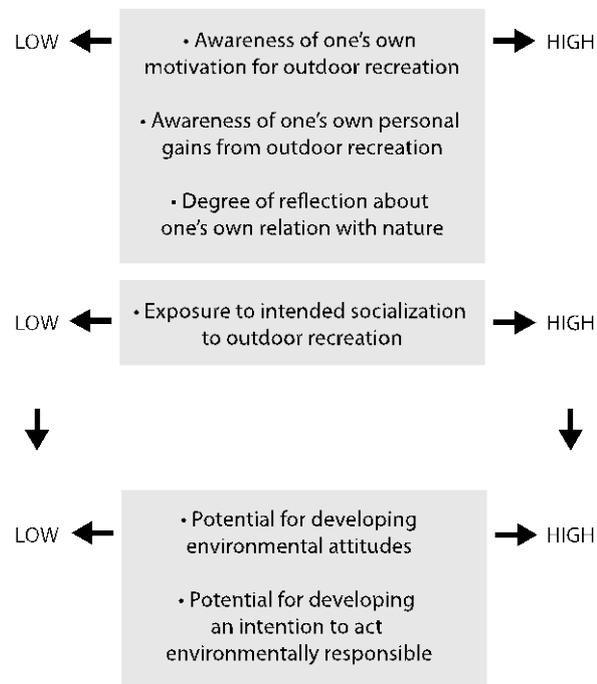
Figure 1



The continuum describes the outdoor recreationists in this study. The continuum describes the following, running from low to high:

- Awareness of one's own motivation for outdoor recreation
- Awareness of one's own personal gains from outdoor recreation
- Degree of reflection about one's own relationship with nature
- Exposure to intended socialization to outdoor recreation

Figure 2



The continuum builds on figure 1, and describes the potential the outdoor recreationists have for developing environmental attitudes and an intention to act environmentally responsible.

Acknowledgement

I acknowledge the participants who made this research possible, and colleagues who have given valuable comments in various phases of this project. Special thanks to Professor Torbjørn Pedersen for help with the figures. I acknowledge the editor and two anonymous reviewers for providing insightful comments that helped strengthen the quality of the manuscript.