



The Saint Olav Pilgrim Trail

A study on the soulful and transformative
experience of the environment

Part I

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The Saint Olav pilgrim trail: A study on the soulful and transformative experience of the environment. Part I.

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Abstract

Pilgrimage or long-distance walking is a life changing journey, that restores the soul, brings inner peace, happiness and balance between body and mind. The pilgrimage along *St Olavsleden*, which is a 580 km long Scandinavian pilgrimage route, is an international phenomenon that attracts people with varying motives. This includes personal, health, social and spiritual/religious reasons as well as cultural-historical interests and the preference for nature and beautiful landscapes. A qualitative approach was adopted for this study, which included the collection of personal pilgrimage stories and in-depth interviews with pilgrims. The main aim was to learn more about how the environment can support the higher needs in Maslow's hierarchy of human needs, that is self-actualization and self-transcendence. In the study it was found that quiet or passive stages of the journey support reflection, increase emotional awareness and liberate the mind, while more active or engaging stages require focus, help the person become present in the now and move forward in life. Being guided by pilgrimage signs through the unknown and the wonderment of nature were found to promote soul restoration, while beautiful scenery, such as the view of mountains, lakes, and waterfalls, as well as the experience of cultural heritage sites fostered a deep emotional connection to the surroundings. Moreover, the experience of these environmental aspects gave life perspective and awakened existential thoughts that led to personal transformation. Finally, the contrasting experiences on the trail were highly appreciated by the pilgrims and made the journey into a metaphor for life.

Keywords: pilgrimage, soul restoration, existential meaning, self-transcendence, self-actualization

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Abbreviations

ART	attention restoration theory
CCT	calm and connection theory
e g	exempli gratia (for example)
i e	id est (that is)
ha	hectares
PSD	perceived sensory dimensions
SDT	self-determination theory
SET	supportive environment theory
SRT	stress reduction theory

1. Introduction

Within the field of environmental psychology there is extensive research on how the physical environment supports the biological and functional needs of human beings, however, there is little empirical data regarding how the environment contributes to the fulfilment of the higher needs in Maslow's hierarchy, that is *self-actualization* and *self-transcendence*, also referred to as *metaneeds* (Koltko-Rivera 2006). An under-researched phenomenon and opportunity to fill that research gap, is to study pilgrimage.

In previous studies (Jørgensen 2008, Jørgensen et al 2020a, 2020b) it has been found that modern pilgrimage or long-distance walking is not only a religious activity, but also serves a therapeutic purpose. The motives for participating in such a sacred journey varies greatly between different individuals. As regards the Catholic pilgrim route to Santiago de Compostela in Spain, also known as the Way of St James, most people walk the distance for spiritual purposes or to get to know themselves better, hoping for a personal/mystical transformation or to become one with nature, while others participate to overcome mental health challenges, such as depression, or coping with a life crisis (Jørgensen 2008). Somewhat different results were found for pilgrims who walk the Christian St Olav Way in Norway (Jørgensen et al 2020a, 2020b, Jørgensen 2022). Here the most significant motives were 'contemplation, health, social/solitary, pilgrimage walking/repeating, followed by less frequent motives such as historical/cultural interests, spiritual/religious reasons, a more present/simple/slow life, and major life events/changes' (Jørgensen 2022:vii). However, it is also possible to walk the St Olav pilgrimage path from Sweden. The Scandinavian route, called *S:t Olavsleden*, measures approximately 580 km and stretches from Selånger located in Sundsvall's municipality to the Nidaros Cathedral in Trondheim (S:t Olavsleden 2023a, fig 1).

As regards environmental qualities, Jørgensen (2008) has found that pilgrims who walk the Camino de Santiago want to experience a sense of beauty and wonder during their journey. According to the same author a female participant also found *herself* in the vast beautiful landscapes. The latter through self-reflection and sharpening of the senses. In Gaunitz (2006) case study on pilgrimage to Vadstena, a Swedish route dedicated to St Birgitta, it was found that the simple environment (nature) affected the spiritual experience the most, however, several participants also expressed that they wanted a church and a beautiful place at the final destination. Otherwise, the environmental descriptions, including what the environment has to offer the pilgrim, are often lacking in both detail and depth.

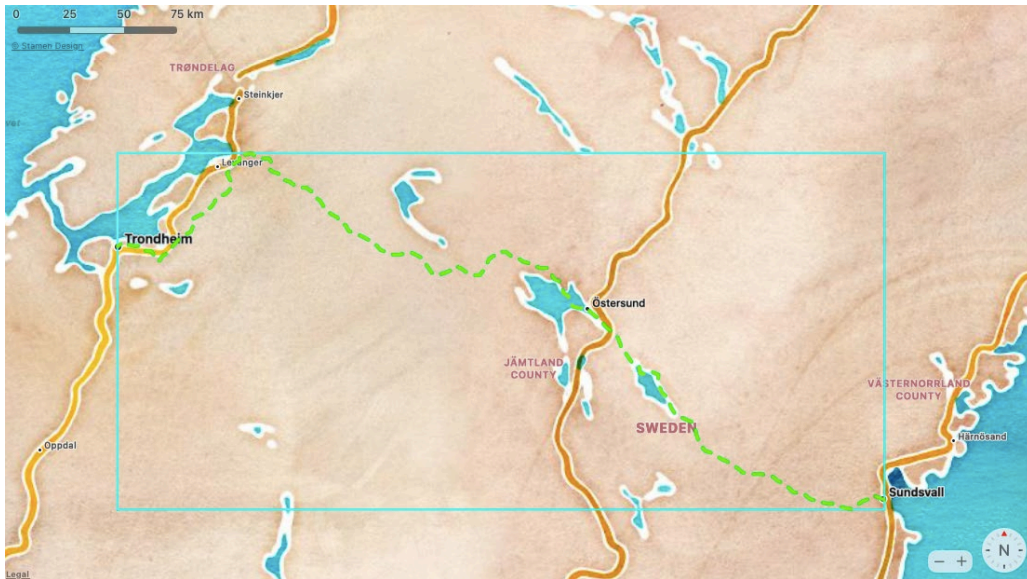


Figure 1. S:t Olavsleden (Stamen Design 2023, OpenStreetMap 2023, Upplev Ånge 2023)

In the traditional sense, and through a strict interpretation of the concept of *pilgrimage*, the participant must reflect on his/her life during the journey (Gaunitz 2006). *Self-reflection* is a form of psychological processing, that has been identified in the context of pilgrimage walking (Jørgensen et al 2020a). Furthermore, it has been revealed how certain therapeutic processes are activated during pilgrimage, i.e., *self-immersion*, *self-release*, and *self-restoration* (Jørgensen 2022). This necessarily involves introspection as well as cognitive and emotional aspects (Jørgensen et al 2020a). However, it may also be experienced as a more outward-looking process, in which the personal world or self gets projected onto the environment (Weber 2016), such as seeing metaphors in nature that represent some life experience (Weber 2016, Prieto 2020, Salonen et al 2022). The self-reflective value of nature has further been identified as a therapeutic mechanism for pilgrims walking the Spanish Camino (Jørgensen 2008). A reflective state can also be accomplished more actively through for example walking, talking, and journaling (Jørgensen 2008, Ki 2022) and in a study on Buddhist pilgrimage, reflection was discussed in relation to experiential learning (Ki 2022). Moreover, ‘reflection and problem-solving are considered key to personal growth/transformation’ (Saunders et al 2013 in Jørgensen 2022:36).

Healing/improved wellbeing and personal transformation can also occur in a more stimulating milieu (Keltner 2023). People can for example develop *place attachment* to sacred places (Scannell & Gifford 2010) and religious practice or soul care often involves activities that stimulate the senses and evokes feelings, such as burning incense, singing/chanting, reading religious texts and preaching words of wisdom that are loaded with feeling (singing/chanting; Keltner 2023).

Among the many benefits of pilgrimage are also improved spiritual and sensorial health as well as personal change (Jørgensen 2008, 2022). Furthermore, observing and mirroring the emotional life of other beings can help us get in touch with our own emotions and make us understand ourselves better (Weber 2016), for example when tuning in to the nightingale's song and watching two squirrels chase each other up the tree. As social beings, we have an innate desire to build relationships and cooperation is also a good strategy to survive/thrive in this world (Kotler 2021).

In addition to the above-mentioned processes, Jørgensen (2008) has found that many pilgrims experience *transcendental flow* after having walked long distances. Within neurobiology the state of flow has been described as a basic biological mechanism involved in high level performances (Kotler 2021). Humans experience flow when 'the nervous system is functioning at its absolute best' (Kotler 2021:9).

The purpose of the present study is to explore the role of the environment in health, wellbeing, personal development, and self-transcendental experiences. More specifically the thesis aims to answer the following research questions:

1. How do pilgrims who walk the *St Olavsleden* experience the journey as a whole?
2. Who are the participants and what motivates them to make the pilgrimage?
3. How do the participants experience the St Olav trail?
4. What are the perceived outcomes of the pilgrimage on health, wellbeing, and higher needs?
5. What healing mechanisms, health-enhancing or developmental processes (spiritual/psychological/bodily) are activated?
6. Which aspects of the journey, if any, contribute to the personal transformation?
7. What is the environmental impact on the perceived outcomes?
8. Are peak experiences part of the journey and which factors, focusing on environmental qualities, may evoke them?
9. Is there a relationship between 1. the experience of beautiful landscapes, wilderness, natural wonders or holy places and 2. restoration, instoration or peak experiences?

To obtain a holistic approach it was decided to use the concept of *alignment* as an umbrella term for the plethora of concepts that concern self-transcendence (Koltko-Rivera 2006, Eliade 1959), the associated states (Weber 2016, Kotler 2021, Keltner 2023) and attunement/resonance (Grahn et al 2021, Desmet 2023). The concept is also used to define the state in which a person is aligned with his/her values and

purpose, including a higher purpose of life. It is hypothesised that pilgrimage/long-distance walking, in a setting with the perceived environmental qualities of *beauty*, *wonder* and *wildness*, will help the participants to achieve alignment and personal transformation.

2. Theories

2.1 Basic theories on restoration

Within the discipline of environmental psychology, most focus has been on nature's role in relation to human's fundamental needs of health and wellbeing. There are several theories that explain the health benefits of human's contact with nature. Firstly, there is Ulrich's (1983) stress reduction theory (SRT), which explains how the aesthetic qualities of natural environments, e.g. the view of trees, has a restorative effect on people both emotionally and physiologically (Han 2010, 2018). Stress is here defined as "the process by which an individual responds psychologically, physiologically, and often with behaviours, to a situation that challenges or threatens well-being" (Ulrich et al 1991:202). However, there is also a 'recovery from *understimulation* and extremely low psychological and physiological mobilization, as well as energy used in reactions to stresses' (Han 2018:152). This includes 'positive changes in psychological states, activity levels in physiological systems, behaviours, and human functioning' (Ulrich et al 1991:202). Given the topic of this thesis, the existence of the *self-transcendent states* of awe, joy, ecstasy/bliss, fun/mirth, and flow should be particularly emphasised (Keltner 2023, Kotler 2021). Furthermore, 'affect can appear independent and prior to cognition' (Parsons 1991; Han 2018:152). Secondly, Kaplan and Kaplan's (1989, 1995) theory on restorative environments, called the attention restoration theory (ART), describes how four perceived environmental properties; *being away*, *extent*, *fascination*, and *compatibility*, promote attention restoration and thereby also cognitive functioning. The property of *fascination* or *effortless attention* also promises an instorative effect, here in the form of reflection, that indirectly leads to a generation of attentional resources (Kaplan 1995, Basu et al 2019). The notion effortless attention was originally referred to as fascination because "it draws on our attraction to fascinating stimuli without requiring sustained effort or conscious control" (Basu et al 2019:1057) and in nature there are many elements that fascinates us. According to Basu et al (2019) an opportunity for reflection should be afforded, because it can lead to a reduction of internal noise, that would otherwise burden the mental resources that are available for *directed attention*. The concept of *compatibility*, i.e. the fit between person and setting, is also assumed to support reflection (Kaplan et al 1998; Han 2018). In addition, *favourite places* have also been identified as restorative places (Korpela & Ylén 2009). The health benefits include for example stress reduction, self-/emotion regulation as well as increase in positive feelings and subjective vitality (Korpela et al 2008, Korpela & Ylén 2009). Lastly, the supportive environment theory (SET) provides an overarching model for how the environment can support people in

different stages of their recovery (Grahn et al 2022). It points out three environmental aspects, i.e. the social, physical, and cultural aspect, that people need or prefer to be healthy and feel good. The theory is summarized with a pyramid where the environmental types are ordered according to the degree of challenge they present to the user. At the bottom are peaceful environments that support introspection and at the top more stimulating environments which require outgoing involvement (Grahn et al 2022). This model has been integrated with the perceived sensory dimensions (PSD) model which consists of eight aesthetic qualities for health-promoting environments in urban green spaces (Stoltz & Grahn 2021). The eight PSD:s are (starting with the least challenging); *serene, sheltered, natural, cohesive, diverse, open, cultural, and social* (Stoltz & Grahn 2021, Grahn et al 2022).

2.2 Alignment

According to the English dictionary, the word align has several meanings. In its most basic form align means: 1. “to range, place, or lay in a line; to bring into a line” or 2. “to fall into a line” and in more specific terms: 3. “to bring two or more points into a straight line; spec said of bringing the ‘sights’ of a rifle into line with the mark, so as to aim straight” and 4. “To bring into a line with a particular tradition, policy, group, or power” (the Oxford English Dictionary 1989:317). The subject of alignment also occurs in a variety of research fields such as education (Rossi 2016), social-cognitive neuroscience (Gallotti et al 2017), physics (Benakli et al 2018) and religion (Yilmaz 2023). In Rossi (2016) alignment is studied as part of a participatory approach with focus on the interaction between teaching and learning, in which alignment appears as a result of the positive relationship between teacher and student. Here the concept is understood as “a process that takes form during the action and includes interaction between subjects as well as their contribution” (Rossi 2016:44). The process is partly explained by neuroscience “describing the role of oscillation in terms of bringing together the thoughts and actions of interacting subjects by synchronising them” (Rossi 2016:46) as well the theory of dynamic systems in which relationships, dialogue and reciprocal adjustments create new systems. In Rossi’s study alignment is discussed in the context of intersubjectivity, empathy, achieving accord and balance, mutual changes as well as the constructive alignment between individual and society. This includes affective, cognitive and sensorimotor aspects (Rossi 2016). Gallotti et al (2017), on the other hand, studies alignment in social interactions from a more general perspective. According to their paper social cognition appears as a result of adaptations which may or may not include shared goals. Alignment is here described as a gradual and dynamic process where separate minds come together and form a shared reality. This includes the alignment of both mental and bodily

manifestations since action cannot be separated from cognition. Further, the shared reality is viewed as an integrated system of alignment defined as “the dynamic coupling of behavioural and/or cognitive states of two people” (Gallotti et al 2017:253). In addition, the authors use the synonym attunement to describe the same process and explains that alignment may also appear through interaction between different systems (Gallotti et al 2017). Finally, the concept of alignment occurs in a study by Yilmaz (2023) in which it was found that religious individuals expect that AI systems align with their moral values. The authors have a social constructivist view on the topic and describes how religion may influence the meaning-making process in the form of certain expectations. For example, religious traditions often provide ethical advice and divine alignment strategies for a better life or afterlife (Yilmaz 2023). In the current study the concept of alignment is used as an umbrella term for self-transcendence, the associated states and attunement/resonance; concepts that will be further elaborated on below.

2.2.1 Maslow’s hierarchy of needs

Most students are probably familiar with the psychologist Maslow’s (1943, 1954) hierarchy of human needs, however, far from everyone knows about his latest thoughts regarding the needs of *self-actualization* and *self-transcendence*. Koltko-Rivera (2006) has finalized Maslow’s work and provided a rectified version in which these two initially combined concepts, were separated and given new definitions that better reflect this position. Here, self-actualization is defined as ‘seeking fulfilment of personal potential’ which ‘refers to a person’s desire to become actualized in what he/she potentially is’ (Koltko-Rivera 2006:303). Self-transcendence, on the other hand, is when a person “seeks to further a cause beyond the self and to experience a communion beyond the boundaries of the self through peak experience” (Koltko-Rivera 2006:303). *Peak experiences* “may involve mystical experiences and certain experiences with nature, aesthetic experiences, sexual experiences, and/or transpersonal experiences, in which the person experiences a sense of identity that transcends or extends beyond the personal self” (Koltko-Rivera 2006:303). (For ethical reasons sexual experiences will not be included in the working definition.) ‘These experiences are characterized by so called *being-cognition*, a special cognitive activity that attends such phenomena’ (Koltko-Rivera 2006:304-305). Further, these *metamotivations* can be expressed as ultimate *verities*, e.g truth, goodness, and beauty, and when people are persistently deprived of these *metaneeds* it can cause *metapathology*, that is spiritualexistential ailments (Koltko-Rivera 2006). According to Hoffman (1996:206) these “include cynicism, apathy, boredom, loss of zest, despair, hopelessness, a sense of powerlessness, and nihilism”.

The inclusion of the concept *self-transcendence* in Maslow's hierarchy has several benefits, for example when addressing issues about the purpose or meaning of life, to understand the importance of self-transcendent goals and why a minority of people sacrifice themselves for the greater good, as well as integrating the psychology of religion and spirituality with personality and social psychology (Koltko-Rivera 2006).

2.2.2 The calm and connection theory

Regarding psychological wellbeing and personal development, Grahn et al (2021) add to the field of environmental psychology by offering an instorative theory, i.e. the calm and connection theory (CCT). It is based on the results of previous studies, in which it was found that rehabilitation participants had positive reactions to natural phenomena. Analysis showed that 'the core variable was the experience of calm and connection; an experience that was associated with stress reduction, improved health, and development of coping skills' (Grahn et al 2021:1). *Instoration* is here defined as "the reconstruction of a person's scope of meaning" (Grahn et al 2021:14), while *instorative environments* function as catalysts or, allegedly, facilitate the instorative process through ten archetypes that communicate with us on a deep, sometimes unconscious level (Hartig et al 1996, Grahn et al 2021). The hypothesis is that subtle sensory stimulation; here in the form of 'nature archetypes signalling beauty, pleasure, and safety', causes an activation of the oxytocinergic system, which in turn explains the positive health outcomes (Grahn et al 2021:3). A state that also includes basic emotional experiences and their corresponding psychophysiological reactions. Oxytocin is a neurotransmitter known to promote social interaction and cooperation, is felt as joy and love and underpins empathy (Grahn et al 2021, Kotler 2021). Accordingly, it was proposed that the release of oxytocin mediates the effects; i.e., stress reduction, increased levels of trust and wellbeing, and possibly human's affinity or attunement ("a kind of attachment") to nature; a state of being which might further increase the capacity for psychological development (Grahn et al 2021, Grahn et al 2022:303).

2.2.3 The soul restoration theory

There is another innovative scholar, who has developed a ground-breaking approach to research on the relationship between people and environment. In Weber's (2016) *poetic ecology*, which belongs to the fields of biopoetics and biosemiotics, new light is shed on what life really is and how nature supports it. In his book *The Biology of Wonder*, Weber claims that three organizing principles govern all biological life, namely:

1. "All living bodies are necessarily bodies of feeling"

2. “The wish to live is palpable and visible in the living body of each being”, and
 3. “Only in the mirror of other life can we understand our own lives”
- (Weber 2016:xii-xiv)

Even though both Grahn et al (2021) and Weber (2016) have developed theories with an evolutionary approach that focuses on emotions, there are major differences between the two. To begin with, the CCT is more static by looking at universal archetypes that are purportedly innate or have been crystallized in our genes through evolution, while the poetic ecology is highly dynamic, leans towards epigenetics and how organisms adapt and orient themselves through life. The latter understanding gives plenty of room for living organisms to choose their own direction – even change their genes for future generations. Subjective experiences are necessary for adaptation in a specific setting, habitation, or choice to find a new environment, and every organism appears to have some innate sense of what is best for them, even though the possibility to choose and act varies greatly between different species (Weber 2016). That is why Weber introduces an “objective subjective” – we can generally feel what is best for us. For an organism’s ability to adapt it must, firstly, be receptive to the specific shapes and textures in the present, and secondly, be creative in adjusting itself to those contours. This requires both subjectivity and intelligence to make choices. However, this subjectivity is not only a property of the brain, but “an elemental attribute of the body in its entirety” (Weber 2016:x), meaning that the subjective sensations of the organism are part of its physical expression. In other words, ‘a living being is not an insensitive machine, but rather animated by values and meanings’ (Weber 2016:xiii). Further, these values manifest in the body and guide its further development. This leads us to the next characteristic of living beings, namely, that an organism seeks expansion. It desires to be, endure, become more, unfold itself and propagate and according to the author this hunger for life is life (Weber 2016). The author also discusses the relationships and mutual transformations that occur within a functioning ecosystem, provides a theory for *soul restoration*, i.e. recovery of the emotional self, and explains how nature provides existential meaning (Weber 2016). The poetic ecology is a development of the Biophilia hypothesis (Wilson 1984) that explains humans’ affinity to nature, but instead of toning this relationship down to a friendship like in the CCT, Weber goes the other direction and expresses a deep love for nature, that is on the verge of a religious conviction. When selecting a theory to explain how nature supports personal development and spiritual wellbeing the latter is a better fit for it recognizes humans as evolving beings, with unique, personal experiences, and that humans want to thrive – not only survive. Another advantage of Weber’s approach is that it provides an ecological explanation to why people are so depressed nowadays. According to Weber, the increasing distance between human and nature together with an extensive technological addiction, have

caused a ‘short-circuiting of the ancestral reciprocity between our senses and the sensuous terrain and led to a loss of attunement to the living land’ (Weber 2016:viii). As a solution, the author argues, we must heal this experiential rift, i.e., the dissociation between the thinking mind and the feeling body. This is achieved through nature experiences in ecologically sound environments, characterized by a radical interdependence of animate forms, and it is this inseparable wholeness of life that explains the human experience of *transcendent oneness* in nature (Weber 2016), something that Keltner (2023) would refer to as ecological belonging. However, there is no contradiction between the theory of soul restoration and the CCT, and reduced depression is also one of the proposed results of the nature-induced release of oxytocin (Grahn et al 2021). Moreover, oxytocin injections in rodents causes an ‘enhanced salience of sensory cues’ in relation to other individuals (Grahn et al 2021:17).

2.2.4 Systems theory and resonance

A similar view is held by clinical psychologist and professor Desmet who, basing his reasoning on Thom’s Systems Theory, claims that the essence of life is irrational, and that the basis of life best can be understood as an ethical principle, a sort of empathy or feeling. During an ontological discussion, Desmet explained how rational thinking, is only the first phase in learning, and that in order to fully acquire knowledge and become a master, one must also develop a certain feel for it, that is a more empathic knowledge. As regards people’s relationship to the environment, Desmet added that humans have an intuition or a more direct resonating contact with the surroundings and, with references to quantum science, he beautifully describes how the eternal vibrance or music of life, nature, or other beings around us can touch the strings of our being and make us resonate with it (The HighWire 2023). With this description in mind the dictionary definition of attunement appears more relevant. According to The American Heritage® Dictionary (2022) the word *attune* means “to bring into a harmonious or responsive relationship” or “to tune (an instrument)”.

2.2.5 Beauty, wonder and wildness

From an evolutionary perspective, it makes sense that environments, which may meet the biological and functional needs of human beings, also give rise to positive emotions. As regards responses to natural landscapes, researchers have found a correlation between *scenic beauty*, *preference*, and *restoration* (attention restoration, stress reduction) that is explained by its functional significance during evolution (Han 2010). Aesthetical beauty can be explained in universal principles, however, beauty is also a subjective sensory pleasure just like eating and drinking (Scruton 2011). Furthermore, Weber (2016) claims that a genuinely healthy eco-

system is best recognized through the felt experience of beauty and that it is through an attentiveness to this beauty, joy, and a sense of wonder that people will be brought back into alignment. In research about awe, the concept of wonder has been described as “a mental state of openness, questioning, curiosity, and embracing mystery” that has the potential to transform your life (Keltner 2023:39). As regards preference, the Kaplan and Kaplan’s (1989) preference model predicts that people should be attracted to scenes that are stimulating but still easy to understand. The model centres around four information dimensions; *coherence*, *legibility*, *complexity*, and *mystery* (Bell et al 2001) of which three are included in the PSD model but under different headings.

2.2.5.1 Holy sites

Along the S:t Olavsleden, which is the subject of the present study, the pilgrim has an opportunity to experience a variety of environments, including beautiful cultural landscapes, and natural wonders such as waterfalls and mountains (S:t Olavsleden 2023c, 2023d). Further, there are several wildlife habitats, of which some are highly protected and subject to different nature conservation measures (Länsstyrelsen Jämtlands län 2019, Länsstyrelsen Västernorrland 2021, etc). However, as Gifford (2016) acknowledges, both natural and historically significant places can give emotional and aesthetic pleasure. Sacred architecture, e.g churches, temples, or cathedrals, including sculptures, art, and other decorations, are often perceived as beautiful and may function as restorative or instorative places (Eliade 1959, Gesler 1996, Keltner 2023). Furthermore, Gesler (1996) has described how pilgrims travel to holy sites in the belief that they will be healed through divine intervention. In Eliade (1959) the holy ground has been described as a strong, significant, and unique space with a fixed point or centre, that is connected to religious valorisation and behaviour. There are many old churches connected to the St Olav trail, and at the final destination is the mighty Nidaros Cathedral, a place that is known for its beauty. The construction of this building began in 1070 and it soon became a place for pilgrims to seek comfort and help (S:t Olavsleden 2023e).

2.2.6 The religious experience

For an introduction to the topic of religious life, it is recommended to read Eliade’s (1959) classical book *The Sacred and the Profane*. It encompasses several perspectives on religion, including its history, philosophical anthropology, phenomenology, and psychology, which includes both rational and non-rational elements. According to Eliade there are two modes of being, or existential situations that are opposite to each other, namely *the sacred* and *the profane*. These are different dimensions of the human existence that affects our relationship with the world and life, including vital functions. In Eliade’s view the sacred is “pre-eminently the *real*, at once the power, efficacy, the source of life and fecundity”

(Eliade 1959:28). Here, sacredness is regarded as a complete life experience which also includes the *regeneration* of the human being, mentally and physically. This approach has been adopted in for example archaic therapy, and the healing process is said to occur through the return to original time or *illud tempus*, where the person is born anew with the reserve of vital forces intact (Eliade 1959). A shift to the sacred state can occur through for example a *hierophany* (i.e. the mysterious act when the sacred reveals itself through an ordinary object or the supreme incarnation of God), rites of passage and other rituals, nature experiences and aesthetic emotion (Eliade 1959). Pilgrimage is also seen as a journey from the profane to the sacred, partly because of the temporal severing from everyday life (Gesler 1996). For religious people “all nature is capable of revealing itself as cosmic sacrality” (Eliade 1959:12), but the individual human’s reaction to natural phenomena is often conditioned by his/her culture (Eliade 1959). Historically, elements such as trees (e.g. the mythological ash tree, the tree of life, warden trees), boulders/mountain peaks (Stonehenge, Navajo Mountain etc), water (Varanasi, the baptismal rite), and the sky with its meteorological phenomena (home of divine beings), have had religious or otherwise mystical significance to people across the world for thousands of years (Eliade 1959, Weber 2016, Keltner 2023).

2.3 Concepts related to self-actualization

When it comes to personal development, one must also remember that people, through will and practice, can develop new skills, that become embodied through the creation of new neural pathways, memorized knowledge, and bodily adjustments such as strengthening of muscles and joints (neuroplasticity; Mather 2016). One should also mention the dopamine reward, felt like ‘excitement, enthusiasm, curiosity, and desire for meaning making’, which is released when we pursue our goals (Kotler 2021:24), as well as the increase in subjective vitality that occurs when our psychological needs are met (Goldbeck et al 2019). The concept of *subjective vitality*, here defined as the “conscious experience of possessing energy and aliveness”, is grounded in Deci & Ryan’s (1985) self-determination theory (SDT) and is a prominent indicator for the dynamic reflection of wellbeing (Goldbeck et al 2019:18). Subjective vitality has further been described as the “conscious experience of energy, perceived as available to the self to harness and regulate purposive action” (Goldbeck et al 2019:18). There are three underlying psychological needs behind this experience, namely the need for competence, autonomy, and relatedness (Deci & Ryan 2000). The founders’ original idea was that ‘humans, as social creatures, had an innate desire for connection and caring, and that we need to *relate* to others in order to survive and thrive, something we are also neurochemically motivated to fulfil’ (Kotler 2021:36). This has been expanded to the concept of *purpose*, i.e. ‘the desire that what we do matter to other people’

(Kotler 2021:36). Both competence/mastery and autonomy are related to increased levels of dopamine and people value goals that are expected to satisfy their needs (Kotler 2021).

3. Methodology

In this case study of the *St Olavsleden* a qualitative approach was used. It included the collection of environmental data about the route and personal pilgrimage stories. The total sample consisted of six pilgrims, four women and two men aged between 23 and 65 years and the subjective data was gathered from February to June 2023. Different channels were utilized during the recruitment process such as public pilgrimage groups on social media (Facebook) as well as approved recommendations from pilgrimage organizations and personal contacts. Through that process an appropriate distance between myself as a “researcher” and the information source was achieved, as I never targeted certain individuals and none of them were known to me from before. All participants received an invitation letter in Swedish and/or English with details about the study (appendix A). According to this document only adults who completed the pilgrimage in 2022 were welcome to participate. However, due to low response, it was decided to widen the target group to include applicants with earlier pilgrimage experiences (see 4.2 period).

Subjective data were gathered in two stages. The first stage consisted of an invitation to pilgrims who had walked the pilgrim trail to write a story about their experience (appendix A). The participants were allowed to express themselves freely but were provided with some general questions for support. This included questions such as “*What was the reason for your journey?*”, “*How did you experience the St Olav trail?*” and “*What impact, if any, has the St Olav pilgrimage had on your life and how did the environment contribute to the experience?*”. The purpose of that stage was mainly to identify people who would qualify for an in-depth interview. Six written stories were received, in which some participants also included diary entries, photographs, and video recordings.

In the second stage, pilgrims who had completed, or nearly completed the whole journey, were selected for a semi-structured lifeworld interview. Kvale and Brinkmann’s (2014) procedure for doing qualitative research was followed, including the methodological suggestions that apply for the phenomenologically inspired lifeworld interview, here defined as ‘an interview with the purpose of receiving descriptions of the interviewee’s lifeworld in order to understand described phenomena’ (Kvale & Brinkmann 2014:19). This particular method was chosen because the topic centres around the complex phenomenon of pilgrimage and because focus was on the pilgrim’s personal experience of it. Obtaining rich descriptions was also considered necessary to identify psychological processes and to understand how the environment contributed to individual outcomes.

A qualitative interview includes the following steps: 1. Thematizing, 2. Planning, 3. Interviewing, 4. Transcribing, 5. Analysing, 6. Verifying and 7. Reporting (Kvale & Brinkmann 2014:144-145). The interview guide was designed to cover the selected topic and included both broad and narrow themes such as motivation, wellbeing, self-actualization and self-transcendence (appendix B). This guide was then uniquely adapted to each participant, with regard to the content of their written story. The prepared questions were both open and specific which gave the interview a semi-structured character. Through this study design it was possible to achieve a holistic approach and at the same time address matters related to the hypothesis. The interviews were held in English with one exception in which the interviewer spoke Swedish and the interviewee Norwegian. During the interview, which was conducted and recorded on Zoom, the interviewee was offered a digital trail map as support when addressing questions about the experience of the physical environment. A total of four interviews were conducted, with an equal number of men and women (see 4.1 demographics). The interviews lasted about 1.25 – 1.5 hours and as the pilgrims were eager to talk about their experiences we ran out of time, which resulted in that some specific questions were never asked. This could have been avoided by reducing the number of questions or managing the interview better. Often the specific aspect was covered spontaneously by the participant and was not considered a major issue. Recorded material was later transcribed and a language expert was hired to ensure the quality of the Norwegian sections.

In qualitative interviews, the analysis typically involves six steps: 1. The interviewee gives a spontaneous description of his/her experience, feelings and actions in relation to a topic. 2. The interviewee discovers new circumstances through self-analysis. 3. The interviewer summarises and interprets the statements and gives the interviewee the opportunity to confirm or reject this understanding. 4. The interviewer transcribes the interview and analyses the material more deeply with selected tools. 5. A second interview is conducted where the interviewee is allowed to validate the analysis. 6. The researcher interprets the participants actions after the interview (Kvale & Brinkmann 2014:235-236). In this case it was decided to exclude the last step since it was not relevant for the study. Another deviation from the procedure was to extend the analysis to include both written stories and transcripts. Moreover, participants were only requested to validate interpretations that were of particular importance for the results.

The material was thereafter analysed both inductively and deductively (Kvale & Brinkmann 2014). Pascale defines analytical induction as (translated into English) “the systematic examination of similarities within and between cases in order to develop concepts, ideas and theories” (Pascale 2011:53). During this phase of the analysis focus was on identifying the meaning or essence behind each statement as

well recurring themes/patterns in the narrative (Kvale & Brinkmann 2014). In accordance with the deductive way of knowledge production (Kvale & Brinkmann 2014) the theories presented in the second chapter were finally applied to the material. These analytical tools were chosen in order to uncover both new information and to confirm/reject previous knowledge about people-environment interaction.

Objective data about the *St Olavsleden* was initially collected through online marketing material (stolavsleden.se, etc), including a trail map (Naturkartan) which were studied in detail. The purpose was to learn more about the route and the surrounding areas. The material was easily found through a simple search on Google, typing the name of the trail. Information provided by the project owners was used since they created the pilgrim trail and were best able to describe it. Since the *St Olavsleden* is relatively new, there is little research about it, and I did not find any published study that covered the Swedish part of it. However, I was aware of two other studies that were running concurrently with mine. Places that could be perceived as wild, beautiful and/or sacred as well as natural wonders were identified and became object for closer evaluation. The sites selected for that purpose were Tännforsen waterfall, Jämtskogen, Åreskutan, Märraskalfjället and Nidaros Cathedral. Maps from Google Earth were analysed to get an overview of the landscape qualities and topography for the selected areas and the map services provided by the Swedish Forest Agency and the Swedish Environmental Protection Agency were used to gather data about environmental classifications and nature conservation measures. Thereafter, responsible authorities, including the two mentioned above as well as the County Administrative Boards, were contacted for more detailed information on, for example, natural habitats, plant and animal species, age of the forest, particular data for nature reserves, forest management, nature conservation plans, etc. This information was used as background information for the interviews and to formulate specific questions concerning the sites of interest for the hypothesis (appendix B). For example, it was expected that protected areas would also be perceived as wild. The tools and documents provided reliable information, but the environmental descriptions did not always correspond with the participants' own perceptions of these sites, giving the impression that some qualities had been exaggerated.

As regards ethical considerations, it was decided to only interview adults, 18 years of age or older, that were able to give their consent. The study involved handling of sensitive data, therefore laws, regulations and guidelines were thoroughly studied, and participant information adapted as to meet the requirements for good research practice. After the interview, measures were taken to protect the interviewees personal data, such as storing the material safely and anonymizing the results. For

that reason, the names used in the results section are all fictitious. A compensation of 250 SEK was offered to the interviewees for their participation, to be used either for their own expenses or as a donation to a charity organization of their choice. One interviewee accepted the compensation, one declined and the two remaining participants decided to donate the money. Finally, I declare there is no conflict of interest in this study; I have no relationship to the interviewees or the actors that seek to promote this pilgrim trail.

4. Results

4.1 Demographics

The six people who participated in the first phase of the study, by writing a story about their pilgrimage experience, were four females and two males aged between 23 and 65 years, with varying backgrounds (table 1-2). The sample selected for in-depth interviews consisted of four participants, men and women in equal number, that were aged from 25 to 65 years old and had extensive experience of the trail.

Table 1. National origin (total sample)

Nationality	Swedish	Nordic	European	Other
Participants	2	1	2	1

Table 2. Main occupation (total sample)

Occupation	Employed	Self-employed	Student	Retired/other
Participants	3	1	1	1

4.2 Period

All participants but one walked the *St Olavsleden* in 2022. Among the interviewees, two had walked the entire trail, or close to it, in 2022, one completed the whole route in 2019 and had documented it day by day in a journal, and another had combined experiences from 2022 and an earlier pilgrimage that took place 5-6 years ago. These descriptions were all relevant, extensive, and rich and therefore accepted and included in the results.

4.3 Motivation and overall experience

4.3.1 What motivated the participants to make the pilgrimage?

Several motives for doing the journey were expressed by the participants, including the need or desire for solitude, autonomy/mastery, social/community, novelty/exploration, personal change, health/wellbeing, and spiritual/religious reasons, as well as preferences for walking/hiking, nature/countryside/Scandinavian countries, and cultural-historical interests. Another theme that emerged was having a joint/cheap/climate-friendly holiday. However, walking the Scandinavian trail was considered more expensive compared to pilgrimage routes elsewhere in

the world. For long-distance walkers, the journey was stated as more important than the physical goal, however, arriving at the final destination, i.e. Nidaros Cathedral, as well as the milestones in between, turned out to be significant moments during the interviews. Further, all the interviewees identified themselves as pilgrims even though only one did it for religious reasons in the traditional sense.

4.3.2 How did the pilgrims experience their journey as a whole?

The pilgrims' overall experience of walking the St Olav path was clearly positive. The two female interviewees, *Norah* and *Linnea*, felt that the experience exceeded their expectations and described the journey in words such as wonderful, great, satisfying and life changing in unique ways. The male pilgrims, *Stefan* and *Jacob* were also very positive and pointed out how the trail appeared to bring people together. However, they were also slightly disappointed, for example, Stefan had expected that the route would be essentially off-road, and that the terrain would be more mountainous, while Jacob was surprised that some villages were almost dead.

It was also found that the mobility of the pilgrims affected their experience of the environment, meaning that the main focus was on walking and the quality of the path – not the surroundings. The perception and impact of the landscape was therefore most pronounced during stops and breaks. Before getting into the specifics regarding the environment, its functions and importance for the pilgrim, a brief environmental description of the trail will be provided.

4.4 The physical and social environment

4.4.1 Environmental description of St Olavsleden

As stated earlier, the pilgrims who travel the St Olav route will encounter a great variety of environments. The trail, which officially begins in Selånger, Sweden and ends in Trondheim, Norway, is approximately 580 km and covers several counties, and municipalities on both sides of the national border. This includes the Counties of Jämtland, Västernorrland, and Trøndelag, as well as many towns and villages, such as Östersund, Åre, Skalstugan, Sul, Stiklestad and Tautra among others. On the Norwegian side, the pilgrim may also choose between an inner and outer trail (S:t Olavsleden 2023e).

When studying the marketing material related to the St Olav path it becomes clear that the pilgrim may experience great environmental contrasts along the way; e.g. peaks and valleys, pristine/wild nature and fine architecture, as well as signs of several cultures and historical events from Stone Age to modern time (S:t

Olavsleden 2023a, Naturkartan 2024, etc). Of particular importance in this context are sites, buildings and objects that relate to the life and death of St Olav. Moreover, the *Route of St Olav Ways*, which is the generic name for several paths that all lead to Trondheim, was classified as a Cultural Route by the Council of Europe in 2010 (COE 2023). The trail is also characterized by its water environment and there are plenty of lakes, waterfalls, rivers, and streams to experience, an environmental aspect that is associated with rich aquatic life (S:t Olavsleden 2023d).

Finally, the goal of the St Olav pilgrimage, Nidaros Cathedral, is situated by the Nidälven river fjord (S:t Olavsleden 2023e). It constitutes the second largest cathedral in the Nordics (STF 2023), and the building, which has its history from Medieval times, was constructed on top of St Olav's tomb in 1070 and onwards (S:t Olavsleden 2023e, Kirkesøk 2023). Since then, it has been rebuilt/renovated several times (Kirkesøk 2023).

4.4.2 How did the participants experience the St Olav trail?

Contrary to what was expected, the pilgrims felt that the St Olavsleden was an easy route, and that anyone in good health could manage it. To begin with the trail was perceived as mostly flat and the basic needs of food, water and physical health was met/safeguarded through regular access to grocery stores, pilgrim springs, and populated areas where they could ask for help when needed. Along the path, the pilgrims were guided by the trail signage, e.g. signposts, the special pilgrimage symbol, and other markings, which supported wayfinding and provided a sense of safety. The only reported risk factor was related to traffic safety while walking on the busy E14 highway. Walking long distances with a heavy backpack is challenging, especially during the first days of the journey, and many thought that walking on asphalt added to the strain. The latter was experienced as mentally demanding, boring, and, occasionally, gave rise to a sense of futility. Many expressed a preference for more natural paths, such as forest trails in hilly terrain, or dirt roads in sparsely populated areas.



Figures 2-4. Dirt roads and forest paths were preferred by the pilgrims.

Three main themes emerged in the participants description of what environmental qualities were important to them namely, the *natural*, *cultural*, and *social* environment. Starting with the natural environment, the pilgrims preferred walking in the forest/woods, while listening to its sounds and enjoying natural elements such as trees, plants, and flowers, as well as natural phenomena, e g, walking through a

sparse forest on a sunny day or viewing a lovely sunset. Varying experiences were conveyed in relation to rain and storms, for example Norah panicked over having to be outdoors in heavy rain, while Stefan was not bothered at all and referred to the old saying; ‘there is no bad weather only bad clothing’. The religious pilgrim *Linnea* experienced how seeking shelter from a storm brought her closer to God. Mixed feelings were also expressed in relation to wildlife, for example the male pilgrims described a love and fear relationship to wild animals, i.e. the moose and bear that were hiding in the forest, while the female interviewees described positive encounters with squirrels and butterflies. A participant called *Ella* disliked the presence of ants, and two others were bothered by mosquitoes. A female participant even wrote that she hated mosquitoes and had to buy special equipment to protect herself. Unfortunately, the pilgrims didn’t see much wildlife beyond that.



Figures 5-6. Beautiful flora and fauna found along the pilgrim trail.

A clear sub-theme that arose, was the pilgrims’ preference for water environments. Lakes, streams, waterfalls, and freshwater springs, were frequently mentioned during the interviews, including its soundscape, such as listening to the river flow, the meditative sounds of a lake, hearing the waves of the fjord hit the shore, or the loud sound/noise from waterfalls.

The cultural landscape was also of great significance to the participants, and they had many positive experiences of cultural heritage sites, religious buildings, and other forms of architecture, as well as walking through beautiful countryside. Mentioned were, for example, sites and man-made elements connected to the history of St Olav, the rock carvings in *Glösa*, an exciting and a little scary experience of entering the cave *Hålbergsgrottan*, museums and sacred architecture such as the Nidaros Cathedral, churches, and chapels. Further, the pilgrims highlighted peculiar buildings like the longhouse in *Viskan*, old buildings with lots

of birdhouses attached to it, mansions, stone bridges, a hunting lodge, and other places with an interesting history. It appeared that both nature and culture were a source of fascination.

During the interview, questions were oriented towards the physical environment, however, the pilgrims were eager to talk about the social environment, and all the meaningful encounters they had along the way. The personal contact with people at the private accommodations, the care/kindness/hospitality that was shown to them, as well as the reciprocity in getting to know each other, was highly valued by the pilgrims and had great impact on them. For example, Jacob experienced how strangers opened their homes to him when he needed a place to stay, and they did so without asking for payment. The trail is also a place to socialize with friends, meet new friends, talk to foreigners and learn more about their life and culture. Furthermore, a sense of community and special bonds quickly develop between pilgrims on the path, and that in an almost magical way as one interviewee put it. Pilgrims not only walk together; they also look after each other, share rooms and meals and sometimes discuss personal issues. Hotels/hostels, restaurants, bars, cafés, and shops constitute another social arena.



Figure 7. Seeing this wonderful view was a great experience (anonymous pilgrim).

A particularly interesting finding of this study was that the pilgrims desire to have a “whole life experience”, something which includes feelings of both pleasure and pain. They appreciate the contrasting experiences, the variation in degree of challenge and diversity in landscape qualities. It is the combination of tranquil and stimulating places, the ordinary and extraordinary, safety and risk, ease and challenge, etc, that bring about this experience and makes pilgrimage into a metaphor for life. The sense of calm was mainly afforded by the natural environment or achieved through countryside walks, while the need for stimulation or enriching experiences as Stefan called it, was satisfied by the experience of

beautiful/wonderful scenery, landscape variation, novelty/surprise, fascinating elements, and the dynamics of life. The treasure lies in finding balance between all these aspects.

4.5 Perceived outcomes of the pilgrimage

4.5.1 Impact on health, wellbeing, and higher needs

Many positive outcomes of walking the St Olav pilgrim route were identified in this study. Regarding the first category *health*, the effects were sensorial, psycho-physiological, and affective/emotional in nature. To begin with, the long-distance walkers all achieved a state of inner peace/calmness on the trail, something which was also referred to as freedom of mind and the ultimate freedom. This outcome emerged gradually over time. However, three interviewees also explained that they first had to go through a, sometimes painful, adjustment period, which lasted for a few days and resulted in physical, mental, and environmental adaptations to the life as a pilgrim. Finding mind-body balance was an essential part in that process. Furthermore, the continuous relaxation, together with certain nature experiences, a sensation of beauty, and so on, was followed by improved sensorial health, here expressed as increased sensuous receptivity or sensitivity, feeling connected to the environment, and sharpening of the senses. The pilgrims also reported increased emotional awareness, being more emotional or having a lot of feelings, and receiving clarity in personal matters. They also developed a more positive outlook on life. The second category *wellbeing* captures the pilgrims' testimony that being on a pilgrimage gives them a good feeling, higher energy, and life satisfaction. The female pilgrims were completely satisfied with their journey, and Norah even exclaimed that it was the best time of her life.

As regards personal development the pilgrims shared how being away for several weeks afforded them space for reflection, which in turn gave rise to increased self-awareness and an unfoldment of the inner self. Spending time alone on the trail was also a way to resolve inner conflicts/personal issues and release burdens, with the result of finding personal integrity and feeling whole, as well as being able to move forward in life and start a new chapter. Furthermore, walking with a purpose, the change of environment including new life experiences, were all important aspects in the meaning-making process and for personal reinvention. Linnea explained how the pilgrimage changed her life in ways that nothing else could. It helped her find a new direction, and ultimately a different lifestyle where she became more present in the now and could enjoy being instead of doing things all the time. Jacob, who saw himself as socially withdrawn, observed how walking together in the Scandinavian landscape helped people open up and become more social. Even

though the journey was more important than the goal, reaching Nidaros Cathedral was associated with a sense of achievement, and having walked the long distance was also a proof of one's own capability. Related outcomes were a sense of fulfilment, improved self-efficacy and self-image, new competence (social and environmental) as well as bodily improvements. For some pilgrims, the journey was also an inspiration for future endeavours.

Finally, the data on self-transcendence show that the interviewees found existential meaning/life purpose on the way and that the experiences led to an improved worldview. Furthermore, the pilgrims had transformative, mystical, spiritual and religious experiences, including special moments, magic, synchronicities, and altered states of being, in which one feels transformed, guided, or otherwise supported by a power outside oneself. The latter was described in words like the power of nature, a mystical force, higher energy, or the presence of God. The pilgrim Jacob recounted a transformative event in which a special nature experience afforded life perspective and made him realise the insignificance of his own problems in the grand scheme of things. Feeling that you are part of/connected to nature were similar experiences described by the pilgrims. In terms of spiritual development, Norah explained how the inner and outer journey are always inseparable to her. In addition, the religious pilgrim had a profound experience in which she found herself in a *peculiar world of wonder*. In this altered state of being, a shift that happened slowly and gradually by the way, she felt the presence of a mysterious, deeper fullness, which led to the discovery of a new self – *the divine self*. When asked about it, she confirmed that this experience was equivalent to a soul restoration. Moreover, Linnea's connection to the higher realm was strengthened, she had a new start with God and their relationship improved. On top of that, all participants but one, reached the positive states of fun, love, joy, awe, bliss, and/or happiness.

4.5.2 Long-term effects

In addition to the reported outcomes, the interviewees experienced positive changes related to their health, personal, social, and professional life that lasted long after the pilgrimage. This included a resilience to stress that lasted for six months or longer, improved work performance and career development. Furthermore, completing the pilgrimage had social effects such as improved relationships and increased social status.

4.6 Environmental impact on perceived outcomes

4.6.1 Contribution to basic health and wellbeing

The fulfilment of survival and safety needs were met through regular access to grocery stores and restaurants, at the accommodation, or in the form of gifts from people on the path, water springs and pilgrimage signs. Good signage was particularly important for the pilgrims to feel safe, while carrying a light-weight tent added to the sense of security in case there would be no available room.



Figure 8. Access to freshwater springs support basic health.

The results show that the natural environment was of particular importance to the pilgrims in terms of basic health and wellbeing. Spending time alone in nature was

a recurring theme among the interviewees and they benefited from this activity as it provided space for relaxation and reflection. Walks on forest trails and the soundscape of the forest also contributed to the outcome. For example, Linnea described how walking in the woods supported introspection, meaning that she could hear her inner voice more clearly, including thoughts, feelings, and desires. She was also very fascinated by natural elements and spent much time looking at leaves. This was further a means for her to practice and improve attentional capacity, something that was expressed as follows (translated to English): *And that you became a lot more observant, then, that you perhaps, the exercise in being able to sit still for a long time and look at things for a long time. Eh, and finding it interesting also makes you, maybe a little bit more patient with yourself and (Johanna Bergström: Mm.) what you, what I felt myself on that it takes time to understand it and, and that it's rather a gift then, the time there. And it might be that the environment had a lot to say, what you were able to think about and, how focused you maybe became on, eh, the reason why you went then, maybe.* Moreover, the beautiful nature scenery and calming waterscape helped the participants to become present in the now and find inner peace. Specific examples related to the water environment included sitting by a river, listening to the meditative sounds of a lake, and dipping one's feet in water. The latter was perceived as both mentally and physically relaxing. Nature experiences were also important to the more secular pilgrim Jacob who said that being in the wilderness is good for the soul, if there is one. In Sweden he saw a lot of wildlife and trees and valued the freedom that comes with being able to camp outdoors without permission from the landowner. However, most participants did not see the pilgrimage as a wilderness experience; the areas of pristine nature were perceived as limited and for Stefan the word wilderness would suggest that there is no path at all.

The cultural landscape was related to similar health outcomes and the two female interviewees described that travelling on dirt-roads through the countryside promoted emotional awareness and self-reflection. At one point, the spirited woman Norah got very emotional, partly due to the exertion of walking with a backpack, and began thinking of poetry as a way to express these feelings. Finally, cultural places and elements were a great source of fascination to the pilgrims, and, for example, the view of an old building sparked both interest and reflection.



Figure 9. The forest environment promoted self-reflection (anonymous pilgrim).



Figure 10. Countryside walks allowed the unfoldment of the inner self (anonymous pilgrim).

When it comes to aspects of the environment that fulfil the emotional needs of connection and belonging, the study shows that the Scandinavian landscape appeared to facilitate/encourage friendship. The trail and private accommodations served as important meeting places and walking the same path as other pilgrims promoted social interaction and a sense of community. In addition, being in nature afforded a sense of ecological belonging while the encounter with familiar landscapes was associated with a feeling of “coming home”. These aspects will be further described in the section about self-transcendence.

4.6.2 Aspects related to metaneed outcomes

Having shown how the environment supports the participants’ fundamental needs, it is now time to present the results on the significant aspects of the journey as well as the environmental qualities that was shown to promote self-actualization and self-transcendence.

4.6.2.1 *Self-actualization*

To begin with, walking long distances had positive effect on physical health, such as improvements in bodily function and shape. These changes were desired and affected the overall wellbeing in a positive way. Road quality greatly impacted the walking experience and the results from the study show that walking on asphalt was hard on the body, while more natural surfaces were beneficial for both body and mind.

For inexperienced walkers, the pilgrimage was a great opportunity for learning and personal growth. The interviewee Norah was initially unsure of whether she would manage to walk the whole trail and handle what was ahead of her, however, with time and experience she acquired both environmental and personal mastery; an outcome that was associated with a feeling of excitement. When it comes to personal development, the essential component of self-reflection was promoted by walks on forest trails and dirt-roads in sparsely populated areas. However, the unsafe and noisy conditions by the E14-highway had the opposite effect. In Linnea’s experience, the presence of traffic discouraged introspection as the fast-driving cars ‘pulled her out of the pilgrim bubble’. Further, seeing new places and having new life experiences were significant factors in breaking old patterns, to reset the mind, and move forward in life. Interacting with foreigners along the way as well as the special contact with people at the accommodations were particularly important for personal change. These encounters were generally perceived as very meaningful. For example, feeling welcomed and taking part of family life had great impact on Linnea who considered the hosts as role models for how to receive people in her own life. In Norah’s case the people she met on the path served as messengers that guided her spiritual development. The interviewee Jacob did not see himself as

a spiritual person but shared a transformative moment by the Nidälven river fjord in which he found resolution to a personal issue that had been troubling him for some time. The release of this burden led to increased wellbeing and personal integrity. Furthermore, reaching physical goals/milestones, such as crossing the national border and arriving at Nidaros Cathedral, were related to a sense of achievement and improved self-efficacy. Completing the journey also led to identity changes, such as receiving the official pilgrim status, becoming part of a new community, receiving elevated social status among friends, and new career opportunities. For Linnea, the life changing experiences on the trail even led to the discovery of her divine self.

4.6.2.2 Self-transcendence

Regarding self-transcendence, it was found that being on a pilgrimage and walking a sacred path gives people existential meaning/life purpose. Along the way the pilgrim signage afforded a sense of direction and added to the spiritual/religious experience. In Linnea's case, the experience of being guided by pilgrim signs through the unknown strengthened her connection with God. The feeling of comfort and trust she developed in that process also contributed to the soul restoration. Furthermore, the history and tradition associated with the path fostered a sense of connection to past pilgrims and historical figures. Self-transcendent experiences were also related to specific cultural heritage/sacred sites. For example, the Glösa rock carvings, which can be seen beside a small stream, made Jacob feel connected to people from an earlier civilisation and evoked complex feelings of love and awe. Graves and burial mounds also afforded a connection to the past. This is well-illustrated by the following quote from one of the pilgrimage stories: *That sense of being in touch with ancient people was palpable. I also felt it when I walked near burial mounds and sites associated with Olaf and the old Gods.* Norah also experienced a powerful moment at one of the cultural heritage sites associated with St Olav (fig 12), a place that she found very meaningful, partly due to the memory of a cultural event that took place there. She wrote: *When I realized that, tears started to burst in my eyes. I couldn't help it. I was so touched by something deep inside, aroused by the environment.* For another pilgrim, the visit to a museum, which exhibited a very large number of wooden figures, evoked the transcendental state of mirth. The cultural environment was also shown to promote existential reflection, and Linnea talked enthusiastically about a peculiar long house in the village of Viskan (fig 13), that she thought was fascinating and touched her feelings. During that time, she felt somewhat dead inside and the house served as a metaphor for that feeling. Despite this dark connotation she still considered it a fun place.



Figures 11-12. St Olav pilgrimage sign and cultural heritage site (fig 12; anonymous pilgrim).



Figure 13. The long house in Viskan functioned as a personal metaphor (anonymous pilgrim).

The results of the study also show that nature plays a major role in the transcendental experience. There were times when the pilgrims felt like they were one with/connected to nature. For instance, Norah described a memorable experience of nature connection that happened while she was walking through a beautiful bright forest. At that time, she experienced real closeness to nature and

had a feeling of being with the trees. Another day she took the opportunity to hug one of the trees. Seeing trees and hugging them made her happy. However, most pilgrims did not think that the natural areas were wild, and along the 580 km long route there were only two areas that were perceived as pristine nature. Jacob, who was the only pilgrim that talked about wilderness experiences, showed appreciation for the natural world and that it still exists. The vast forest areas and the clean and ordered towns in Sweden were perceived as ecologically and socially functioning, which contributed to the experience of the world as a good place. Jacob also gave a detailed description of a great moment he had in the forest. He had rented a cabin in the woods that looked like a haunted house from the outside but turned out to be beautiful and comfortable inside. The contrasting experience of being alone in nature, cooking food or just sitting there listening to the soundscape, and at the same time having access to a warm and lovely house to stay in is what made this moment so memorable. Two pilgrims also mentioned the small Norwegian island of Tautra. The natural scenery near the island had a profound impact on Linnea, giving her a general feeling of calm. When it comes to her relationship with wildlife, she said that seeing wild animals makes her happy and gives her a warm feeling inside. She thinks that animals are fascinating and a symbol for freedom, authenticity, and instinct. However, during the pilgrimage the wildlife encounters were rare.



Figure 14. Overcoming challenges require focus.

Moreover, some participants thought that walking on forest trails was a joyful experience, for instance, Agnes found the stretch between Revsund and Pilgrimstad, with its path and natural terrain, to be nice and somewhat fun. Stefan, who prefers climbing hills and more rough terrain, shared a fun experience on the *Märraskalfället*. He and a fellow walker, whom he had befriended along the way, climbed the mountain together and were surprised to discover that there was snow on the mountain in June. Together they overcame the challenge of crossing a large pile of snow, something which Stefan thought was great fun.

Most importantly, it was found that the natural environment promotes self-transcendence. In nature the pilgrims were reminded that there is something greater than oneself and facing its vastness and power gave new life perspective and made personal problems diminish or go away. In this study mountain views, natural elements and great waterfalls, were associated with this type of experience. Visiting waterfalls were a positive experience and words like wonderful, beautiful, impressive, and powerful were used to describe them. Stefan made associations to other fascinating experiences, both natural and cultural and then said: *But even then, then you still see the, the power of water, and the, the force of nature, eh, that can create and change, eh, the surrounding. And that's all, that's always interesting to, to see what's behind it.* When asked about what was most meaningful to him, he replied that it was probably the waterfalls. Its wideness and power were pointed out and he continued: *Ehm, eh, if, if you let that be meaningful to you, then you also realize that you are only a small part of it. And, eh, eh, that there's much more, and maybe that's also religious, that there is a much, there is a greater power, than you can, eh, stand, eh, against.* For other pilgrims, the waterfall evoked a feeling of awe. However, Norah thought that the journey was so powerful in itself that the waterfall didn't appear as awe-inspiring as it would have otherwise.



Figure 15. The Tännforsen waterfall evoked existential thoughts and awe.

The natural world was also related to religious/mystical experiences. For Linnea, nature is the best place to meet God, even better than the church, which seemed to have more of a social function. In the written story she described an experiential shift from the mundane into a peculiar world of wonder as well as the role of nature in that experience (translated into English): *I became aware of it through experiencing every detail of a leaf and hearing the sound of the wind talking to me in the forest.* This experience was also associated with the perceived soul restoration, in which the initial feelings of emptiness, lack of joy, disconnection and distance from the own life circumstances, were replaced by a sense of presence, wholeness, and connection to God. This may be compared to the experience of boring/unsafe environments, such as the highway, that some pilgrims perceived as

meaningless and detrimental to the soul. The interview with Linnea also revealed that meteorological phenomena, together with physical affordances, played an important role in the religious experience. On the day she walked between Revsund and Pilgrimstad, the most demanding part in terms of the quality of the path (narrow and difficult), she was under time pressure due to an approaching storm. Linnea managed to reach Pilgrimstad, a well-known meeting place for pilgrims, before it started to rain and she took shelter in a small chapel. It was a proper shelter with a door (fig 15), and there she could simply lie down and be safe while the storm passed. At that moment Linnea felt that she was taken care of by God and remembers it as one of the really great experiences of the trip. For another pilgrim, the spiritual experience was associated with physical affordances, natural elements, and human interaction. According to Norah, the inner and outer worlds are always inseparable, meaning that the inner journey is reflected in the physical experience of it. During the pilgrimage she also noticed many synchronistic events, such as thinking about having lunch and then finding a table with chairs to sit on, or the unexpected meeting with a white-water rescuer who appeared in one of the waterfalls and had a spiritual message for her. These two events were perceived as unique and contributed to the greatness of the journey.

Finally, the pilgrimage supported the metaneeds by providing evidence that the world is a good place. For Jacob, experiencing the goodness of other people and seeing that not everyone is *evil and nasty* strengthened his faith in humanity. The same is true of observing societies that are clean, well-maintained, and orderly, in contrast to those that have fallen into decay. Witnessing that not all nature has been destroyed also made him more optimistic about the future of the planet. The freedom to camp in the Swedish nature was much appreciated by Jacob and may have contributed to this experience.



Figure 16. The chapel in Pilgrimstad served as a refuge (anonymous pilgrim).

4.7 More about specific sites

To test the hypothesis, five specific sites (Tännforsen, Jämtskogen, Åreskutan, Märraskalfjället and Nidaros Cathedral) were studied in more detail. This included both the environmental qualities and the pilgrims' experiences of them. The results for three of these sites are presented below.

4.7.1 Forest areas (Jämtskogen)

Jämtskogen is a deep forest located by the Jämtland and Västernorrland County border. The place was mainly selected for the purpose of evaluating outcomes related to the environmental quality of wildness. Jämtskogen also has an interesting history connected to it, for example there were once robbers hiding in the forest which made it a dangerous place for the transients (S:t Olavsleden 2024a).

A request was sent to the Swedish Forest Agency for more information about the area (specified as Fasikan since the name Jämtskogen is not on the map), but the authority was not willing to provide any environmental data without a diary number. These circumstances made it difficult to gather objective data, however, part of the forest area was found to be covered by the County Administrative Board's decision for *Harrån nature reserve*. This protected area comprises several very valuable environments, e.g. a marsh-swamp forest complex, a watercourse, a limestone pine forest, and natural forest environments (Länsstyrelsen Västernorrland 2024). Furthermore, there is a very high level of biological diversity in the area, including protected species such as otter, river pearl mussel and the butterfly violet copper, as well as a variety of threatened lichens, mosses, and fungi (Länsstyrelsen Västernorrland 2021, 2024). The management objective for the nature reserve is that the environment shall develop freely in accordance with natural processes (Länsstyrelsen Västernorrland 2021).

During the interview, Linnea described the area as a desolate place with a lot of fine pristine forest. Jacob also spoke of a large old forest with winding paths and dense vegetation, but the location of this place has not been confirmed. Stefan did not remember this area at all, as it had no important landmarks. Norah never mentioned Jämtskogen and was not asked about it. Therefore, no site-specific outcomes regarding health, wellbeing or higher needs were recorded.



Figures 17-18. Forest areas close to the border of Västernorrland and Jämtland.

4.7.2 Tännforsen waterfall

The second site, Tännforsen waterfall, was chosen as a representation of the perceived quality of wonder. Tännforsen is located about 20 km from Åre and has been recognised as Sweden's largest waterfall. The wild waters that fall from this 38-meter high and 60-meter-wide waterfall gives a powerful nature experience (Länsstyrelsen Jämtlands län 2024, Åre Sweden 2023). Further, the place has been marketed as “one of the best places of natural beauty along the entire trail” (S:t Olavsleden 2024b). The waterfall, including its surrounding area, has very high nature values and is protected by several decisions/classifications, e.g., Natura 2000 Åreälven, Natura 2000 Tännforsen (9,3 ha), nature reserve Tännforsen (97,3 ha) and key biotope waterfall forest (2,4 ha) (Länsstyrelsen Jämtlands län 2019, Skogsstyrelsen 2024).

In the decision on the establishment of Tännforsen nature reserve, the area is described as a unique forest mist environment that provides habitat for very rare cryptogams. Moreover, the decision contributes to the fulfilment of the environmental quality objectives of ‘living forests, lakes/watercourses and rich biodiversity’, which in turn are supported by a management approach characterised by free development (Länsstyrelsen Jämtlands län 2019). In the scientific literature, waterfalls and their recurring rainbows have also been referred to as natural wonders (Heidorn & Whitelaw 2010). Tännforsen waterfall is not an exception, and has fascinated authors, artists, and other visitors for hundreds of years (Länsstyrelsen Jämtland 2024). According to the same source, the dense spruce forest with its lichens and moss-covered ground appears magical and awakens the imagination.

During the interviews, two pilgrims spontaneously mentioned the Tännforsen waterfall. Jacob also remembered this place when reminded of it, while no conversation about the waterfall took place in the interview with Linnea. In addition to the self-transcendent experiences described above (section 4.6.2.2), the area was seen as a social place and tourist attraction. Tännforsen was also perceived as a joyful, inspiring, powerful, and friendly place.



Figure 19. The wonderful Tännforsen waterfall.

4.7.3 Nidaros Cathedral

The goal of the pilgrimage, Nidaros Cathedral, is the second largest cathedral in the Nordics (STF 2023). The place is situated by the Nidälven river fjord in Trondheim (S:t Olavsleden 2023e). The building, which has its history from Medieval times, was constructed on top of St Olav's tomb in 1070 and onwards and has been rebuilt/renovated several times since then (S:t Olavsleden 2023e, Kirkesøk 2023). The sacred architecture has a combination of Romanesque and Gothic styles (Storemyr 1997) with stained-glass windows, high arches, and sculptures (S:t Olavsleden 2023e). Religious valorisation is connected to the site and the religious aspect is also expressed in the form of depictions and symbols that are part of the design (Ekroll 2015, Storemyr 1997). Further, the Nidaros Cathedral has been described as a tranquil, beautiful, and mighty place, where the pilgrim can find peace in the soul (S:t Olavsleden 2023e).

For the participants in this study, the physical goal was always present, at least at a subconscious level. However, the evaluation of the building itself varied from not interesting to viewing it as great, beautiful, and wonderful. The perceived qualities were clearly influenced by previous experiences, either of this site or more beautiful ones. Those who were very familiar with it showed little interest and having seen more magnificent buildings led to higher standards and expectations. In addition, Stefan saw the site as a tourist place that was hectic outside but quiet and peaceful inside. Jacob showed special interest in the history of the building and mentioned its impressive front where one can see St Olav with a double headed axe. Religious background also impacted the relevance of this site. As stated before, achieving goals was associated with a sense of achievement, however, reaching the final destination was also associated with mixed/negative emotions as it marked the end of the journey.



Figure 20. The impressive façade of Nidaros Cathedral.

5. Discussion

The main purpose of this study was to explore how the environment can support the higher needs in Maslow's hierarchy. However, since the satisfaction of more fundamental needs is a prerequisite for higher level experiences, and because peak experiences are often intertwined with more basic physiological/psychological processes, it was necessary to take a broader, more holistic stance of the topic. In the discussion section, however, there is a particular focus on the human needs for self-actualization and self-transcendence.

5.1 Summary of main findings

Self-reflection is essential for personal development (Jørgensen 2022) and the results of the current study indicate that more tranquil areas, such as forest environments and countryside, strongly support that psychological process. Being alone in nature or walking on forest trails and dirt-roads in sparsely populated areas was shown to give room for introspection, with an exception for stretches that were perceived as more challenging. Furthermore, the conditions by the highway (asphalt, fast-driving cars, etc) had negative impact on the process as it required outward attention (the opposite of introspection), gave rise to negative thoughts and emotions, and was heavy to walk on. In addition, the fascination of natural elements, wildlife and culture supported the reflective state. So did encounters and conversations with other people on the way. However, this was part of a more outward-looking process, in which aspects of the natural, cultural, and social environment served as metaphors/projections/mirrors of the inner world (thoughts and emotions), role models and spiritual messengers.

However, self-actualization is not only about the processing of past experiences. Goals, challenges, and new experiences are essential for personal development, and the results of the study show that in order to move forward in life one also needs to become present in the now. Travelling by foot on narrow trails in hilly terrain, the view of beautiful scenery and the wonderment of nature are examples of environmental aspects that promote a state of presence. The mentioned aspects all require/attract attention, translated into scientific terms that would be both focused and effortless attention (Basu et al 2019). Furthermore, new life experiences, such as meeting foreign people and seeing new places, fosters personal growth as it affords an opportunity for experiential learning. The results from the interviews indicate that reaching physical goals, such as the milestone of the national border

and the destination of the pilgrimage, Nidaros Cathedral, are associated with improved self-efficacy and a sense of achievement.

Fulfilment of the complex human need for self-transcendence can take many forms. In this study it was found that nature, meteorological phenomena, physical affordances (shelter and outdoor furniture), and cultural/historical/religious sites best supported this need. The power of nature, its vastness, creative/destructive abilities, and the feeling of ecological belonging are some aspects that explain the role of nature in self-transcendence. The vastness of nature can also promote personal transformation as it gives life perspective, i.e., smaller self or diminished ego (Keltner 2023). Furthermore, the perceived soul restoration displayed clear religious connotations, as the outcome involved connection to God with both natural and manmade elements as medium. The religious experience was also associated with restorative outcomes such as becoming present in life, feeling whole, etc. The results therefore indicate that the fulfilment of the highest need is also related to basic health and wellbeing. According to Linnea, a sense of wonder (with a mystical touch), such as 'hearing the sound of the wind speaking to her in the forest' and being guided by pilgrim signs through the unknown, were factors that promoted soul restoration. However, she also explained that this was not a sudden shift but rather a slow/gradual change. The data also show that time spent on introspection was associated with increased emotional awareness. Finally, all participants reached transcendental states such as fun, bliss, love, awe, and happiness. Achieving environmental mastery, mind-body balance together with a variety of enriching experiences contributed to that outcome. The feeling of being connected to nature and place attachment could be considered self-transcendent states as these are expressions of ecological belonging, an emotional state where the line between the self and the environment gets blurred.

5.2 Theoretical interpretation of perceived outcomes

Since the achievement of inner peace is a major outcome of pilgrimage walking and because basic health is involved in higher level experiences, it is important to understand how the environment support this outcome. As expected, the natural environment had a great impact on the perceived health effects of stress-reduction and attention restoration, something which supports the old theoretical models found in environmental psychology (Ulrich 1983, Kaplan & Kaplan 1989, 1995). While analysing the narratives provided by the pilgrims it appeared that the perceived properties of a restorative environment (Kaplan & Kaplan 1989, 1995) were applicable. Of these properties, *being away*, *extent* and *fascination* were the most prominent, but there was also an example where *compatibility* promoted reflection. Moreover, the pilgrim Linnea said that looking at leaves was a way for

her to *practise* her capacity for attention and she also gave an example of when the cultural environment reflected her *feelings*. This explanation does not perfectly align with the attention restoration theory and goes beyond its theoretical scope. Moreover, this theory does not address the experience of self-transcendence.

The results from the study also show that there is another healing mechanism, *soul restoration*, that is associated with a peculiar sense of wonder. This restorative experience was related to both natural and cultural elements. Weber's (2016) theory on soul restoration together with Eliade's (1959) work might best explain this outcome. Weber defines soul restoration as the recovery of the emotional self and the healing process is hypothesized to occur when the senses become attuned to ecologically sound nature (Weber 2016). Furthermore, the author claims that the outcome is mediated by the experience of joy, a sense of wonder and attention to the beauty of nature. The knowledge behind the calm and connection theory (Grahn et al 2021) also contribute to the understanding of these restorative and instorative effects. Furthermore, Eliade's (1959) definition of the sacred is applicable to Linnea's testimony as it involves a mental and physical regeneration that is born out of a religious experience. However, I propose that the increased sensitivity to environmental cues and messages as well as the change in perception might be a result of restored/increased neurological functioning resulting from long term exposure to healthy environments. In the literature on flow states, it has also been described how cognitive load is released almost automatically when we focus on things that truly interest us and align with our purpose (Kotler 2021). This type of focused attention, which is perceived as being present in the now, is supported by intrinsic drives and the neurochemicals dopamine and/or norepinephrine, leading to improved functioning of the nervous system (Kotler 2021). This means that attentional capacity can increase while we are fully attentive and that both focused and effortless attention may lead to a sharpening of the senses. Furthermore, environments that are perceived as fascinating, beautiful, and wonderful may function the same way as *flow triggers* do (italicised concept: Kotler 2021). An interpretation that is supported by the fact that the pilgrims' attentiveness to these qualities helped them become present in the now and therefore more aware of the surroundings. With this knowledge in mind, I believe the perceived benefits from fascination are due to the same mechanism and not the "mental bandwidth-theory" as suggested by (Basu et al 2019).

As regards other theoretical frameworks, the findings provide some support for the place attachment model (Scannell & Gifford 2010). For example, the sight of familiar landscapes was associated with a feeling of "coming home". Further, the pilgrims' desire for enriching experiences was understood as a need for stimulation, and the fulfilment of that need might explain some of the positive emotional states

experienced by the pilgrims (Han 2018, Ulrich et al 1991). However, in this study novelty was clearly more important than familiarity and Korpela and Ylén's (2009) theory of favourite places as restorative places seemed irrelevant.

The analysis also revealed that the supportive environment theory (Grahn et al 2022) is applicable to this case, as the results indicate that the natural, cultural, and social aspects of the environment are important for restoration and personal development. Furthermore, the results show that the tranquil environment found in nature affords introspection, while the social environment is associated with more outward-looking processes. However, in this study it was found that all three environmental types promoted reflection. Either as part of introspection, projection/mirroring, or experiential learning. In addition, the pilgrimage had an instorative effect on some participants, giving them a new sense of purpose/scope of meaning. Linnea, for example, found a new direction in life on the St Olav way, while Jacob felt that pilgrimages in general had given him a more positive view of the world. The latter example has also been interpreted as a resolution of Jacob's spiritual existential problems, as the experiences fulfilled his need for goodness (Koltko-Rivera 2006). Believing that the world is an evil place where everything is being destroyed can be likened to an existential crisis, and the results show that new life experiences that contradict such beliefs are important in restoring a positive outlook on life. The presence of vast forest areas, wildlife, functioning societies and the perceived kindness of other people were found to promote this need. However, no miraculous healing or divine intervention was expected or experienced by the pilgrims at Nidaros Cathedral, although the place qualifies as a holy site. This finding differs from Gesler's (1996) pilgrimage study.

Finally, the fulfilment of the need for autonomy and competence (Deci & Ryan 1985, 2000), and finding mind-body balance, appeared to explain the transcendental state of bliss. For the curious woman Norah, being independent and gaining environmental competence was associated with a feeling of excitement, while walking on forest trails was perceived as calming. This combination of excitement and relaxation together with mental and bodily alignment, are the variables that most likely explain how she reached this peak state.

5.3 Metaneeds related to environmental qualities

When the results were analysed in relation to Stoltz and Grahn's (2021) perceived sensory dimensions (PSD:s), it became apparent that the pilgrim experiences all of these qualities during the 580 km long journey. However, when the dimensions were related to the higher needs, the PSD:s *nature*, *culture*, *social*, *serene*, and *diverse* stand out. Furthermore, mind liberation was related to the dimension *open*,

beauty experiences included both the *diverse* and *cohesive* qualities, and the *sheltered* dimension was associated to the religious experience. As regards the Kaplan and Kaplan's (1989) preference matrix, the information dimensions *coherence* (immediate understanding), *complexity* (immediate exploration) was part of the perception of beautiful scenery, while the dimension *mystery* (inferred exploration) was applicable to the mystical quality of the path (Bell et al 2001).

5.4 Evaluation of hypothesis

Does pilgrimage/long distance walking, in a setting with the perceived environmental qualities of *beauty*, *wonder* and *wildness*, help the participants to achieve alignment and personal transformation? The qualitative data of this study, suggest that natural beauty and wonder promote self-transcendence and related states (alignment), as these qualities evoke religious thoughts, positive emotions and help the pilgrim to become present in the now, etc (presence; Kotler 2021, being cognition; Koltko-Rivera 2006). In addition, the results show that nature experiences promote personal transformation. This involves an environmental resonance that aligns with Desmet's (2023) and Weber's (2016) understanding of human's interaction with nature as a mutual process that involves feelings. Since the wonderment of nature led to self-transformation, there is also support for Keltner's (2023) research. Furthermore, the experience of natural beauty and wonder, was associated with positive emotional states, however, most pilgrims did not consider the pilgrimage as a wilderness experience. This reveals that a lower degree of naturalness is enough for the soul restoration to occur. In Linnea's pilgrimage story nature was also described as the best place to meet God which fits well with the work of Eliade (1959) and Koltko-Rivera (2006). Even though the architectural beauty of the Nidaros Cathedral was highly appreciated by Stefan and gave rise to positive feelings no impact on higher needs was recorded in relation to this form of beauty. Instead, the results indicate that nature is perceived as more sacred than this holy site.

The impact of beauty, wonder and wildness on higher needs will be further explored in part II of this case study, which includes the development of a measurement tool called *the alignment and transformation scale*, onsite observations and landscape analysis.

5.5 Suggestions for future research

Based on the findings of this pilgrimage study, it appears that Kaplan and Kaplan's restorative theory (1989, 1995) needs to be revised. There is also a need to integrate

different models into a combined framework. In a new explanatory model, Kaplan and Kaplan's theory could be adapted to Weber's (2016) model as well as to research on flow (Kotler 2021). According to my *alignment and transformation hypothesis*, it is the focus on fascinating elements, natural beauty and wonder that explains both soul and attention restoration as well as the instorative effects. The collected data indicate that these environmental qualities function in the same way as flow triggers, by helping the person to become present in the now (Kotler 2021). In this state, intrinsic motivation and focus chemicals are responsible for removing cognitive load (Kotler 2021). There is also the possibility of incorporating Grahn et al's (2021) Calm and connection theory into such a model. Through a shift in perspective that recognises people as feeling beings, we may also be able to develop health care practices that are humane.

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Appendix A. Invitation to study

INBJUDAN ATT DELTA I EN STUDIE OM DIN PILGRIMSUPPLEVELSE

Bakgrund och syfte

Mitt namn är Johanna Bergström och jag skriver min masteruppsats inom programmet *Utemiljö för hälsa och välbefinnande* vid Sveriges lantbruksuniversitet (SLU). Examensarbetet handlar om pilgrimsvandring och hur miljön bidrar till upplevelsen, ett ämne som det finns lite forskning kring. Syftet med denna studie är att få djupare kunskap om den fysiska miljöns betydelse för pilgrimsresan. Du är välkommen att delta i studien om du vandrade S:t Olavsleden under 2022, är 18 år eller äldre och har förmåga att ge ditt samtycke.

Tillvägagångssätt

Som deltagare i studien får du, inledningsvis, skriva en berättelse om din personliga pilgrimsupplevelse. Därefter kan du komma att bli kontaktad och ges möjlighet att delta i en intervju där vi utforskar din upplevelse på ett mer djupgående sätt.

Behandling av personuppgifter

Dina personuppgifter kommer att behandlas konfidentiellt och resultatet anonymiseras före publicering. All information kommer att lagras på ett säkert sätt, antingen i ett låst arkivskåp eller i en lösenordskyddad dator med säkerhets- och antivirusprogram, och endast projekt-ledaren kommer att ha tillgång till den ursprungliga datan. Mottagna personuppgifter kommer raderas i oktober 2023, medan andra uppgifter anonymiseras och arkiveras under en begränsad period i granskningsyfte. Slutresultatet presenteras i en masteruppsats som kommer att publiceras. För information om dina rättigheter när det gäller behandling av personuppgifter kontakta SLU eller Myndigheten för integritetsskydd (IMY).

Deltagande i studien är frivilligt och det förutsätter att du lämnar ditt skriftliga samtycke. Frivillighet gäller för båda momenten av studien och du kan t ex välja att endast vara med i det första delmomentet. Vidare kan samtycket återkallas när som helst under studien utan förklaring. Under sådana förhållanden kommer alla personuppgifter att raderas omedelbart.

Kontaktuppgifter

Vid frågor är du välkommen att kontakta mig, Johanna Bergström på telefon 0725-44 84 04, eller mejl jobm0003@stud.slu.se alternativt kursansvarig Fredrika

Mårtensson som nås på telefon 040-41 54 53 eller e-post fredrika.martensson@slu.se.

Detaljerade instruktioner finner du nedan, och om du vill medverka i studien, vänligen skicka in din berättelse **senast den 20 mars 2023**. Jag skulle verkligen uppskatta ditt deltagande!

Om dig

Ålder:

Könstillhörighet:

Nationalitet:

Huvudsaklig sysselsättning (anställd, egenföretagare, studerande, sjukskriven, pensionerad, annat):

Din pilgrimsvandring på S:t Olavsleden

När du skriver din berättelse så uppmuntrar jag dig att uttrycka dig fritt och med egna ord. Följande frågor presenteras för att stödja minnet av din personliga pilgrimsupplevelse. Du får gärna lägga till annan relevant information och dela med dig av fotografier, videor eller dagboksanteckningar för illustration.

- I. Vill du berätta om din pilgrimsresa?
- II. Var det din första pilgrimsfärd? Hade du tidigare erfarenhet av att vandra i vild natur/vildmarken?
- III. Vad var anledningen till din resa?
- IV. Vandrade du ensam eller i sällskap?
- V. Hur upplevde du S:t Olavsleden?
- VI. Uppfylldes dina förväntningar, förhoppningar och önskemål?
- VII. Vilken inverkan, om någon, har S:t Olav-pilgrimsfärden haft på ditt liv och hur har miljön bidragit till denna upplevelse?

Du är välkommen att skicka din berättelse via post eller e-post och kom ihåg att bifoga det undertecknade samtyckesformuläret med dina kontaktuppgifter.

Adress:

Johanna Bergström
Johannesbäcksgatan 54B
754 33 Uppsala

E-post: jobm0003@stud.slu.se

Tack på förhand för att du delar med dig av din kunskap och erfarenhet relaterat till detta viktiga ämne. – Det betyder mycket!

Samtycke till deltagande i studie

Jag har fått information om *pilgrimsvandningsprojektet* och jag väljer frivilligt att delta i studien. Med denna underskrift ger jag mitt samtycke i enlighet därmed.

Ort och datum:

Namn:

Adress:

Telefon:

E-post:

Underskrift:

Genom att kryssa i rutan ger jag också mitt samtycke till:

- ytterligare kontakt rörande en intervju
- att materialet får användas i framtida forskning

INVITATION TO PARTICIPATE IN A STUDY ON YOUR PILGRIMAGE EXPERIENCE

Background and purpose

My name is Johanna Bergström, and I am doing my degree project within the Master's program *Outdoor Environments for Health and Wellbeing* at the Swedish University of Agricultural Sciences (SLU). The master thesis is about pilgrimage and how the environment contributes to the experience, a topic on which there is little research. The purpose of this study is to gain deeper knowledge about the significance of the physical environment for the pilgrim's journey. You are welcome to participate in this study if you completed the St Olav Pilgrimage in 2022, is 18 years of age or older and able to give your consent.

Procedure

As participant in the study, you will write a story about your personal pilgrimage experience. You may also be contacted afterwards and given the opportunity to further explore your experience during an in-depth interview.

Data management

Your personal information will be treated as confidential, and the results will be anonymized before publication. All information will be stored securely, either in a locked filing cabinet or a password-protected computer with security and antivirus software, and no other people than the project manager, will have access to the original data. Personal data will be deleted in October 2023, while other data will be made anonymous, temporally archived and be available for review. The final results will be presented in a master thesis that will be published. For information on your rights as regards personal data processing contact SLU or the Swedish Authority for Privacy Protection (IMY).

Participation in the study is voluntary and requires your written consent. This applies to both parts of the study and you can, for example, choose to participate only in the first part. Furthermore, consent can be withdrawn at any time during the study without explanation. In such circumstances, all personal data will be deleted immediately.

Contact information

If you have any questions, please contact me, Johanna Bergström at jobm0003@stud.slu.se or +46725 44 84 04, alternatively the course coordinator

Fredrika Mårtensson, who can be reached at fredrika.martensson@slu.se or +4640 41 54 53.

I would be happy to see you join! Detailed instructions are found below, and please submit your story no later than **28th March 2023**.

About you

Age:

Gender:

Nationality:

Main occupation (employed, self-employed, student, on sick leave, retired, other):

Your experience of the St Olav pilgrimage

When writing the story, I encourage you to express yourself in your own words. The following questions are presented to support the recollection of your personal pilgrimage experience. Feel free to add other relevant information and share photographs, videos, or diary notes for illustration.

- I. Would you like to tell the story of your pilgrimage?
- II. Was it your first pilgrimage? Did you have other experiences of hiking in the wilderness before?
- III. What was the reason for your journey?
- IV. Did you walk alone or in company?
- V. How did you experience the St Olav trail?
- VI. Were your expectations, hopes and desires met?
- VII. What impact, if any, has the St Olav pilgrimage had on your life and how did the environment contribute to this experience?

You are welcome to send your story via mail or email and remember to attach the signed letter of consent with your contact information.

Address:

Johanna Bergström
Johannesbäcksgatan 54B
754 33 Uppsala
SWEDEN

Email: jobm0003@stud.slu.se

*Thanks in advance for your contribution to knowledge on this important subject.
- It means a lot!*

Consent for participation in study

I have been informed about the *St Olav pilgrimage* project, and I voluntarily choose to participate in the study. With this signature I give my consent accordingly.

Place and date:

Name:

Address:

Phone:

Email:

Signature:

By ticking the box, I also give my consent for:

further contact regarding an interview

the material to be used in future research

Appendix B. Interview guide

General

1. Would you like to tell the story of your pilgrimage?
 - a. How was your overall experience of the journey?
 - b. When did the journey take place?
 - c. Was it your first pilgrimage?
 - d. Did you have other experiences of hiking in the wilderness before?
 - e. Where did you begin and where did you finish?
 - f. How many days did it take to arrive at your destination?
 - g. Did you walk alone or in company?
 - h. Where did you seek shelter for the night?
 - i. How were the overall weather conditions?

Motivation

2. What was the reason for your journey?
3. Did your motives change along the way? If yes, why?
4. Were your expectations, hopes and desires met?
5. What was most important to you, the journey, or the destination?

Soul restoration

6. Did you perceive any improvements as regards your psychological well-being? If yes, in what way?

Transformation

7. What impact, if any, has the St Olav pilgrimage had on your life?
8. Did you experience any changes personally, spiritually, etc due to the pilgrimage, during or after the journey?

Self-actualization

9. Did you achieve your personal goals?

The physical environment

10. How did you experience the St Olav trail?
 - a. What significance, if any, did the landscape have for your inner journey, your wellbeing and/or achievement of personal goals?
 - b. Did the landscape variations contribute to your experience, including different stages of your journey?
 - c. Which environmental type(s), if any, did you prefer the most and why?
 - d. Which sites along the trail were most important to you? Why?
 - e. Which places did you like the most?
 - f. Any places that evoked strong feelings or had a deep impact on you?
 - g. Which environmental aspects did you find most interesting?
 - h. What experiential content was most meaningful to you?

- i. How would you describe your relationship to nature and wildlife?
11. How did the weather affect your experience?

Specific questions regarding self-transcendence and transformation

12. During your journey did you experience any altered state of being, such as flow or becoming one with the surroundings? If yes, when, and where did it happen? Any specific memories related to that experience?
13. Did you have any life changing or transformative experiences during the pilgrimage? In the case of a specific event, can you describe the details surrounding that experience?

Experience of particular sites

Did you walk through/visit/stay at any of the following sites?

- a) Tännforsen waterfall
- b) Jämtskogen forest
- c) Åreskutan mountain
- d) Märraskalfjället/Merraskarfjellet mountain
- e) Nidaros Cathedral

If yes, can you describe your personal experience of these? (For example: What did you perceive with your senses? How did you feel? What did it mean to you? Your relationship to that place? How it affected you? etc)

Appendix C. Scientific poster

See separate document.

Publishing and archiving

Approved students' theses at SLU are published electronically. As a student, you have the copyright to your own work and need to approve the electronic publishing. If you check the box for **YES**, the full text (pdf file) and metadata will be visible and searchable online. If you check the box for **NO**, only the metadata and the abstract will be visible and searchable online. Nevertheless, when the document is uploaded it will still be archived as a digital file. If you are more than one author, the checked box will be applied to all authors. You will find a link to SLU's publishing agreement here:

- <https://libanswers.slu.se/en/faq/228318>.

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NO, I/we do not give permission to publish the present work. The work will still be archived and its metadata and abstract will be visible and searchable.