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Landscape as Experienced Place and Worth Conserving in the Drawings of Finnish and Swedish Students

Eija Yli-Panula ^{1,*}, Christel Persson ², Eila Jeronen ³, Varpu Eloranta ¹ and Heini-Marja Pakula ¹

¹ Department of Teacher Education, University of Turku, Turku 20014, Finland; varpu.eloranta@elisanet.fi (V.E.); heini-marja.pakula@elisanet.fi (H.-M.P.)

² Faculty of Natural Science, Kristianstad University, Kristianstad 29188, Sweden; christel.persson@hkr.se

³ Faculty of Education, University of Oulu, Oulu 90014, Finland; eila.jeronen@oulu.fi

* Correspondence: eija.yli-panula@utu.fi

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Abstract: Children explore their environment through experiences and each experience is meaningful in developing their environmental consciousness and identity. On the basis of the drawn landscape experiences, the present qualitative study set out to find out what landscapes the participating students deemed worth conserving. The data consisted of the drawings of 11- to 16-year-old Finnish ($n = 311$) and Swedish ($n = 246$) students. Deductive and inductive content analyses were used to analyse the data. The results showed that all three landscape types; nature, built, and social were presented in the drawings. Nature and built landscapes were the most frequent types, with the proportion of nature landscapes increasing and that of built landscapes decreasing with age. There were gender and cultural preferences: boys drew built landscapes more often than girls; and Finnish students drew summer cottages, a cultural phenomenon typical of Finnish landscapes, which was not found in Swedish drawings. Similarities in Finnish and Swedish data were identified e.g., in forest and water and “cultural landscapes”. Some of the students displayed a more distant, observing role, whereas others adopted an active one in relation to all three landscape types. The results are discussed in connection to the landscape theories and earlier findings of the drawn environments.

Keywords: environment; experiences connected to environment; inductive content analysis; landscape; students

1. Introduction

The knowledge of students’ subjective world views [1], their environmental conceptions, experiences, and relationship to the environment are remarkable when developing sustainable education in schools. Media and information technology take over more and more of the youth’s spare time, and children have fewer experiences from nature and outdoor spaces than their previous generations [2].

The present study sets out to explore and analyse Finnish and Swedish children’s and adolescents’ views and experiences of landscapes that they deem worth conserving. The Finnish word of landscape ‘maisema’ and Swedish ‘landskap’ have a strong connection to the ‘bounded area’ or ‘region’ just like the German word ‘Landschaft’. So, they differ from the English word ‘landscape’ which covers more social aspects [3,4]. Instead the term ‘preserve’ we use the term ‘conserve’ because it includes the aspect of the future as the Finnish word ‘säilyttää’ and Swedish word ‘bevaka’ also do. The study was carried out as a country school project between Finland and Russia in 2003–2005, [5,6] organised by the Finnish National Board of Education. Drawings were chosen as data, as the researchers did not write

or speak Russian. The project [5,6] provided an inspiration to explore the reasons why children want to conserve nature, what kind of landscapes they want to conserve and what kind of differences there are between age groups. Since then, studies have been expanded and updated to include also drawings by children and adolescents in southwestern Finland [7,8]. Apart from our research, there are no studies on adolescents' views on landscapes deemed worth conserving in this research framework.

The qualitative data consists of drawings and written descriptions of favoured landscapes. The focus is on Finnish and Swedish adolescents' drawn and written experiences of the landscapes that they deemed worth conserving. Using deductive content analysis [9], the drawings were first divided into three groups: nature, built or social environment [10]. Then, the drawings and the accompanying written texts were interpreted using Wylie's pairs of tensions of the landscape [4], and analysed further in connection to the children's and adolescents' experiences regarding the landscape worth conserving. Below, the results are presented for countries, students' age (grade), and gender. The findings are discussed in connection to landscape theories and earlier findings of drawn environments.

2. Theoretical Background

2.1. Core Concepts of the Study: Landscape and Environment

Originally, landscape was used to refer to nature, but later on, human activity, such as man-made fields, and cultural artefacts, such as traditional houses, were included in the definition [11]. A landscape can consist of several environments and is formed mainly by visual experiences that embody the perceived landscape in one's mind. Thus, the landscape is a physical and mental entirety, which exists when a person observes the surroundings and forms her/his own experiences of the environment. The mental images are based on an individual's lifelong experiences, values, education, profession, mental state, and even on external matters like the season. Individual mental landscapes are unique, perhaps even products of imagination based on subjective or inter subjective experiences. Thus, the definition of a landscape also includes the way we interpret the environment [12]. Landscape can be seen as a dynamic synthesis of natural and cultural environments [13]. The concepts of landscape and environment can be used as synonyms, as does this study.

The environment is a complex concept that can be examined from a number of dimensions: as immediate, local, international, global, animate, inanimate, natural or constructed, physical or social phenomena [14]. Suomela and Tani [15] analysed it from three different aspects. The first, scientific and objective, aspect views the environment as something out there, outside and independent of man, formed from physical, chemical and biotic matters. The second aspect refers to an individual experience of the environment: my experienced environment—the environment is here. According to this view, every human being has her/his own environment, which acquires its meaning via thoughts, experiences and emotions of the individual. The third view refers to the environment formed by the community and society including the dimensions of power and responsibility. This view is represented by environmental politics, for example. The dimensions of power and responsibility can be seen in historical buildings and their surroundings, for example, which in Sweden and Finland are usually taken care of by the municipalities and also appreciated by the inhabitants.

In the phenomenological view, Tilley [16,17] endows landscapes a personal and social identity by defining landscapes "as perceived and embodied sets of relationships between places, a structure of human feeling, emotion, dwelling, movement and practical activity", Taylor [12] refers to subjective and personalized experiences. "Landscape is not simply what we see, but a way of seeing: we see it with our eye but interpret it with our mind and ascribe values to landscape for intangible-spiritual-reasons. Landscape can therefore be seen as a cultural construct in which our sense of place and memories inhere".

Wylie [4] views landscape as a topographic idea with surface and depth. He sees landscape as a tension between the perceiver, the subject, and the perceived, the object. According to Wylie, the term landscape refers to four pairs of tensions. The first pair involves the tensions of proximity and distance: the landscape is "here", or it is "over there". In our study, proximity refers to tactility; the landscape

is described as something that is in the viewer's immediate environment, whereas distance refers to a landscape that is viewed as a visual drawing object from a distance. The second pair of tensions views the person in relation to the landscape: s/he may be an observer or a part of the landscape. In our study, the students are considered observers if their drawings present only a set of observable material cultural artefacts, and they are regarded as part of the landscape when their drawings describe first-hand observations of the environment including meaningful practices and values that they have lived, touched, and explored. The third pair of tensions refers to eye and land tension: is the landscape real and not just a figment of imagination, is it just something we see or is it also a way of seeing? In our study, the landscape of the drawings is considered real if it is described as a solid, physical and palpable entity which can be surveyed, mapped, and described in a factual and objective manner and if the drawings in our study include a pictorial understanding of the landscape, that is, if they are pictures or images of the landscape showing that the students are able to look at the world around them in a special way. The fourth pair refers to the tension between nature and culture. If the students present the landscape from the environmental point of view the drawings are viewed as emphasizing nature but if they describe practices, actions, habits, events and other everyday things they emphasize culture. Wylie's [4] (2007) pairs of tensions were used as the key geographical ideas to analyse and interpret the drawings and identify the individual concepts of landscape. The tensions were also part of Suomela and Tani's [15] three different aspects of the environment in relation to man.

2.2. *Man and the Environment*

As the major thrust of human geography is on the definition of the relationship between man and the environment [10], the original idea of the present study is based on this discipline. The nature of this relationship is also at the core in the interpretation of the results of the present study. Kaivola and Rikkinen [18] showed how environmental relations and images in space and place are created and how they are shaped by knowledge, experience and thinking. Feelings, sense of worthiness and attitudes also have an important role in building up environmental relationships and images. Created images of the environment may be absorbed in memories and entangled in meanings. They are highly subjective and are not available for investigation. The images and the relation between man and his environment is seen as important and unique and can become a lifelong environmental relationship. In human geography the environmental conceptions are also studied, and they reflect the basic understanding of the relationships between man and the environment. According to Loughland and others [19], there are two main categories of environmental conceptions: objective conceptions and conceptions representing a person's relational focus on the environment in a mutually sustaining relationship, which can be analysed.

Man and the environment can be connected to each other via experiences. The living environment as experienced surroundings constitutes students' physical and social environment [14]. For example, during a walk in the forest, one may physically feel being part of the environment or else feel connectedness to the environment via a social habit, such as a forest walk with one's friend. It can be seen through personal social responsibility as well as through the families, communities, and environment in which somebody is living and working [20]. The size of the living environment and the number of environmental experiences are connected to children's age [18]. An increasing number of environmental experiences with age was shown to broaden the range of Finnish and Russian students' landscapes that they deemed worth conserving; while younger students drew more yard and home environments, older ones drew more forest and water landscapes with many observed details, and also foreign holiday resorts [8,21,22].

Natural landscapes may hold a significant positive value to young people. Using drawings to visualize Swedish young people's thoughts about nature, Alerby (2000) found what she called "good world": nature was represented as pure and beautiful [23]. The same beautified picture of nature was reflected in the drawings of Finnish, Russian, Australian, and Nepalese children [8,22].

2.3. Landscape as An Experienced Place

Children use and experience places based on their functions as environments for play and activity [24]. Traditionally, natural environments have been places for children to play and enjoy physical activities, and they have been found to show creativity in their activities in the natural environment [25]. However, modern societies seem to have neglected the value of such environments for the development of children and adolescents. Being a child in an urban area requires that children spot the opportunities for play in the landscape.

Play belongs to childhood, and the environment used for play is pivotal. The different types of contacts that children have when exploring their environment are meaningful in developing children's environmental consciousness and identity and in shaping the way in which children respond to the protection of the environment. Play has been shown to be a form of informal cognitive learning for children. It helps children to develop "flexible and divergent thinking" and provides children with the ability to solve real problems [26]. Outdoor play and experiences are important in creating connections between children and nature. Experiences of nature also help children (3–12 years of age) to shape conceptions and values [27].

There is less research into adolescents' landscape experiences as compared to children's play, but it is known that nature interactions and experiences are restorative [28] as well as beneficial for the general wellbeing for adolescents and adults [29]. For example, in their study of the functional properties and physical features of the environment, Woolley and Johns [30] found that skateboarding is a sociable experience for adolescents. It is a hobby in which adolescents gather to skateboarding places and meet each other.

3. Study Design

3.1. Study Questions

The aim of this study was to find out what kind of landscapes Finnish and Swedish 11- to 16-year-old students wanted to conserve. The hypothesis is that the landscape which the students want to conserve is important and valuable to them. Another research focus is how landscape drawings vary according to the age, gender, and country of the students. The age group was chosen, as adolescents' drawn experiences of landscapes they deem worth conserving for the future have not been studied in earlier related research.

The study questions are:

- What are the landscape types presented in the drawings and how are they described in the students' texts?
- What kind of relationship do the students have in connection to their own landscapes?
- What do the drawings reveal about the personal experiences of the students in relation to the landscapes they want to conserve?

The first and second study questions are related to nature, built, and social landscapes as defined in environmental psychology [10], and the data includes all of the Finnish ($n = 311$) and Swedish ($n = 246$) students' drawings and accompanying texts. The third study question is related to the students' experiences in connection to the landscapes that they want to conserve analysed in the framework of Wylie's pairs of tensions [4]. The data includes the drawings/texts of the students in southwestern Finland ($n = 182$) and in Sweden ($n = 246$).

3.2. Data of the Study

This study includes two groups of adolescents (Table 1), one group of Finnish ($n = 311$) and the other of Swedish students ($n = 246$), in grades 5–9 (11–16 years old). Students ($n = 557$) from two neighbouring countries were selected due to the similarities that the two Scandinavian countries share in terms of nature and culture. The participants of the study were recruited by e-mailing school

teachers in Southern Finland and Sweden, informing them about the study and asking whether or not they wanted to participate in the study. The teachers were also told that participation in the study is voluntary. Prior to the study, they were to inform the students and their parents about the study via a digital platform. The participating schools were located in both the rural and urban areas. The researchers visited the schools and gave the teachers instructions both in oral and written format. The teachers were guided that in case of confusion or misunderstanding they were allowed to clarify the word landscape to the students, explaining that landscape is connected to the environment. If the students needed further clarification, the teachers were allowed to ask the students to describe what there is in the environment. If the students' descriptions were scanty or limited to, say, objects in nature landscapes, such as mountains or water, the teachers were instructed to provide the students with a long list of objects contained in the environment to ascertain that the students develop a versatile picture of the concept. According to the teachers, the students were aware of the concepts at least in the basic level because only the word 'environment' was to be discussed and not other things on the list.

The students ($n = 557$) were instructed to draw a picture of a landscape they would like to conserve. This instruction was given in Finnish (in Finland) and in Swedish (in Sweden). The students were given one hour at school to complete the drawings.

Table 1. Distribution of nationality, gender and grade of the Finnish and Swedish students ($N = 557$).

Grade	Age	Finland			Sweden		
		Female	Male	Total	Female	Male	Total
5 and 6	11–12 years	69 (25)	67 (19)	136 (44)	50	47	97
7 and 8	13–14 years	60 (43)	51 (36)	111 (79)	39	45	84
9	15–16 years	36 (31)	28 (28)	64 (59)	25	40	65
		165	146	311 (182)	114	132	246

The Finnish drawings ($n = 311$) were collected from Eastern Finland ($n = 129$) in 2003 and from southwestern Finland ($n = 182$) in 2011, and the drawings from the Swedish students ($n = 246$) were collected in 2010–2011 from southeastern and southwestern Sweden. Due to the fact that the physical, built and social worlds have changed during the 8-year gap between the two datasets from the Finnish participants, the analyzed drawings were compared to the ones of our earlier studies. The data from 2003 and 2011 were studied, and it was shown that despite the changing world the students' views of a landscape worth conserving were uniform with the earlier data [6,21]. However, for clarity, the data of 2003 are presented separately from the data of 2011. In analysis phases II and III, only the drawings from southwestern Finland (2011) and Sweden (2010–2011) were analyzed.

3.3. Drawings as Study Material

Drawings by children and adolescents have been used as study material in several studies [e.g., 6,8,23] and their potential and challenges as research material have been discussed in earlier studies [6,21]. Students' drawings are important to get access to their ideas [31], or [32] in Fisher's (2005) words: 'Drawing is a wonderful way of making thinking visible' (p. 57). According to Reiss and Tunnicliffe (2001) [33], drawings are of special value for students that have difficulties in expressing themselves verbally. Drawings can also be helpful for those students who are shy or lack language skills, [34]. There are difficulties in using drawings and written texts as research data. According to Barraza (1999) [35], Backett-Milburn and McKie (1999) [36], and Horstman and others (2008) [37], the main drawback is the difficulty in analyzing the drawings of young people in particular. In the present study, the drawings were accompanied by explanatory texts, which helped the researchers to analyze the pictures. To increase the reliability of the analyses and interpretations, three researchers analyzed the pictures independently using mutually agreed criteria.

In the present study, the landscape is examined as the visual outlook of the environment in the students' drawings illustrating the landscape they want to conserve. The drawn landscape of the

environment “worth conserving” can be considered to reflect the mental images, where personal experiences related to the images of the environment are combined. [38]. They are comparable with the mental maps of living surroundings or wide environments [18]. The drawings of the Southern Finnish and Swedish students were accompanied by written comments which were used as additional support for the interpretations that were made on the basis of the drawings. Thus, versatile sources were used to understand the drawers’ meaning making [39] and to validate the interpretations (triangulation).

3.4. Study Method and Analyses

The Finnish and Swedish students’ drawings of landscapes ($n = 557$), were analysed by re-producing the visual contents of each of the drawings, one at a time, in written text. The written text and the background information were then exported to Microsoft Excel. The written descriptions were then analyzed in three phases (for detailed description, see [8,21] in terms of gender and grades). The three researchers analyzed the material independently and agreed in the vast majority of cases (93%), so the inter-rater reliability was high [40].

In phase I, the drawings were divided into three main landscape categories using deductive content analysis [9]. The analysis yielded drawings which presented (1) nature environments (no features related to the built or other human activity were described), (2) built and cultural environments (showing some indication of human’s activities, such as roads, fences, buildings, vehicles or cultivated fields) and (3) social environments (with human beings drawn as stick figures, showing the face only or as an angler in a boat, for example) [10].

A built environment is a human-made space in which people live, work, and recreate on a day-to-day basis [41]. The World Heritage Committee (2002) [42] defines a cultural environment as “a combination of nature and man and designed and created intentionally by man” and may be a relict or continuing landscape.

In phase II, the contents of the drawings were analyzed more carefully using inductive content-based analyses, and the prevailing contents as well as the details of the landscapes were further specified.

In phase III, the written experiences related to the drawn landscapes were analyzed using inductive content-based analysis [9]. The combined drawn and written experiences were analysed and classified using Wylie’s [4] pairs of tensions (Table 2). The ideas underlying the categories express the students’ “voices”, that is, the reasons why they want to conserve the drawn landscapes. Finally, eight categories were formed based on the students’ personal experiences (Table 2).

The drawings in category A were realistic copies of the environment “out there” and easily analyzed as nature experiences. The drawn details in category B, such as animals, flowers, gardening and other objects in the landscape showed the person’s relation to the environment in detail. Categories C to F represented experiences related to the city/town, holidays, summer cottages, and sport experiences. The last two categories contained descriptions of home/house (G) and “mental landscapes” (H).

Table 2. Categories of personal experiences connected to the landscapes drawn by the students—based on inductive content analysis.

Code	Category of Experiences	Content of the Drawing and Written Text
A	Experiences of nature	sea landscape with sun, sea with the horizon, sunrise/sunset, mountain landscape, forest landscape, the falls by a nature trail, tree or trees, fishing experience
B	Classical landscape as an experienced place	classical country landscape or lake landscape, lots of different kind of elements in the drawings
C	City/town experiences	big cities like Chicago or Amsterdam, the street landscapes in cities/towns, shopping centers and sales
D	Holiday experiences to the Mediterranean or similar places	the beach and warmness of tropical areas, warm places with palms, dolphins, Hawaiian Islands
E	Experiences in summer cottages	the surroundings of a summer cottage, lake landscape and a wharf, boats
F	Sport experiences	downhill skiing, football, floorball, tennis, golf, roller skating, dancing
G	Own house/own “nest”	own room + TV, home courtyard, beloved place in tree, built hut in tree or in ground
H	“Mental landscape”	being alone in a silent place-like on the beach or in the forest path, often listening to music

4. Results

4.1. Nature, Built and Social Landscapes in Drawings in Relation to Students’ Age and Gender (Analysis Phases I and II)

All three main landscape categories; nature, built and social environments were present in the data (Figure 1). Nature and built landscapes were the most, and social landscapes the least numerous in both groups’ drawings.

The proportion of natural landscapes increased, and the proportion of built landscapes decreased with the increasing age of the Finnish and Swedish students (combined, data not shown). Nature landscapes were the most favoured by the girls in lower grades in both countries. Built landscapes were favoured more often by the Finnish and the Swedish boys than the girls. Social landscapes were more evenly distributed among the different grades and genders in the Swedish than in the Finnish data, being especially common in the Finnish fifth- and sixth-grader boys’ drawings.

There were many similarities in the contents of the landscapes drawn by the Finnish and Swedish students. The Finnish ($n = 311$) and the Swedish students’ drawings ($n = 246$) typically represented a basic type of physical *nature*. Forests and trees (birches, pines, spruces, leafless trees and bushes), water (creeks, rivers, small lakes, lakes or the sea) and the sun were the most prevailing features. Water elements were particularly frequent in the girls’ drawings, but present in the boys’ drawings as well. In a number of drawings, both nature and built landscapes were represented, typically with the nature landscape gradually changing to the built one without the man-made landscape disrupting the peace of the nature landscape. *Built landscapes* and cultural landscapes (see picture c in Figure 2) were equally represented in the Finnish and the Swedish drawings. The prevailing features were man-made objects, such as wharfs, bridges or vehicles, (cars, tractors, and in the Swedish drawings also helicopters). Houses, streets or courtyards were also frequent. The Finnish students often drew summer cottages, which were not found in any of the Swedish drawings. Human beings were rarely part of the *social landscapes*; people were present only in 18% of the Finnish and 13% of the Swedish drawings. Man was drawn in harmony with the landscape, often as an active agent, for example as a person fishing on a lake in the summer (Finnish data).

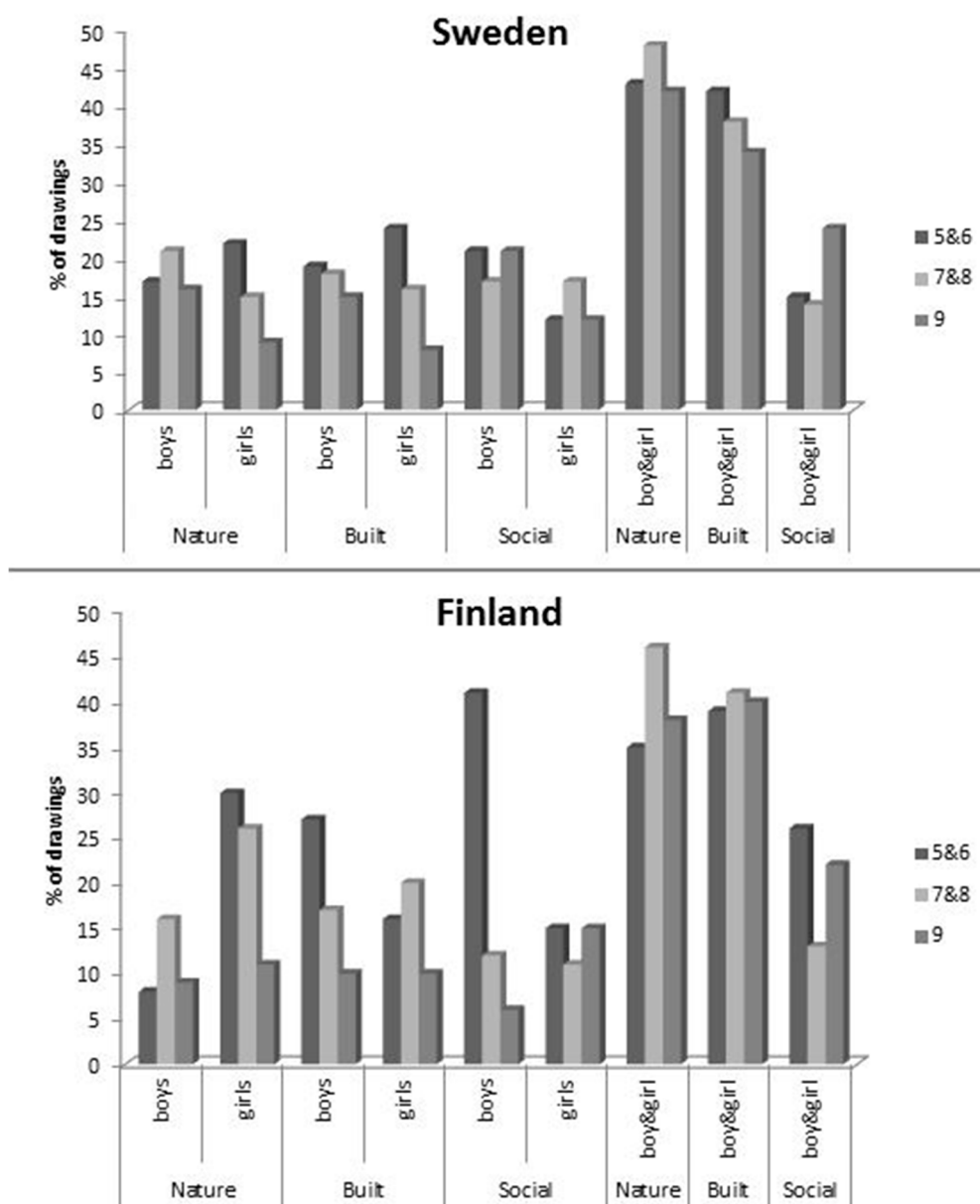


Figure 1. The distribution of the Finnish ($n = 311$) and Swedish ($n = 246$) drawings by the girls and the boys in grades 5–6, 7–8 and 9 in the three main landscape categories: nature, built, and social landscapes.

Most landscapes represented summer sceneries in Finland and Sweden; there were only a few views with snow and winter activities. Some tropical environments were drawn, too, especially by the 7–9th graders. Boys in all grades drew more often various actions, sports and technical matters than girls. Girls and the youngest students drew animals, such as birds, horses, rabbits and fish. Boys drew mostly birds, but also fish, dogs, and even camels.

Although some of the boys' landscapes represented schematic and diagrammatic drawings (baseline drawings included the sun, clouds, flying birds), they clearly showed views that they had seen and experienced (visual realism). The girls' nature landscapes were more expressive and their drawings more versatile. Nature landscapes were often drawn as a scene in the far distance, they were landscapes "out there".



Figure 2. Drawn landscapes as an experienced place (analysis phases II and III): (a) lakeside summer cottage drawn by a Finnish boy (11 years) (b) downhill skiing drawn by a Finnish girl (15 years) (c) classical country landscape drawn by a Swedish girl (12 years) (d) town experiences drawn by a Swedish boy (15 years).

4.2. Personal Experiences Connected to the Drawn Landscapes (Analysis Phases II and III)

The drawings showed the students' personal experiences of the landscapes they wanted to conserve. The written text gave a deeper and more detailed picture of their relation to the environment describing what, how and why the students wanted to conserve the drawn environment. The students also expressed their personal feelings, impressions, opinions, values, and environmental threats. Thus, landscapes were clearly observed via emotions, senses and cognitions.

According to the drawings and texts, the experiences of the Finnish and the Swedish students were often related to "pure nature", classical landscapes with many details, and the built environment representing city/town, holiday and sport experiences. Experiences related to summer cottages were drawn only by Finnish students as well as being alone in a silent place (Figure 2), although silence and peace were also mentioned by Swedish students. Some landscape drawings by both Swedish and Finnish students (most by Finnish boys) presented a built hut or their own house.

4.3. Experiences in Relation to Nature Landscapes

The most commonly drawn nature landscapes were water and forest environments. The experiences were related to the drawers' beloved places, holiday experiences, beauty of flowers or animals especially in the girls' classical landscapes (Figure 2). Many Finnish girls (grades 5 and 6) appreciated nature landscapes with silence, spending time with their parents at summer cottages, whereas Finnish and Swedish boys preferred sport experiences. A few boys from both countries also favored their own "nest" and own place in their drawings. Nature landscapes drawn by 7th and 8th graders typically represented a shore with water, palms and the sun. For Swedish students, such landscapes seemed to reflect freedom and outdoor living and dream landscapes for teenage girls.

The landscapes of the Finnish and the Swedish 9th graders were mostly environments “out there”, representing spruce dominated (mountainous) landscapes, the sea and sunset, and sunny holiday beaches. While the Finnish students drew beaches at summer cottages, the Swedish students drew sceneries of an outdoor recreation area (e.g., Stakedala). Ninth grader boys’ landscapes like the drawings in the 7th and 8th grades were scanty and simple. Their drawings had few elements, such as coniferous forests, winter with snow, night, seashore and a palm on a desolate island or a desert. The girls drew more detailed landscapes with rainbows, flowers and animals.

Examples of Finnish (FI) and Swedish (SE) students’ written descriptions in connection to nature landscapes (A-H refer to the categories of personal experiences in Table 2):

- “This tree is next to the home of my friend Atte, where we spend time together” (FI boy, 6th grade, G)
- “The sea landscape in the archipelago of Turku, where I sail” (FI girl, 8th grade, A)
- “Foreign destination, sunshine and waves” (FI girl, 8th grade, D)
- “My drawing represents harmony and peace. It is a forest landscape (the sun, water, two trees and big stones)” (SE girl, 8th grade, H)
- “The sunset in the mountains, it colors the snow lilac, You can see reindeer there” (FI boy, 9th grade, A)

The examples above show that the experiences of the students, especially the youngest ones, pictured in nature landscapes are related to places where the students currently lived or had lived with friends and relatives. The experienced environment represented greenness, harmony, silence and peace to some 5–9th graders. However, only the Finnish students wrote that they wanted to be alone in their silent place. For Swedish 5th and 6th graders the forest was a place for play and fun. They also wrote that greenhouse gases and rubbish should not be allowed to destroy nature, one student wrote about people having exploited the seas at an alarming rate and that the seas should be saved for the fish.

4.4. Experiences in Relation to Built Landscapes

The built landscapes drawn by the Finnish girls in the 5th and 6th grades represented most often summer cottages with surroundings at the lake- or seaside but also their family homes and yards. The surroundings of the summer cottage were usually drawn in detail; the pier, stony paths, the sauna, the well and a grill. The Swedish girls also drew sea landscapes with details, sun umbrella, sandals, sunglasses and a rubbish box with texts “all rubbish in here” and “keep the environment clean”. Boys in the 5th and 6th grades drew city environments, country landscapes with tractors, downhill skiing and the sea with a boat.

Half of the built environment in the Finnish girls’ drawings in the 7th and 8th grades represented summer cottages with piers. Other common landscapes in the Finnish and the Swedish data were cities with window sales and city life in general, whereas country landscapes or air pollution were rare. The Finnish boys (7th and 8th grades) drew mountain cottages, boats at the sea, piers at the summer cottages and a few pictures of city life or golf grounds. The Swedish boys also had detailed features in their landscapes e.g., piers, cars, boats, flowers and apple trees.

Built landscapes drawn by the Finnish girls in the 9th grade represented the sea and southern holiday beaches or summer cottages at the lake. Also nature reserves, shopping areas in the city and ice hockey playgrounds were drawn. The Swedish and the Finnish girls shared the same or similar features in their drawings, e.g., sea landscapes with boats, shopping areas and holiday sceneries with palms. The Finnish boys also drew ice hockey rinks, forests, summer cottages at the lake and terraced cultivated grounds, palms, mountain areas with bridges and high-rise buildings. The Swedish boys’ built environments often included a rock, cars, airplanes, trains and downhill ski-lifts.

Rubbish boxes and recycling bins appeared in the Swedish landscapes (but not in the Finnish ones) and some Swedish texts also mentioned the importance of keeping the environment clean.

Examples of students’ written descriptions in connection to built landscapes:

- “Our summer cottage at the lake, it is a silent place and that is the reason why it is my beloved place. There is also a sauna in my drawing” (FI boy, 5th grade, E).
- “My room with TV and play station” (FI boy 6th grade, G).
- “Sunny and silent morning in the center of the town” (FI boy, 8th grade, H).
- “Floorball playground (boy, 8th grade) or golf ground” (FI boy, 8th grade, F).
- “Island with palm trees in a warm climate and a treasure box” (FI boy 8th grade, D).
- “Landscape of the summer cottage and I am sitting on the shore of our summer cottage and I was looking at the sea when the sun was setting—best evening ever (music from the radio was on)” (FI girl 8th grade, E).
- “City life” (block of flats next to each other in the drawing) (FI girl, 8th grade, C).
- “Refrigerator, sale” (FI girl, 8th grade, G).
- “I have drawn a ski resort area, because I want to save the snow in the mountains so I can do downhill skiing in the future” (SE boy 9th grade, F).
- “House with peaceful atmosphere and the garden without any exhaust/emission and pollution (impurity)” (SE boy, 9th grade, G).

In the built landscapes, both the Finnish and the Swedish students frequently drew experiences related to nature (forest, sea) but experiences related to city/town, holiday, sport and family home were also drawn. Among the Finnish students the written text reflected experiences of being alone in a silent place and at summer cottages with relatives. The Swedish students connected their landscapes to freedom, outdoor living, hobbies and even to global environmental problems in their written texts.

4.5. Experiences in Relation to Social Landscapes

The social landscapes drawn by the Finnish boys in the 5th and 6th grades were related to hobbies, such as downhill ski areas in winter or fishing places in summer. The Swedish boys focused more on people, exemplified by a drawing of a man in the yard with fruit trees and an area with a rubbish box. The Finnish and Swedish boys described tidy environments, such as a family house with a man in the tree or football grounds. Two boys drew “motocross” cycling. Whereas the Finnish girls’ drawings had details: a girl sitting on a rock near home, girls walking or just lying down at a summer cottage, jumping from the pier to enjoy swimming, playing floorball in the sports hall, angling on the shore, reading in the hammock or letting the sled glide down the slope, the Swedish girls drew sceneries, such as a girl sitting in a park on a bench, ducks swimming on a little creek and a rubbish box in a tidy environment, or a girl sleeping in a hammock.

The social landscapes of the Finnish girls in grades 7 and 8 represented boating, children on a sandy beach and girls in the dancing hall, while the boys drew scanty landscapes with a team playing football, doing downhill skiing or people swimming in the sea. Some examples of the Swedish girls’ drawings are a seascape with a girl sailing in a small boat, a girl taking care of the horses in a stable or a girl mowing the lawn. The Swedish boys drew scanty and simple town landscapes.

The Finnish boys in the 9th grade drew hobbies, downhill skiing places or beaches with people on a summer day and classical country environments. The Swedish boys’ drawings represented their own houses, boys playing the guitar or cycling in the countryside. The Finnish girls’ social landscapes represented both summer cottage areas and winter environments with downhill skiing opportunities. The girls described the drawn places in writing as “relaxed and fun”, “my place”, “I relax in places where I can do things I like”. “I am with my friends, in good company and I eat good food.” The Swedish girls’ drawings included a shore with young swimmers, a girl in a summer scenery with flowers, and an African landscape with the text “nobody should suffer from hunger”.

Examples of students’ written descriptions in connection to social landscapes:

- “Tennis court, number 8. I play tennis with my Dad, exactly on this tennis ground number 8.” (FI boy 6th grade, F).
- “The Lapland mountain where Father Christmas lives and his reindeers” (FI boy 6th grade, A).

- “In my landscape one is to be able to go out and take a nice morning walk without garbage lying everywhere. The animals have a good life. One is able to swim in a river without getting stuck in a plastic bag. I think it should look like this in the future. A squirrel should not die because of a man throws a chewing gum” (FI girl, 6th grade, B).
- “The countryside cottage which I often visit in summer.” (vegetable garden in the drawing) (FI girl, 8th grade, B).
- “The downhill skiing area in a beautiful forest landscape” (several people doing downhill skiing with the drawer at the front of the picture looking at the others) (FI boy, 7th grade, F).
- “My landscape represents forest, humanity, vegetation, animals, knowledge, place to live, food and love. The globe and life on earth should be fine” (FI girl, 8th grade, B).
- “My future landscape” (country landscape, people working in the fields with different kinds of equipment, roads, a city with buildings, sea or lake with many people swimming and sunbathing) (FI boy, 8th grade, B).

In the social landscapes, human beings were drawn in an active relation (e.g., people doing something in the environment such as fishing) to the environment and they represented the so called “good world” (cf. [23]). for both Finnish and Swedish girls and boys. In addition to social activities, hobbies, images of places that the drawings and texts represented, future dreams were drawn. These included space travels or going to the summer cottages in summer.

5. Discussion

This qualitative study focused on Finnish and Swedish children’s and adolescents’ drawn landscape experiences with the aim to find out what landscapes the students deemed worth conserving. Their drawings were studied using deductive and inductive content analysis methods.

The first research question concerned the range of landscape types presented in the drawings of the students. The results showed that all the analysed types, nature, built and social landscapes, occurred in the data. The result is in harmony with the previous studies on landscapes drawn by a group of Russian and Finnish 7- to 16-year-olds [6] and by Nepalese and Swedish 7- to 8-year-old children [8]. The built landscapes were more often drawn by boys than girls in both countries. Built and social landscapes were often *clearly connected to the nature* [18], and in several drawings both nature and built landscapes were illustrated, with the nature landscape gradually altering to built and social environments (cf. [21]). These findings support other studies on drawings of the Finnish, Russian and Australian students [6,8]. The findings are also in harmony with *the classical concept of the landscape*, which consists of nature and built environments [13].

The drawings showed that the borderline between nature and built landscapes is gradually disappearing in the drawn pictures of the students [21,38]. As in earlier studies of Finnish young people [21] and of Finnish and Russian students [5,6], social landscapes were described in this study. The human being in the social landscapes indicated the close relationship of man and the environment, which is a central idea in human geography [43]. The present study confirmed this relationship for the Swedish students’ landscape perceptions, too.

With the drawers’ increasing age and educational experience, the drawings of nature landscapes with prevailing features of the water, forest, trees and the sun were enriched and detailed and turned to built landscapes, often to “cultural landscapes”. The advanced level of cognitive development may have turned the drawings of the older adolescents to be less concrete, more artistic and adult like.

The second research question focused on the students’ relationship to their own landscapes. Both the Finnish and Swedish students had drawn themselves as observers (looking at the environment), or as active participants (having an active role in their landscapes) or as people living in the environment (taking responsibility for it). These observations of drawn landscapes clearly reflected a combination of the definitions [4,12], and the result is in line with the findings of the previous studies concerning

Russian and Finnish students' drawings [5,21]. Environmental responsibility was reflected in the drawings or commented on in writing by the Swedish adolescents in particular.

The third research question asked what the drawings revealed about the personal experiences of the landscapes that the students wanted to conserve. Forests and water were most often included in the drawings of the Finnish and the Swedish students, which is understandable, as forests, rivers, lakes and the sea are easily reached by people in both countries. The result is in line with the previous studies [44]. Nature, classical landscapes, city/town, summer cottages, one's own house/own nest, sports and holiday landscapes were also described in the students' drawings. Nature landscapes were presented most often as landscapes worth conserving, a finding in line with Yli-Panula, Grönlund, and Eloranta (2012) [8]. As natural landscapes were more frequently valued in the adolescents' than the younger students' data, it may be that school-based outdoor activities have had an effect on students' memories (Chawla, 1999) [45]. The adolescents, more than the younger students, have been involved in environmental education conducted at schools. Both in Finland and in Sweden, environmental education and outdoor education are emphasized in the curricula [46–48].

Built landscapes were also seen as important, more often by the boys than the girls in both countries. A difference was that some of the Finnish students drew summer cottages but the Swedish students did not. This may be due to a Finnish cultural feature: Finnish families often have summer cottages, which provide opportunities for outdoor activities. Another cultural difference was the Finnish drawers' tendency to value silence and solitude in the favoured environment. The observed categories correspond to those reported in previous studies. Places such as homeplace and active places [48], restorative places such as sports/playgrounds settings [29], and places with significance or emotional memories, such as special holidays, were valued and considered worth conserving [49]. In these landscapes, children and adolescents have traditionally enjoyed their activities, and nature has been an inspiring source for their creation [25]. The built environment was represented by many students as "cultural landscapes" and man was drawn in harmony with the social landscapes. The drawn landscapes clearly showed views which the adolescents had seen and experienced (visual realism).

As far as the validity of the study is concerned, it was found that the drawing task was not easy for every student. Some students drew spontaneously on the paper what the concept of landscape brought into their mind. The resulting drawings represented stereotypical landscapes and were very meagre in content. Such simple landscapes were drawn by several students in the same classroom and represented the schematic stage of the drawer [21]. This was evident in some of the Finnish and the Swedish boys' drawings describing their activities on football playgrounds, for example. To draw one's favoured landscape is no easy task in the sense that it requires the control of at least two demanding cognitive processes, namely, selecting a memory of a valuable landscape among the (visual) memories in the existing knowledge storage, focusing on the visualization and reproducing the image on paper.

6. Conclusions and Implications

Children explore their environment through experiences. Some of the students had taken the role of an observer in drawing the landscapes while others showed an active relation to the environment. Increase of nature landscape drawings with increasing age of the students shows that the task to build up an image of a valuable landscape worth conserving, and at the same time to draw a picture, require development of cognitive processes. These cognitive processes are based both on the knowledge and on the observations that students make in the environment. Therefore, it is important to visit the school surroundings during school days to study their role and possibilities to conserve their landscape and living there in a responsible way. The message for landscape planning is to create or survive multifaceted landscapes and green areas for children and adolescent to experience.

The social landscapes described in this study and the human being in these social landscapes indicated a relationship of man and the environment, which is a core idea in human geography. The drawings showed that the borderline between nature and built landscapes is gradually disappearing.

The built environment was represented in many cases as a “cultural landscape”, and man was drawn in harmony with the landscape in the social landscapes. The drawn landscapes illustrated views which the students had seen and experienced (visual realism).

To sum up, based on our research it seems that especially the nature but also the built environments are seen valuable to be conserved by the students in both countries. The social environment was not as often described. The natural and cultural heritages were not taken into account, although they play an important role in human development as a repository of knowledge, driver of economic growth, symbolic force for stability and conveyor of meaning. Their diversity and different forms should be emphasized more in teaching and learning processes because they are valuable common goods not only for creative innovation, well-being, dialogue, employment, income generation, reconciliation but also for sustainability [50].

To be able to provide a rich and versatile set of experiences of different environments to all students, in particular to those who have limited access to nature, it might be helpful to design virtual platforms with examples (films, pictures) of different kinds of landscapes, also environments that are more distant and unreachable, invite students to explore them, and help them to understand the concept of the landscape and the reasons why conserving nature for future generations is of prime importance.

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