

In what ways do different sources of ancient rock art utilized by educators as educational resources, make a positive contribution towards children's education and development when adapted as a resource for identity building?

Introduction

There are many types of rock art, which is a global phenomenon. In connection with rock art in Scandinavia, this research paper aims to bring into focus the discovery of new types of a contemporary rock art sites in Finland, as well as examining the reuse of prehistoric rock carvings in education in northern Norway and educating children about prehistoric rock paintings in northern Finland. Currently, rock art locations are classified as sacred sites and many of these are under threat because of vandalism (See Joy 2015a).

The collection of data consists of interview materials collected through communication with educators from different backgrounds as well as photographs. These were compiled between 2012 and 2021. In addition, correspondence with Västerbotten Museum in Umeå, Sweden in 2012 concerning rock art exhibitions opened up another important channel of communication in relation to gaining insight and understanding into the work the museum does with school children. The research and correspondence in northern Norway concern the Alta Museum in Finnmark, which is a UNESCO World Heritage Center for rock carvings. The center also runs educational courses for children.

The motivation for engaging with these subject matters concerns how in Finland, there is very little regarding education resources in mainstream education about the aforementioned ancient sources of art, given how each municipality has its own teaching curriculum and the majority of rock art sites are located south of the Arctic Circle.

Scandinavia has an enormous number of rock art locations dating from prehistory up until the beginning of the common era and many of the oldest ones are located close to lakes (Finland) and the Arctic Ocean (Northern Norway). Research concerning the dating of prehistoric rock paintings in Finland has from within the field of archaeology place the art between "ca. 5000-1500cal. BC" (Lahelma 2005, 29). Whereas, in northern Norway there are so many rock carvings, there are different chronologies for these. In the far north there are variations in dating between "5200BC and 100AD" (Gjerde 2010 & Helskog 1988; 1999,

2014).

In Finland, many of the works of art are located at the edges of the lakes and waterways throughout the central and southern areas of the country, the majority being around the Saimaa and Pajanne Lake regions. The close proximity of water indicates that it has played a significant role in what could be described as place specific art. The largest rock art sites of Astuvansalmi in Ristiina; Värrikallio (Hossa) in northern Karelia and Saraakallio in Jyväskylä, have become major tourist attractions.

The content of many pre-historic rock art sites depicts diverse dimensions of the traces of a magico-religious tradition in which cosmology, shamanism and ritualistic behavior has been widespread in relation to spiritual practices and other contexts related to trance, dancing and flying, for example. Some of the most outstanding features of the aforementioned in terms of spiritual practices are portrayed through the shamans' out-of-body experiences in the spiritual worlds where interactions between human beings, animals and spirits have taken place. There are also cosmological structures such as boats, suggesting spiritual traveling. In addition, hand prints as signatures and moose, reindeer, and snakes are other animals located within painted landscapes, which characterize human-animal relationships in connection with the shamans helping spirits, which might indicate the classification of certain animal species in relation to oral tradition and hunting myths (astral mythology).

Primeval rock paintings in Finland present some of the most interesting as well as highly controversial traces of ancient history due to questions concerning their cultural origins. Research in Finland (see for example: Nunez 1994, Lahelma 2008; Joy 2013 and 2018), has sought to clarify the cultural context of the prehistoric rock paintings in Finland between the predecessors of the Sami, and the Finns [i]. Presently it has been estimated that to date,

“the total number of sites is 142. Number of prehistoric sites is 122. Locations with identifiable figures is 103. Locations with no identifiable figures is 19. Paintings with controversial dating is 12. Painted locations with uncertainty are 8” Luukkonen (1994-2020). [There are 5 identifiable themes and these are dance, flying, boats, horned figures and the X-symbol].



Figure 1. A portrait of the painted stone panel at Värrikallio which is located in northern Karelia. The images have been painted using red ochre, and show the scene from a ritualistic event, where the human, animal and triangular headed spirit figures are dancing in what could be a type of shamanistic ceremony. Photograph and copyright, Francis Joy 2006.

Also, and according to Lahelma (2005: 34), “[...] shamanism is a central element of both Finnish and Saami pre-Christian religion, and indeed is present in some form in the entire area populated by Finno-Ugric peoples, extending well into Siberia”.

There has been a fair amount of ambiguity and conflict among scholars in Finland as to the possible origins of rock art. Some of the earliest commentaries are presented below in connection with the nature of the controversy regarding Sámi culture and possible links to the rock painting tradition in Finland, this is explained in detail by Lahelma (2007: 121).

"[...] Finns, Karelians and Saami can all be seen as 'descendent communities' (to borrow a term used by Cunningham, (2003) of Subneolithic Comb Ware populations is today considered probably the most by archaeologists, geneticists and linguists alike (e.g. various authors in Fogelberg 1999 and Pesonen & Westermarck 2003). This view of Finnish prehistory, which because the dominant paradigm in the course of the 1980s, replaced an earlier theory that posited a relatively late (Early Iron Age) migration of Finnish speakers that would have replaced an indigenous Saami population (e.g. Kivikoski 1967). Some critical voices have been raised against the 'continuity theory', as it is known in Finnish archaeology. For example, Fewster (1999) a political motivation behind the post-World War II shift from migration theories towards a notion of 'eternal Finnishness, and as Ante and Aslak Aikio (2001) point out that the archaeological continuity does not necessitate a linguistic or 'cultural' continuity as far back as the Subneolithic. [...] But it should be noted that even its critics tend to agree that in the light of the present knowledge the notion of continuity remains the most likely option (e.g. Aikio & Aikio 2001: 14).

However, and from more recent research Finnish archaeologist Lahelma (2012: 18), states that:

"during the four decades that have passed since Luho wrote his text lots of new material has been accumulated. Even if there is a lot of fundamental uncertainty and open questions concerning interpretation, dating and the language history of the Finnish area, I want to be a little braver than Luho and claim, that the iconography of the rock paintings and the rituals that are connected to the painted locations, there is a clear recognisable Sámi element. It does not mean that the paintings would literally have been made by Sámi people, since the Sámi ethnicity can hardly be extended to the Stone Age. However, it has turned out that at least in the northern parts of Fennoscandia the rock picture tradition and/or the ritual action that are connected to it has been going on (only exclusively) in the Sámi context from historical time, it is very likely, that the creators of the Finnish rock paintings have been in some way "genetically" related with the Sámi people of historical time.

The rock art of the Sámi culture in historical time was clearly fading and an esoteric tradition, which has not left no signs in literal sources. The number of sites is small and they seem by character to be marginal, but their geographical dispersion is so large, that creating the rock pictures must have been a phenomenon organically connected to the Sámi

culture. From the position of research, its existence is an important observation, because it makes a direct historical approach possible within the interpretation of rock paintings". (Translated from Finnish to English by Linda Granfors 2015).

At the Alta site in Finnmark northern Norway, Norwegian scholar Knut Helskog (1987: 92) states in relation to the rock carvings found on the coastal area by the sea, how:

"they all connect in the shore zone, and within the zone where all worlds of spirits, humans and nature connect, we find strong liminal places. Certain areas are chosen as places where stories of life, events of the worlds are depicted and rituals connected. The carvings signify such places. In this sense the shores with the carvings are liminal places where people, through rituals, connect with the spirits to appease them, to seek information, to secure the transition between stages in human life and in nature, and to connect with the souls of the dead; i.e. many of those ideas that are described in the ethnographic record. This could be why the rock carvings are located in the shore area".

What makes the historical background of both of these sites interesting is that the ancestors of the Sámi people have had settlement areas, previously. However, and in the case of Alta, Finnmark, there are still many Sámi people living in the region.



Figure 2. Rock carvings at the Alta site Finnmark, depicts reindeer, moose, bears and humans. Photograph and copyright, Francis Joy 2016.

In connection with the importance of the rock art at Alta Museum it is likewise, beneficial to understand the following points.

“The rock carvings in Alta constitute the largest known collection of rock carvings in northern Europe. They are included in UNESCO’s World Heritage List, which comprises ancient monuments particularly deserving of preservation in international terms. In Alta in north Norway, rock carvings were made in Jiepmaluokta (Hjemmeluft), in Bossekop, Amtmannsnes and Kåffjord. In addition, rock paintings have been found in Transfarelv. Jiepmaluokta is the largest site with at least between 1,500 and 2,000 carvings.” (Sveen

1996:7).

Aims of the research and method used

The main aims of the research have three dimensions to them. The first is concerned with visibility and what kind of understandings can be drawn from the values attached to ancient traditions and practices related to making rock art that are living expressions of cultural heritage and in what ways these are utilized as an educational resource in contemporary settings. The second aim is to demonstrate within the context of the research to better understand by what means rock art landscapes inspire and help facilitate place-based learning within different educational settings for children. The third aim is to assess how using rock art as an educational resource has been contributory in helping to facilitate the development of various narratives that are intimately connected with building a sense of identity through reshaping the past in different environments and how this is undertaken as seen presented in the four different contexts below.

I have chosen Vilma Hänninen's narrative approach as a framework for application of the research method regarding the analysis of the materials. In this case, it has value through its implementation, given that it works rather well when combining both scholarly and artistic material together. For instance, we see its "[...] ability to bring together various disciplines, [and cultures] as well as bridge the gap between science and art" (Hänninen 2004: 69). This helps give the participants a voice and equal representation that is supported with textual and artistic data in connection with both their experience as educators and also how ancient narratives connected with symbolism is being reused to teach and inspire children in their educational development. In essence, the stories and material collected are deeply embedded in both personal and collective narratives and therefore, the narrative approach "[...] is a primary way of organizing and giving coherence to [...] experience" (Hänninen 2004: 71) especially in relation to identity building.

It should likewise, be added that within this research paper, the approach used likewise, aims to illustrate in what ways "the study of heritage in local context values history as a learning living source, facilitates the understanding of historical concepts and helps to understand the world in which we live, contributing to the multiple understanding of history and to the building of the three pillars of history education: History-Memory-Identity"

Magro, de Carvalho and Marcelina (2014: 34).

In addition, I have also utilized the indigenous research approach to the material because part of the research and data includes an interview with a Sámi educator at a school in Tromsø, Norway, who uses Sámi cultural heritage to teach children about their history, culture and spiritual practices. Furthermore, included in the research also is photographic materials and textual data from a Sámi artist Hans Ragner Mathisen; (Elle-Hánsa is his Sámi name), regarding his teaching to children at the school, which provides an interesting example of how traditional cultural knowledge is transmitted. In addition, implementation of the method also provides insight into how sharing knowledge through cultural narratives, and teaching to Sámi children in an educational setting could be understood as a beneficial method that “[...] present[s] an opportunity to work through the legacies of colonialism in the art history of remote [...] [Sámi] artists” Jorgensen (2013: 77).

Furthermore, the approach I have used is something new in terms of building up a field of study into the reuse of cultural heritage and both the sharing and document of Sámi traditional knowledge in this way. Typically, in academic research, these activities usually take place among adults in the academic world. Therefore, given the fact the data collected within the context of research in Tromsø also comes from children is something new. Equally, and in accordance with the ethical guidelines for the documentation of Sámi traditional knowledge, I have adhered to commentary by Sámi scholar Åsa Nordin Jonsson and her research paper: Ethical Guidelines for the Documentation of Árbiediehtu, Sami Traditional Knowledge (2011).

Jonsson repeatedly emphasizes documentation of traditional knowledge needs to be done in such a way that it: “[...] ensure[s] that indigenous peoples are no longer exploited [...]” Nordin Jonsson (2011: 102).

To further compliment this approach the collection of data likewise, reflects in what ways the artistic materials that have been photographed demonstrate how: “indigenous knowledge is therefore holistic; deeply related to land, stories and ancestors where the past is made manifest in life within the local environment, family or even through the connections of past, present and future” WINHEC (2009: 7).

The data collected from interviews in Swedish and Norwegian Sápmi was published in part, earlier in 2015 and titled, *The Absence of Sámi History and Cultural Heritage in Children's Education in Finland*. I have combined it together here with the more recent data about the reuse of rock art in children's education in Finland because it makes a worthwhile contribution to help extend this present study.

New rock paintings in Tampere and a case study of educational development in relation to this

In the summer of 2013, I was walking with a friend in Hikivuori Park by Lake Kaukajärvi, on the outskirts of the city of Tampere in central Finland, when an extensive natural rock formation became visible with what looked like from a distance, traces of red paint on various levels of stone surfaces in certain areas.

On closer observation, what we had encountered were a series of modern-day rock art forms, which had at some time in the past been painted over a large area at the base of hill. Further investigation the same evening and the following day also revealed more paintings were visible on various separated boulder formations which have since the end of the last Ice Age fallen away from the side of the hill and come to rest at the base.

What made the find at Hikivuori interesting by comparison to Stone Age rock paintings was Hikivuori is close to earlier Iron Age dwellings where a number of artifacts from graves were discovered in Vilusharju, in Haihara which include tools and personal items.

At the present time, there are no other rock paintings recorded in the area. The selection processes of choosing a series of extensive flat stone surfaces on which to paint demonstrates how artists have favored large boulder formations and vertical rock panels because they provided the relevant medium for expression and necessary surface requirements needed in order to apply the art. Many of the Stone Age rock painting sites in Finland also bear similar vertical and horizontal stone surfaces that have been painted. The chosen location for paintings at Hikivuori is also significant because the images had been created using the traditional substance of red ochre, which is a sacred mixture and pigment extracted from iron ore, which is used in ritual art for preservation purposes, and as noted above, is also found in the Stone Age art in Finland.

In a much wider sense, the application of the red colour to stone is somewhat typical of traditional artistic methods, techniques and practices used at sites that were painted at many other prehistoric rock art locations throughout the Nordic countries. At the Hikivuori site there appeared to be other substances used as well, and what looked like red aerosol paint in certain areas used to create some of the modern and more recent images, which are presented below, thus demonstrating that different paintings have been made at different times.

On the initial discovery of the images and their content, and because they were so varied it was difficult to draw any clear conclusions regarding possible origins or dating. Moreover, many of the images looked as if they have been created within recent years because of the freshness of the colour and the fact that some were faded whilst other paintings were not. Additional complexity which was encountered during the initial discovery, assessment and clarification of the images was due to the presence of graffiti. Moreover, in some cases, it was difficult to be able to ascertain which images were painted as rock paintings from those that looked like graffiti.

The paintings were spread out over a wide area, the majority being on the actual hillside, and other ones located on several of the boulder formations at the foot of the hill. Because of the contrast of several of the images which were faded and covered with lichen, as well as ones which had a deeper, red colour to them; initial indicators suggested the faded ones were older paintings.

At least 6 of the painted images in one place were well preserved because they were protected from the rain. Furthermore, erosion was also evident in some images in the areas where metal pegs had been hammered into the vertical rock face. The metal pegs illustrate how the area has been a popular location for rock climbers.

As a method to try and establish a more comprehensive understanding of both the content and age of the paintings, I invited Finnish rock painting's photographer and specialist Ismo Luukkonen to view the paintings for his expertise on the subject. Luukkonen, who has photographed all the rock paintings in Finland, visited the site on Monday August 2nd. During a second investigation of the paintings, each image was photographed and documented. A general consensus was reached that most if not all the paintings were

modern ones; however, it was not clear exactly how old the images which were faded were.

In addition to the research at the site with Ismo Luukkonen to try and establish a foundation for dating, contact was also made with Ulla Lähdesmäki at the Vappriikki (Pirkanmaa Provincial) Museum in Tampere who is an archaeologist working for the protection and research Unit of the Cultural Environment. Following a brief appointment with Ulla, we decided to meet at the site on August 8th 2013, with two journalists from the Aamulehti which is Tampere's local newspaper because the discovery of the work paintings had been reported by the museum and drawn the media's interest.

At 13.00 on August 8th the group met and carried out a further assessment of the paintings on the side of the hill in the Hikivuori Park area. Each image was photographed and documented by Ulla Lähdesmäki and Kreeta Lessel from the Museum. Addition photographs were taken by Aamulehti photographer Jukka Vuokola, and the journalist Lauri Pajuoja who captured the story related to the discovery of the paintings.



Figure 3. Francis Joy and Ulla Lähdesmäki examine several symbols including a swastika which are painted on a large boulder at the Hikivuori site. Photograph and copyright Aamulehti 2013.

Encountering the different symbols

In one particular area, two symbols that were recognizable had been painted using red ochre on the inner side of a rock: boulder A leaning against a much larger boulder: boulder B. Boulders A and B are located approximately one meter from the hill. The symbols on boulder A are not immediately visible from around the perimeter of the area, but on the inner side of boulder A which is smaller than B and leaning on its right side, is the painting of a swastika. The swastika is a magical symbol known to have a possible origin dating back to the Iron Age in Finland[1]. A second symbol in close proximity on boulder A is painted as a square which has a cross inside it and four pointers around the outside, which look like 'Y'

shapes.

Each shape has been painted in such a way they give an impression of a possible correspondence with the four cardinal points of: north, east, south and west, and could be representative of a type of solar or lunar symbol, in a similar fashion to how a ritualized structure would indicate the four quarters-directions for example on a ceremonial drum or circle.

The significance of both the unusual shape and size of boulder B appears reminiscent of a Seita sacrificial stone or pinnacle. Seita sacrificial stones are sometimes evident in rock painting areas, and in some cases have paintings on them. Occasionally, their anthropomorphic or zoomorphic features can reflect human or animal profiles which were sacrificed to as spirits that dwelt within the landscape. Boulder B has a long vertical tapered end pointing towards the sky, and the surface is decorated extensively with transverse lines which contain quartz patterns. Quartz seams as such are likewise, evident on Seita stones.

Several paintings are evident on boulder B as well, and two of these red markings resemble triangular shapes indicative of pointers or almost pyramid type structures. The uppermost symbol is pointing towards the sky and the lower one towards the earth. What makes this interesting in terms of shamanism and cosmology is Seita stones may have in certain circumstances been considered to be representative of a vertical axis which connects the upper world with the earthly realm, thus demonstrating the connection between the two in cosmological terms. However, the only person who knows the truth behind this meaning is the person who created the symbols.



Figure 4. Top left is boulder B which is a large upright pointed rock standing out from the base of Hikivuori hill. The top-centre photograph demonstrates how faint painted images can be seen on the front surface. Top right is the smaller boulder A, which lies against the side of B. On the inside of A are several paintings, including a swastika. Bottom left is a close-up of the Swastika symbol. The photograph on the bottom right shows a square symbol with a cross in the middle, which is linked together by four 'Y' shaped points which look like metaphors representing the four cardinal points of the cosmos. Photographs and copyright Francis Joy 2013.

Because very little information has been written about the use of magical symbols in Finland from the Iron Age, I contacted Raila Kataja who is an ethnographer at the National Museum of Finland in Helsinki to see if it was possible to ascertain information about the swastika, as

I had seen one there exhibited some years previously from the Middle Age period. Raila was able to supply me the following information, which she kindly translated from Finnish to English from an excerpt taken from Sulo Haltsonen's book: *Suomalaisista taikamerkeistä - Kansatieteellinen tutkielma*, (an ethological dissertation about Finnish magical symbols) (1937) and here is a short translation of what Haltsonen says about the swastika:

"The most common of the Finnish magical symbols has been the cross and the pentagram (svastika seen as one form of a cross). The swastika has been very well known in Finland and it has been used as both a magical symbol and as a signature. It has been used here since the Iron Age and in the Middle Ages it was a common symbol in the ecclesiastical murals and equipment's. It has also been widely used in Sweden, and in Estonia (as in Finland) it was also used in textiles. As a protective sign swastika was carved to e.g. cowsheds and stables to protect cattle and horses" (Haltsonen 1937: 69-71; Kataja 2013: 1).

In its original blue colour, the swastika symbol was used by the Finnish Airforce from 1918 to the end of the Second World war, when it was then only accustomed in the Airforce's official emblem, as well as on their uniforms up until 2020 when the decision to discontinue it was made.

I also sent Raila a photograph of the second symbol which looked like a type or metaphor indicative of the four cardinal points. The symbol was unknown to her.

Approximately three meters to the right of the boulders A and B is a grotto which is like a tunnel that goes below the surface of the earth. Inside the hole is a space large enough to fit several persons. The grotto is at the base of the hill which extends under the earth, where a circular symbol is found painted on the stone surface. It was difficult to tell the age of this painting because the surface on which it had been painted was wet, but the brightness of the colour suggests it is quite modern. Cave paintings in Finland are very rare.



Figure 5. Top, a red circle in a grotto beneath the earth. In the middle and several meters to the left of the large horizontal boulder are two animal images one which is mostly faded is reminiscent of a dog. Bottom, is an image of a horse or dragon, which looks like a type of heraldic symbol painted on one of the boulders at the base of Hikivuori hill. Evidence of the painting being made recently is seen not only through the freshness and colour of the image but also how the lichen has been scraped away before it was painted. Photographs and copyright Francis Joy 2013.

How the past influences the present in relation to children's education and creation of rock paintings

On Wednesday August 14th 2013, Tampere's local newspaper Aamulehti published an article explaining the discovery of the rock paintings and the mystery behind their creation. On the 15th of August, Marja-Leena Puroanniemi who works as an art teacher at the Sara

Hilden Art Academy of Tampere, and who lives in the close to Lake Kaukajärvi, near to where the rock paintings are, contacted Ulla Lähdesmäki by email. Marja-Leena informed Ulla of her involvement in the creation of the art at the Hikivuori site.

On August 29th 2013, to try and unravel some of the facts and information behind the art, I conducted a telephone interview with Marja-Leena Puronniemi with regard to her involvement in the creation of the rock paintings, who explained the following. "When I was a twenty-year-old art student teacher at the University of Jyväskylä, my art teacher was Pekka Kivikäs who gave me strong inspiration for art" (Puronniemi 2013: 1).

Pekka Kivikäs is one of Finland foremost researchers and early pioneers into rock paintings. Now, a retired art teacher living in Jyväskylä, Kivikäs has written and published extensively through a variety of different book titles which include: *Kalliomaalaukset: Muinainen Kuva Arkisto* (Paintings on Rock: An Ancient Picture Archive, 1995); *Saraakallio* (1990), and *Kallio, Maisema Ja Kalliomaalaus (Rocks, Landscapes and Rock Paintings)*, 2005).

Marja-Leena has created new types of rock paintings on two different occasions at the Hikivuori site, using "brushes and fingers" Puronniemi (2013: 2). The first time was "nineteen years ago where her youngest son visited and made paintings with his school teacher and class mates, from a school in Kaukajärvi" Puronniemi (2013: 1). On this occasion a picture of "the family dog was painted on the rock (as seen depicted in figure 5 above).

"The second visit was approximately ten years ago with a group of six and seven-year-old children from the Sara Hilden Art Academy in Tampere. The substances which were used for painting were earth pigments including red ochre mixed with glue. Prior to the visits to the site I had spoken with the children about the work of Pekka Kivikäs with regard to the old prehistoric rock paintings in Finland, and had presented different photographic material of Finland's rock painting to the class, as well as pictures from the Lascaux cave paintings in France. The reason for creating the rock paintings was because the approach was one of the ways to understand Finnish history by using the same methods employed thousands of years ago by the hunters. The overall task was to illustrate what rock paintings were, and how they had been created, including the themes of shamanism." (Puronniemi 2013: 1).

When questioned about the creation of the swastika and other symbol on the tall narrow boulder, Puronniemi (2013: 1) replied that “the swastika was not her work, and that she never noticed old or original paintings on Hikivuori”. The same response was given regarding the painting in the grotto as well.

Further information from Puronniemi also revealed that “two years ago, a group of children who were on a summer course from Haihara Art Center in Tampere, also made paintings at Hikivuori, which was part of an art project.

To follow on from what had been learned regarding the creation of the new rock paintings at the Hikivuori site with regard to cultural history and the significance or possible value of such material, I contacted archaeologist Ulla Lähdesmäki at the Pirkanmaa Provincial Museum in Tampere again to ask her opinion regarding the paintings status as new art forms. Lähdesmäki responded by stating that:

“The question about the value is interesting. Without any particularly profound reflection I can briefly say, that the age is not the only criteria when thinking about the relevance or value of such places that are considered archaeologically meaningful. [...] This Hikivuori site bears meaning and relevance at least as a place where ancient painting techniques and methods and “set up or surroundings” has been experimented by modern people, wanting to have some kind of connection to the past or to the knowledge we have about the rock paintings and their world. To my mind the paintings should not grow important as examples of Stone Age culture and creativity since they are obviously not from that period of the past. However, they do bear significance to the area, the bedrock and large stone boulders with their characteristics is definitely in the area and people know the place and possibly visit it because of the geological features of the nature. The art school has chosen the place because of its characteristics. The modern painting makes a new “layer” to the site. But I feel it important to make people understand that they need to make a difference between a legally protected site with ancient paintings and sites with modern paintings – it is also interesting that such sites may become later, when time goes by, archaeologically classified and even protected” Lähdesmäki (2013: 1).

Children's stone painting workshops at the Kierikki Stone Age Center, II and the important role cultural history plays in making art and educating children

As a way of further investigating activities in connection with children and rock art in Finland, in the summer of 2020 I conducted an interview with Leena Lehtinen at the Pohjois Pohjanmaa Museum in the city of Oulu. I had met Lehtinen in 2019 during a visit to the Kierikki Stone Age Centre Oulu Museum and Science Centre, located in the municipality of Il, which is a coastal area north from the city of Oulu when visiting an old time market there. Lehtinen is the curator of the place. One of the museums attractions during the market is the stone painting workshops held for children. What was revealed about different events that take place there were described in the following ways.

“Each summer a Stone Age market is held in the functional Stone Age village, the structures of which, are made from wood, birch-bark and clay. These dwellings reflect the lives and livelihoods of the ancient Finns as hunters, fishers and trappers, a location, which is on the shore of the Baltic Sea, within the centre’s grounds. “Lehtinen has been working at the centre for twenty years” Lehtinen (2020: 1).

I had to try and make-a-plan when engaging with the children and parents at the Kierikki in such a way it would not disturb what they were doing by asking questions because the children did not speak any English as well as some of the parents. Therefore, as an approach to conducting the fieldwork I spoke to Eveliina Jantti, who was one of the helpers-supervisors involved in the organization of the rock painting workshops if she could explain to me how the work and supervision she was offering at the center helped to benefit the children in terms of their education and learning and in addition, how parents have responded to what is being taught to children. Therefore, and furthermore, in relation to the interview material collected from Lehtinen, there is a contribution from Jantti as well.

I had decided that for this first fieldwork excursion, the strategy would be to interview only the organizers. However, based on how the results of this approach worked, it would for the future allow me to plan to focus on using a translator to communicate with the participants and their parents as a proposal for a further visit when possible.



Figure 6. Top left, Leena Lehtinen presents two laminated A4 sheets that have different symbols, figures and landscapes printed onto them, which are used as templates for educating children about rock paintings in Finland. The red ochre is the traditional colour used in rock paintings in Finland. Top right, different scenes featuring human figures dancing, flying as well as boats, animals and a net-shaped structure from rock painting locations in Finland; practices that are linked with shamanism and out-of-body travel. Bottom left, a variation of figures, symbolism and landscapes likewise, associated with shamanism and spiritual travel are depicted in this template in black and white. Bottom right, the working area outside at the Kierikki Stone Age Centre, Il, depicts different types of painted stones made by children and a painted template from which they copy or take ideas from. Photographs and copyright Francis Joy 2019.

During the meeting with Lehtinen, I asked a series of questions as a method to better understand and gain insight into the roles and functions ancient prehistoric rock paintings in Finland play in connection with the education of children. The questions and interview materials are presented below, beginning with information about her own interests and inspiration behind the formulation of workshops and other activities. The first question to Lehtinen was concerned with how did the idea originate to teach children about rock art in Finland? Lehtinen responded as follows.

“My hobby has been to study rock art throughout the world for the past thirty years. With a group of friends’, we have travelled to visit rock art sites. There is a special place called Virukoda in Estonia, which is about 100km east from Tallinn and there is an artist’s place where there have been exhibitions about rock art collected by scholars. Väino Poikalainen is a retired professor who has written extensively about rock art around Lake Onega. He lives in Tartu, and owns half of Virukoda, which is an old shop from the Soviet times. Erkki Suonio was another partner involved in the preservation and research into rock art. He was Finnish but he moved to Estonia.

A group of retired friends have been working in the Finnish society of Rock Art. They are also involved in the preservation of the Virukoda centre and it is a place we want to use to educate children. They want to save the location.

About 10 years ago we had one rock art painting made from egg white and red ochre by an artist called Hanni Haapaniemi, who living in Haukipudas, she used barbecue sticks at Kierikki Stone Age market to apply the mixture to stones, which gave me the idea to use this simple method to educate children. During the summer time when the museum is open, we teach this to children in the village outside. We buy the red ochre from the internet and mix it with egg white because it makes the mixture more fluid when mixed with water and this can be used for painting stones with, which are collected from a gravel pit. So, this takes place each summer for about the past 10 years” Lehtinen (2020: 1).

To follow, I asked Lehtinen if she could provide insight and understanding as to how the stone-painting workshops have helped enhance education regarding local history and traditions, and why are these important?

“The Hossa rock paintings at Värrikallio shows the shaman dressed with horns and in a wolf skin as well as those triangular headed figures wearing masks are important because the shamans of the Stone Age have been artists. We can get information about people from the Stone Age from rock paintings, looking for the soul of the artistic peoples from very early on. Today, within nomadic cultures, their artists still make rock paintings” Lehtinen (2020: 2).

I then asked Lehtinen how long have the Stone Age markets been running for? “From 2004” Lehtinen (2020: 2).



Figure 7. Top left, student Eveliina Jantti dressed in Stone Age attire helps facilitate the children's stone painting workshops. Top right, a mother with children focussed on painting

small stones using wooden sticks. Bottom left, two older children create interesting landscapes using in this case pieces of flat stones in order to paint on. Bottom right, small rock is been painted on different sides depicting an X symbol, moose, boat and water bird, which are all figures depicted in prehistoric rock paintings in Finland. Photographs and copyright Francis Joy 2019.

Upon gaining comprehension regarding the origins of Lehtinen's ideas for harnessing ancient history and the methods used for turning these into stories and educational resources, she then went on to further describe some of the aims of what she hoped to achieve.

"The main aims of the painting work are to let children have fun and also let what they are doing reflect the ancient spiritual traditions in Finland, which are associated with shamanism, from the Stone Age era. Especially painting boats, as there are questions attached to them as to whether or not these are actual boats or mythical ones. Very many ask where can they buy ochre so they can paint when they go home. The educational aims are to help children learn how artistic the Stone Age people were living and their beliefs. Also, their skills in hunting, and using skins for clothes as well as tendons for fastening skins and structures that made furniture such as beds and internal structures in the dwelling place. How boats were made from tree trunks, (Kyppi) maps of rock painting locations in Finland. It is not planned as a formal educational program but as something informal" Lehtinen (2020: 1).



Figure 8. Top, parents watch over the children whilst they experiment with red ochre and its application to different sized stones. Center, two children use different techniques for painting. The girl on the left is using her fingers whilst the boy uses a wooden barbecue stick. Bottom, two finished pieces lay in the sun to dry. Photographs and copyright Francis Joy 2019.

“The children for example, come from Oulu and the projects they paint a couple of stones based on rock paintings but also, they can make paintings of things they like. The ochre will last for 6-7 years even if they have been under the snow. The egg-white helps preserve the paintings. We have adult artists who come and work in the summer, who facilitate the paintings events, some are high-school students going to University whilst others can be University students. They are employed for the summer months” Lehtinen (2020: 1).



Figure 9. Top left, an ancient boat and sun symbol are evident in this case. Top right, different patterns, figures and designs painted onto a variety of shaped stones, which are left to dry. Bottom left, presents stones with both rough and smooth surfaces that have been painted with a range of symbols, seen here drying. Bottom right, images of reindeer are evident as is a spirit figure among these examples. Photographs and copyright Francis Joy 2019.

With further reference to interviewing Eveliina Jantti about her role in helping to supervise the work the children and their parents were doing, I asked her if she could explain to me some of the benefits and aims of facilitating this type of educational approach to using both ancient history as a resource and some of the aims and outcomes by doing so. Jantti responded in the following way.

"I would say this type of education through activities and a variety of different methods overall encourages children to see learning as a possibility for an exciting experience. It also develops self-knowledge to explore new ways to learn. Educating about history also benefits children to understand the surrounding environment and supports creativity.

In addition, the content of what is offered at Kierikki Centre's summer market helps to build children's awareness of their own culture and history especially through comprehensive experiencing and physical activities. In the stone painting workshop, we use red ochre as paint on stones. Participants are given basic knowledge about symbols from the time periods in general as they could paint the very same symbols by themselves using the same material as in the Stone Age. Learning turns into an exciting activity and produces concrete knowledge and this same type of education is shown in all workshops.

I received a lot of positive feedback from many attendants in wide age groups. Parents were intrigued about how convenient getting hands-on is especially for children and what materializes in terms of outcomes as a result of such an approach to learning. Kierikki supports multiple methods to learn. For example, through auditory, illustration, reading and physical activities. Everyone can find their own way to learn about ancient history and it shows in the way of excitement among visitors.

According to Leena Lehtinen, Kierikki has taught the Stone Age focus each year to approximately 4,500 students since 2001. That makes approximately 90,000 mainly 5th graders. Kierikki Centre is the largest and most experienced instructor related to the Stone Age environment in Finland so the work undertaken there is extensive and has much value for children.

This spring the archaeological exhibition renews its art room into the stone painting art area. There arrives a new 10-minute loop video about the art of Finnish rock paintings made by Ismo Luukkonen. In the auditorium also arrives new educational video made by Pekka Honkakoski about research of the Värrikallio Cliffs rock paintings" Jantti (2021).

With further reference to the meeting with Lehtinen, I asked her whether or not the education about rock paintings also include children from other areas of Finland, and are there any international children that take part, she responded in the following way.

"There is a rock art project in Ristiina, south-eastern Finland, which has been active since 2017. I was one of the experts there as a rock art project. Children who visit the museum are from different areas in Finland. Kierikki is known well, so people like to travel to visit. We are the best-known place in Finland. We also get groups from Germany and Swedes and also people from Britain. We also have professionals and colleagues who are involved in EU projects and therefore, market Kierikki. We have communication with colleagues in Europe" Lehtinen (2020: 2).

To follow on from what is described through the aforementioned and to conclude this chapter regarding the stone painting workshops at Kierikki, I then asked Lehtinen what do parents have to say about the artistic workshops the museum provides her response was as follows.

"Parents give us good feedback about what we offer. They want to get red ochre and make painted stones at home and put them in their gardens. Neolithic and stone age people also used ochre on corpses to help preserve them, and it is a very ancient tradition. Teachers want to bring the children as an excursion, so they can gain experience outside."

"We also show documentaries to the children about the exhibitions, and archaeological excavations and findings and we have a good media platform, which teachers like. I have been involved in excursions to Värrikallio for several days 3 times, and I am a guide to the site, as well as traveling to the site several times myself. Hands on doing is important for children, it teaches them" Lehtinen (2020: 2).

To follow on from the type of educational learning for children in Finland, in this next chapter, the focus turns to other approaches used by educators and within educational establishments in northern Sweden and Norway. This is for the purposes of further demonstrating how ancient history and local traditions in connection with rock art can be harnessed and used as an intersection for linking past and present traditions and heritage together. Henceforth, in order to help with preservation of a shared history and to enhance art education through a study of ancestors as well as their beliefs and practices.

Examples of children's rock art education and development in Swedish and Norwegian Sápmi, from educators interviewed in the research

This third part of the paper provides both understanding and insight into how rock paintings, carvings and sacred places can be used as historical sources of data and what they can contribute in terms of them being harnessed as educational resources for children, should they be preserved. The data presented below is from both interviews and fieldwork with scholars in Sweden and Norway in relation to the work they do with helping children to remember the past in various settings. The approaches used by each of the educators are exemplary of why teaching about the richness ancient beliefs and ways of life have with regard to their value and thus, why they are used as a method that contributes to educating children in their early lives. Moreover, by communicating past legacies it is possible to grasp how this promotes the development of children through education and which, in turn, demonstrates both the importance of cultural heritage and how both local and national identity building can be developed and in what ways rock art is used in order to help facilitate these.

For assistance with this and to support the need for better protection of sacred sites, rock carvings and paintings, on September 23rd 2012, I had correspondence with Kristina Kalén in a telephone interview as well as email correspondence. Kalén is the former coordinator of the Västerbottens Museum, which is a regional museum, in Umeå, northern Sweden. During initial contact I was informed by her how “each year the museum hosts four conferences on rock art including seminars.” (Kalén 2012: 1).

“Rock art, Sámi symbols and northern cultural traditions are interpreted, conveyed and brought to life by school children, storytellers, actors, teachers, dancers, archaeologists, artist and researcher. Rock art in Sápmi starts with the images in the stone: the paintings and carvings on the rocks of Sápmi, and continues with different activities that convey feelings, thoughts, insights and ideas about yesterday, today and tomorrow. Rock art in Sápmi is Västerbottens museum’s major collaborative project before and during Umeå’s year as European Capital of Culture 2014. The project has a number of partners and will increase knowledge of rock art’s imagery and its history through the use of theatre performances, storytelling, and performance art, school programmes for children, art exhibitions, books and seminars. History is the starting point, but there is also space for new interpretation and innovation.” (Västerbottens Museum & Kalén 2012).

The central focus of the educational activities of both rock carvings and paintings in Sweden

are formed around two main locations, the first is: “[...] Norrforsen, [which] is just outside Umeå, and the second is in Lycksele]. The [area where the] Lycksele rock art [is located] is Korpberget.” (Kalén 2012).

In addition to the interview with Kalén, in a second interview via telephone and email correspondence on the same day, I spoke with Eva D Johansen who is the museum educator at the Alta Museum in Finnmark northern Norway. I made similar enquiries as to the use of rock carvings as educational resources for school children. The reasons for contacting Kalén and Johansen was to try and assess what the two scientific educational establishments in Sweden and Norway were doing in practice with regard to promoting rock paintings as sources of knowledge about ancient history and beliefs as well as local traditions and practices. In both cases each of the interviewees were able to supply valuable information which is documented in the sub chapter below and discusses how to meet the challenges of preserving rock paintings as educational resources for children.

“The involvement of children at Alta which takes place in September each year is for a two-week period; the children who are invited are from the fourth grade: 9 years of age. A part of the purpose of inviting them to the site concerns creating good cooperation with schools, and to monitor and discover what kind of learning-goals are interesting for children; this is both with regard to rock carvings. The rock carvings are used as finds from 7000 years ago and these help them interpret and identify the different figures as a way of encountering life in the Stone Age time. Through working with rock carvings, they also work with animal skins and bones, and make other items such as knives and arrow heads from slate. There are also connections to the bear hunting myths which are portrayed through the carvings.

There are 60 children in each group which is then divided into groups of between ten to fifteen children. When the rock carvings are shown to the children, there are two dimensions to this; one is the carving in the stone, and then the paintings [of the carvings which were] painted for disseminating purposes [some] time ago. Children who take part in the activities are Sámi and Norwegian.” (Johansen 2012).

In connection with further interviews, Ina Beate Pentha is a Sámi school teacher at the Prestvannet School in Tromsø, who provided essential information during a visit to the school in 2012 as well as through interviews that followed by phone and social media about

the artistic education of Sámi children at the school. The correspondence with Pentha helped gain a broader understanding of the nature of the activities in terms of how reusing Sámi cultural heritage as an education resource is twofold. The first part concerns the reuse of figures and symbolism from sacred Sámi drums from the seventeenth century as a resource for producing art. More information about Hans Ragnar Mathisen can be found here: <http://www.keviselie-hansragnarmathisen.net/>

The second part is in what ways ancient cultural heritage is reused as an educational resource takes place from various interactions with rock art during visits to sacred sites and then how the artistic inspiration drawn from rock art is put into practice amongst the children in terms of identity building and education about the beliefs and practices of their ancestors. Hence, the data from the telephone interview has been used in the subchapter below, which discusses how to meet the challenges of preserving rock paintings as educational resources for children.

“The school has both Norwegian and Sámi children as pupils and there is a separate Sámi class for Sámi children in the school so they feel they are integrated into the school system. There are four Sámi teachers in the class and nine teachers overall who travel to teach at twenty-two schools in Tromsø from the first grade to the tenth grade. There are 350 children in the school and 40 children are Sámi. Many Norwegian children have Sámi grandparents and relatives. The Sámi teachers who know about Sámi history are able to teach this to the children, through music, art and the old culture, and this is what produces the artistic work.” (Pentha 2012: 1).

As a method for demonstrating some of the interactions with rock art at sacred sites as well as sacred Sámi drums, below, are two photographs that come from material donated by Sámi elder and artist Hans Ragnar Mathisen (Elle-Hánsa) from Norway, who visited the Prestvannet skole in the Tromsø Commune in Norway in 2012. Mathisen photographed two murals of art created by Sámi children who had been taught about the symbolism and artwork depicted within cosmological landscapes on the Sámi noaidi shaman from the seventeenth and eighteenth centuries.

“Mathisen’s approach to educating the children was to teach them about the mythology of the Sámi people, how symbols have been used and what they mean. He last taught in the

school approximately four years ago (2016). However, we have also had other Sámi elders such as Mikkel Gaup who has been teaching both the Sámi and Norwegian children at the school how to joik, which is a special for of Sámi singing. The education of children is also done by parents who have special knowledge but how much they teach depends on how much money we can get from the Tromsø Kommune to pay them” Pentha (2021).

The first photograph depicts the children's artwork with regard to the drawings on the old Sámi noaidi drums, their symbolism and cosmological landscapes as interpreted by the children in both a past and present context. The second photograph is of a mural created by the children from the school, depicting rock carvings and paintings from the Alta site in Norway, from the hunting period between “4200-500BC” (Sveen 1996: 13).

The two photographs from Mathisen are important because they demonstrate how ancient history can be indeed utilized and integrated into the national education system for learning and development of creativity by school children.

Furthermore, Sámi traditional knowledge holders, i.e. the noaidi's in Sámi society have been artists and their depictions of cosmological landscapes within both ancient rock art landscapes as well as those depicted on Sámi drums are one of the ways cultural memory and heritage has been recorded and transmitted. However, it is worth pointing out how persons as such do not easily share their knowledge to those outside their community. Nevertheless, their artwork enables us to create a dialogue between past and present in such a way that it facilitates the opportunity for Sámi elders to share their knowledge with the children as a way of transmitting culture.



Figure 10. “The first [photograph] has some drum designs including the whole drum” Mathisen (2012: 1), which have been copied from different decorated seventeenth century Sámi drums, giving some indication of the level of influence the historical drums have on the children and how these are then expressed through the artwork. There are also Sun symbols, the Sámi tent *Goahte* and some of the spirits found in Sámi cosmology that are evident within the artworks. Photograph: Hans Ragnar Mathisen (2012).

A fine example of the potential for different types of learning for Sámi children at rock art and rock carving locations is currently underway in “[...] Báhppajávrrí Skuvla [Prestvannet school] in Romsa/Tromsø [Norway]” Mathisen (2012: 1).



Figure 11. Colourful examples of how working with rock art has both inspired and influenced the Sámi children in their art within the montage: “Helleristninger” [rock carvings]” Mathisen (2012: 1). In both cases the artwork was created between “2002-2003” Pentha (2012: 1). Photograph and copyright Hand Ragnar Mathisen (2012). Some of the content of the art depicts human-animal interactions with reindeers, boats, hunting and fishing, which are core practices within Sámi culture.

To follow (below) is a third photograph taken by the author in 2012 of a mural created by the Sámi children at the Prestvannet School, which demonstrates how sacred drum symbolism from the seventeenth century is reused as an educational resource and method of teaching the children about their culture, heritage, traditions and practices. Thus, demonstrating the value and importance of using history and spiritual traditions as an

educational resource for 'remembering'.



Figure 12. An assortment of noaidi figures and animals such as moose and reindeer are evident as are Sámi spirits from various ancient drums from Swedish, Finnish and Norwegian Sápmi in this mural. The colours chosen to paint them with are likewise, commonplace within Sámi culture and those used in schools through art education. In particular, red, yellow blue and green are used in Sámi clothing as well as on the Sámi flag, thus, indicating identity. Photograph and copyright Francis Joy (2012).



Figure 13. Sámi school teacher Ina Beate Pentha stands in front of the artwork made by the children at the Prestvannet School. Photograph and copyright Francis Joy (2012).

To follow-up on earlier research conducted at the Prestvannet School in 2012 in Tromsø, and as a method for establishing if the educational program using art had continued, I contacted Ina Beate Pentha again in February 2021 and she relayed the following information in relation to this and its development.

“The educational program in the school is much better today because the Sámi have a much better position in Norwegian society. There is more visibility of the ancient symbolism of the Sámi and some of these are found on textiles and jewellery and therefore, the children see them in shops and on clothes people are wearing and because of this, they are interested in learning what they mean. So, in the school we can teach them about that. The Sun symbol is the most common because it is the Mother of Life. This way of teaching has been integrated into the curriculum in Norway in connection with education and artistic studies. Therefore, we see art is becoming more popular among young people in Norway. Even Sámi artists are using Sámi symbolism in street art so it is more visible in society.

The ways in which the educational programs have been developed in the schools in the north of the country means that educators from the south are asking us to teach and share the knowledge we have so children there can learn about Sámi culture. Methods such as using reindeer skin and antlers to make clothing and items such as knives and cups are popular because what materials we collect we use everything and they are beautifully crafted and made to last.

Being able to teach these ways of our culture to Norwegian children and teachers makes the Sámi children proud that the Norwegian people are interested in their culture, heritage and its use. This also means that the Norwegian people are proud too that they have the Sámi people in Norway and that they can share this together.

We also have a program in Norway where children from the second-grade classes for 2-3 weeks during the year visit Tromsø Museum where they learn about life outdoors and the Goahste, the Sámi reindeer herding tent, as well as Stállu who is a spirit being in Sámi culture who teaches about life and how to live. The Sámi parents also have knowledge and

some have reindeer farms. We take classes from the school to visit these locations and the children are taught how to cook and prepare reindeer meat when it is cooked inside the Goahte, which is good for them because some of the Sámi children live in the cities" Pentha (2021).

When I asked Ina Beate Pentha about whether or not the visits to the Alta Museum in Finnmark still continued she responded in the following manner.

"We do not take the children to the Alta museum and rock carving each year because these visits, which include going to the Sámi Parliament building in Karasjok, costs money. Therefore, it depends what financial resources we have available to us. We ask money from the Sámi Parliament and also Tromsø Kommune. When travel is not possible, we teach them on-line about the symbolism in the rock art in relation to hunting and fishing, as well as the astral myths associated with the sky and star constellations such as Sarvva, the cosmic reindeer or elk hunt. The rock art is very important because it is connected with our early culture" Pentha (2021).

How can we meet the challenges of supporting and preserving rock paintings as educational resources for children?

The content of rock art both past and present contains many cultural expressions that are a consensus of the Cosmic Mind of the Arctic and Circumpolar Regions of the world and their populations and their understandings of and interactions with a much Greater Reality. However, and in terms of their uniqueness, it must be emphasized in what ways Stone Age rock art locations are characterized by stories and narratives from both tribes-groups and individual perspectives that are the first written sources of language which is communicated through symbolism that is ancient and irreplaceable as sources of knowledge.

On a more local level, and within the diversity of such sites, the fact rock art is made outdoors and often by the water in the case of prehistoric sites in Finland as well as the ancient Alta site in Norway demonstrates how art forms that are concerned with both subsistence activities in relation to hunting, fishing and trapping as well as spiritual practices with regard to hunting magic, which in their essence are holistic, overall, have much value as educational resources for children. Initially, because of the different

perspectives and environments in which the art has originated and how it is encountered. Furthermore, many rock art landscapes demonstrate the relationship between human beings, animals, spirits, and for example, modes of spiritual travel within ritual contexts where boats are present, that are known to be commonplace in connection with sacrifice, offerings and worship. Therefore, these are intricately tied to oral narratives and cultural memory.

It was interesting to note in each of the contributions from Puronniemi and Lehtinen in Finland how both referred to shamanism, ancient traditions and hunting from the Finnish perspectives. Whereas, in the correspondence from Sweden and Norway, the term 'shamanism' was not used. However, as has been demonstrated above, there are traces of shamanism in the rock art landscapes at Alta, Finnmark and also at rock painting sites in Swedish Sápmi. In addition, in Tromsø, including the utilization of noaidi figures as well as spirits and some mythical animals from ancient drums that have originated from Finland, Sweden and Norway, intimately demonstrates how shamanism or noaidivuolta in north Sámi terminology, as a spiritual practice still retains much value and importance in connection with identity as encountered within the children's artworks. Thus, and on reflection it is possible to comprehend the merit ancient rock art landscapes have whereby when further appreciated, we are able to see by what means within:

"the processes of ethnogenesis Arctic peoples have developed spiritual symbols for constructing the living environment, which meet the conditions of the natural environment. Its principle is the natural ecotecture based on the belief in the kind of creative character of nature, in the spirits of fire, tundra, taiga, mountains, sea, roads and other" Vinokurova (2015: 28).

The ways the educators have interacted with the children in different contexts with regard to communicating the language of symbolism to them, clearly demonstrates how there are still beliefs concerning in what manner noaidi or "shamans employ powers derived from spirits to heal sickness, to guide the dead to their final destinations, to influence animals, and forces of nature in a way that benefits their communities" Joralemon (2001: 14032-14035). Equally as important to remember also is how the noaidi or shaman likewise had powers to protect their culture and to punish thieves for example, who stole reindeers. In addition, reading between the subtle lines of the work each of the educators were doing

this can be viewed as bringing into focus the importance of the shamans work as an artist and bearer of tradition and cultural memory. Whereby, “a typical hereditary shaman acting in the sacred places helps his community to restore lost spiritual ties with family, ancestral roots on the traditional land and heavenly protectors” Vinokurova (2015: 28). To some extent, this seems apparent within the work of Mathisen.

The learning that emerges through understanding the noaidi and shaman as an artist who created rock art and painted sacred drum landscapes as a method for recording and preserving embedded knowledge systems has equal importance in connection with the recreation of the art presented above in contemporary culture. Ultimately, therefore, demonstrating how through reuse of ancient symbolism firstly, children and art educators could be seen as creating an environment where it is possible to reconnect and rediscover shamanic heritage in relation to divination using the drum. Meaning, searching for food sources through divination in connection with hunting fishing and trapping practices. A practice which was outlawed and therefore, had to go underground in the Nordic states between the sixteenth and seventeenth centuries because of how the Sámi and Finns turned to supernatural powers for help regarding their search for food. From evidence of ritual landscapes at the Alta rock art in Norway, drums have likewise been used in the Stone Age era for similar purposes. Henceforth, not only does reengaging with rock art help signify and define the meaning of place (Arctic environment), but also for understanding by what means “shamanic traditions, however, deeply rooted in different ethnic folklores, [can be seen] as truly belong[ing] to the common cultural heritage of mankind” Hoppál (2004: 1). In addition, and with regard to both rock art and drum symbolism, how “ecological wisdom comes from the creative harmonious communication with the natural world, the world of life, and symbols of art” Vinokurova (2015: 28).

Broader significance in relation to understanding the value of using ancient art sources to teach children demonstrates how recreating rock art and drum symbolism within children's education brings into focus and helps with remembering the importance of being able to comprehend the value of the shamans' worldview depicted through art in this present time of ecological crisis and destruction in the Arctic because of mining, hydro dams and deforestation. For instance, this can be discerned in relation to the tools and techniques shamans used with regard to gaining access to other dimensions of life as well as communicating with their inherent powers via the methods they used in order to make this

possible, such as drums, chanting, singing, flying and use of both spoken language and language of symbolism, as a way to connect them with their ethnic group and ancestral realms. These cultural practices were maintained as a way of sustaining an ecological balance and good relations with the governing powers of the water, forests, air, land, animals and ecosystems and were recorded through art, thus, creating a bridge between the human world and powers of nature, henceforth, helping their descendants to understand how they lived.

In actual fact, what the reuse of ancient symbolism demonstrates in all examples presented in the research data above is it affirms how in this time of ecological destruction the approaches used in educating children creates the potential to

"[...] to promote a new perspective on spirituality in holistic art education while providing a distinction between religion and spirituality, particularly for secular educational settings. As an aspect of holistic education, which considers the human as an integrated whole comprised of mind, body, and spirit, spirit is defined and considered as an essential part of the curriculum planning and pedagogy in visual art education" Campbell (2006: 29).

Through a close study of the materials and data presented above, the ways ancient history and traditions have been approached, and reused within different context clearly demonstrates in what ways each of the:

"[...] art educators currently seek to embrace a pedagogy that is nurturing and authentic. This includes a teaching philosophy that requires careful navigation of the human landscape, which is lush with culturally shaped experiences, often expressed through a transformative engagement in visual arts, whether literally or metaphorically. [...] This approach, holistic education, seeks to encompass and enlist three major aspects of the whole person-mind, body, and spirit-in the learning process and environment" Campbell (2006: 29).

In terms of the reuse of local history and traditions, in addition to the aforementioned, the types of learning evident from the contributions presented above offer further evidence of how it is possible to comprehend by what means the transmission of religious and spiritual beliefs and practices are important, as well as the exchange of ideas and information that

are transmitted through the language of symbolism and patterns, which are meaningful. Henceforth, these images, metaphors and representations are unique systems of communication that have survived and when taught to children can be understood as having value in connection with both the construction and development of the self.

Their value and significance are evident as sources of traditional knowledge and cultural heritage in the ways the educators have utilized them to teach to children through what agencies they are recognizable cultural representations that are linked with both identity and integration with nature. Moreover, the methods of instruction used by the educators may be evaluated as techniques utilized for both observing and demonstrating the different ways of experimenting with rock art is a useful approach for constructing interactivity between children and the natural environment. This furthermore, helps validate the importance and indeed uniqueness of northern ecology and identity in relation to shamanism or noaidivuolta in the ancient Scandinavian hunting traditions as in which the Sámi traditions take up a central position. Thus, providing children with a notion of interconnectedness between all life forms both past and present. Helping to change they ways they think and interact with the world around them.

It is conversely, paramount to identify how the contribution from the Prestvannet school in Norway regarding the images on the sacred drums from the seventeenth century shows to what degree importance is given to these sources of cultural heritage because landscapes as such extend from the prehistoric rock art to noaidi drums from the seventeenth century. Thus, demonstrating the value of symbolism and patterns as agents of transmission and in what ways this type of knowledge is encountered and subsequently reused within Sámi education.

What is more and within the context of the study, it can by the same token, be considered how, because the practice of shamanism (noaidivuolta in the Sámi tradition) has been portrayed as being negative and associated with evil powers by the Church throughout history, the rock art has been created in a time before colonialism. Therefore, it is possible to see how the creation of art and reuse of symbolism can be linked with the very core of Sámi culture, spirituality and well-being. Concepts, which are rooted in oral traditions that are connected to sacred powers that are free from the types of conditioning attributed to noaidi drums by the authorities in the Nordic countries and therefore, tend to be portrayed

in a much more positive light because it is so ancient.

When viewed in this way, as assessment of the types of animals, beliefs, practices such as shamanism, trance, ecstasy and an animistic belief in the powers of different landscapes and in what ways these are portrayed through rock art and drum symbolism brings into focus in what respect there exists a living cultural heritage across cultures and generations.

From the interviews conducted at Alta Museum in Norway, Västerbottens Museum in Umeå and the Prestvannet School in Tromsø strong emphasis was placed on the importance of ancient Sámi culture within rock art research, landscape use and the education of children mainly from Sámi perspectives. However, what was apparent is how:

“creating both structures and a framework for sharing traditional knowledge and the values with regard to rock paintings as well as the ways in which this knowledge is expressed through the nature of rock paintings to Sámi children and those of the nation states could be seen as pioneering work helping to enhance the learning of children further afield by providing an environment where education and incorporation is equal for everyone” Joy (2015b: 24).

“There are questions that arise within the research regarding how the rock paintings in Finland, which are sources of traditional knowledge can be reintroduced educationally in such a way that the content of the art becomes a resource not only for bridging the gap between past and present but also between science and spirituality” Joy (2015b: 25).

Recognizing the potential of rock art as a national educational resource for the present and future for bringing into focus the importance of bio-diversity and ecological responsibility

The boulder formations in Hikivuori park in Tampere that have been painted with symbolism deserves likewise, further attention because of the notion of their significance and what these might bring to the area in terms of sacredness. Although there is no concrete confirmation from Ulla Lähdesmäki regarding the status of the painted boulders are as artifacts it is worth noting what Finnish archaeologist Lahelma has to say in relation to ancient rock paintings at seita sites as well as seitas themselves because despite the

paintings not being old, the boulders themselves would have arrived in their present locations at the end of the last Ice Age.

Thus, what was obvious from observation of at least one of the boulders is how some seita stones can be recognized by how certain types may appear as “consisting of a large rock that was perceived as being somehow distinct from its surrounding landscape” Lahelma (2005: 126), a minority of which have been dedicated to certain powers or even ancestors, families or certain deities as is the case within the Sámi traditions.

Therefore, perhaps whoever painted them did so as an expression of perhaps making links between Finnish pre-Christian religion, nationalism and identity, which is deeply rooted in landscape and also sacred places that are interpreted by some as containing supernatural or spiritual powers. Or is it simply the case that the paintings are a signature of human encroachment in the area?

Seeing as it has not been possible to know who painted the swastika and other symbols close by, this question cannot be answered. However, in terms of the value of both the unusual shaped boulders and their artwork, in connection with northern (Arctic) ecology and biodiversity these landscapes do have value and provide potential examples for education children. Henceforth, nature conservation where local spiritual traditions are brought into focus because they have stories attached to them, locally and also nationally, as has been demonstrated by the work Marja-Leena Puroanniemi and Leena Lehtinen are doing outdoors with the children as well as in the classroom.

In academic research the value of sacred sites is culturally important because of the beliefs associated with them. Despite ancient beliefs not really being known anymore, archaeological research in Finland has contributed greatly to identifying offerings of bones, tools and coins at some boulders despite not knowing the oral narratives associated with such places^[ii]. Moreover, where sacred sites in particular belonging to indigenous people, as well as Finns, Swedes and Norwegians are being redefined and given new meaning as culturally important landscapes, and thus, being reused and therefore, emerging with new and elaborate themes and narratives associated with them.

At the Hikivuori site, the Iron Age symbol of the Swastika is a solitary example of this.

Equally, providing opportunities for educators to teach about ancient history, culture, practices and traditions, thus, making them attractive to children, which is evident in the approaches used by all five participants with whom the above correspondence has been described within.

As Sámi scholar and elder Elina Helander-Renvall (2011: 11) has expressed in her work regarding how in terms of education “it is important that biological, ecological and cultural studies of the land use are combined with more spiritual approaches as they contribute to wider understanding of the world picture that governs life and the actions of indigenous people” (cf. Vibetsky 2005; Kawagley 2006).

There are several other points that are relevant from Helander-Renvall to be included and these are as follows. The first concerns how in terms of educating children about northern ecology and biodiversity, rock art and the concepts of sacred boulders and stones helps create a platform for place-based learning in association with “[...] cultural values and relations to nature [...] [by furthermore giving] expression to the living relationship that exists between lands and spiritual realms [...] [that could in addition help] increase mutual understanding between different ethnic groups in society” Helander-Renvall (2011: 11).

Furthermore, Helander-Renvall (2011: 13), likewise, stresses how what is noted in the aforementioned could moreover, create the potential for helping children to develop “[...] the ability to fully interact and relate to their environment”. And as a consequence, come to better comprehend in what ways there is a uniqueness concerning the Arctic environment in relation to further understanding of both the concepts of northern ecology and “[...] biological diversity [...] [and how these are constructs] that [...] [are] established to protect the environment” Helander-Renvall (2011: 13).

With further reference to the aforementioned. There is clear evidence of these agencies painted on the sacred drums belonging to the Sámi people, which are currently the property of museums in Sweden, Great Britain, France, Italy, Germany and Denmark. Within the cosmological drum landscapes there are multiple sacred sites and offering places, *siidiseita* places, animals, a world pillar-tree or *axis-mundi*, which is a structure that holds up the world, that plays an essential function regarding communication between the realms of the Gods/Goddesses/Divine Powers and human beings.

This structure in itself painted on drums has been likewise, a common concept found through large upright vertical boulders at rock painting sites. The reasons these are parallel is because they have been considered to attract spiritual powers and are therefore, related and depicted as physical and cosmological landscapes that are unique to the north and Arctic regions with regard to identity, biodiversity and ecology.

Accordingly, when reflecting on the cosmology of the Sámi people we find supernatural powers who govern and watch over the cosmos, each one playing a fundamental role and function in relation to both ecology and biodiversity in terms of regulation. For instance, “Gods of the wilderness. The god of hunting, Liejbbeålmåj (the god of blood or alder), ruled over the wild animals in the forest. The Sami made offerings to him so that they would have good luck when hunting. Tjáhtjeålmåj (the god of water) ruled over water and lakes and gave luck when fishing” Samer.se (2020: 1). These provide both examples and evidence of correlations between social structures, northern ecology, ecosystems, spiritual powers and well-being. But are rarely explored in terms of their potential significance and value today as a response to the climate crisis and cultivating respect and the understanding of how the roles and functions of these dieties is connected to balance and social and cosmic order as well as conservation. Moreover, the well-being of forests, animals, water and fish is brought into focus. Hence, as is the survival and well-being of Sámi society.

Awareness is gained when it can be understood how spiritual powers govern ecosystems. This understanding might also be termed as ‘animistic thinking or philosophy’ and is central to the Sámi and all indigenous peoples throughout the world who through the ways they live demonstrate how dependent upon these powers they are, as has been the case for thousands of years. A focus Western civilization has sadly forgotten about.

Therefore, both the study of ancient rock art as well as the creation of new types of rock art could create a platform for learning whereby, “cultural assets and heritage are therefore, pedagogically important as they are significant consolidation and implementation learning means that make teaching less bookish and more alive, giving meaning to learning too (Mendes 2009)” Magro, Ramos de Carvalho and Marcelino (2014: 34). Engaging with rock art and sacred symbolism in different environments within various educational contexts could present the opportunity for re-engagement and re-animation of a living spiritual path that has value, purpose and meaning that is characterized through art.

Concluding remarks

The main research question in the introduction of the paper asks: in what ways do different sources of ancient rock art utilized by educators as educational resources, make a positive contribution towards children's education and development when adapted as a resource for identity building?

In relation to the research undertaken in Finland, and as the data has demonstrated, the work undertaken by Leena Lehtinen and Marja-Leena Puronniemi is still being developed and therefore, holds much interest for further research into their approaches to educating children where nature is the classroom. Their styles and approach to learning in connection with educating children has much value and can be further developed. The questions I put forward to Leena Lehtinen during the interview revealed some important information in relation to how the educational framework was created, developed and implemented, which could likewise, have value for teaching children about the values of history. Thus, allowing them to learn new skills in relation to a study of the environment and sacred places.

Marja-Leena Puronniemi's contribution is yet another example of how in terms of transmission of knowledge about local traditions, her approach and development of children's education was influenced by earlier rock art research in Finland and thus, in what ways she has used her own experience in university to teach others with. Puronniemi's contribution from her own learning does in this case, as has been demonstrated, bring into focus both the values and benefits of teaching about rock art in higher educational establishments, which has then, twenty years later become a hands-on practice for place-based learning outside in nature for children within schools and colleges.

The new rock paintings presented above at the Hikivuori site, help to demonstrate how past human behavior which in the case of ancient rock paintings in Finland is culture specific, that has been subsequently interpreted and then expressed in a modern way, which attempts to demonstrate a type of cultural continuity within a local context and thus, link past and present practices together. Both educators have not taught the children shamanism per se but have skilfully made numerous references to the ancient practice with regard to the link between shamanism, art and the underlying beliefs and worldview, which are tied into northern identity, hunting practices, animals, cultural monuments and

ecosystems. Thus, helping to integrate these as part of a creative whole into their learning. Their work, approaches and methods used, have in these examples, helped define how art communicates, culture, history, traditions, practices and beliefs and by what means these can be used as different sources of creativity to help children develop.

Concerning Sweden, given the fact that Västerbottens Museum in Umeå has created a permanent exhibition about rock art in the Sámi areas that is on-going, as well as placing emphasis on the links between prehistoric art and noaidi drums, this can be seen as the establishment supporting young Sámi people in terms of decolonizing their history, practices, culture and traditions as well as helping them in the identity building processes[iii]. Moreover, helping to build a link between past and present Sámi cultures as well and create dialogue through various interactions with cultural heritage and oral narratives that are linked with Sámi pre-Christian religion and related practices.

Furthermore, interesting to note in the Rock Art in Sápmi exhibition in Umeå is how one of the photographic panels there is from Finland, namely, the Hossa Värrikallio site, which is connected with the ancestors of the Sámi, and also mentioned by Leena Lehtinen in relation to education at Kierikki. Thus, underlining how rock art and related sacred sites are indeed like an interactive web connected across countries, cultures and millennia.

The formulation of the research data regarding the visit to Prestvannet School in Tromsø and interviews undertaken there with Ina Beate Pentha as well as via phone and through social media in addition to how the children are educated by Hans Ragnar Mathisen in connection with the study of rock art and noaidi drum symbolism can be interpreted as a demonstration of integrated learning. Henceforth, where traditional knowledge taught by Mathisen is linked with Sámi pre-Christian religion, traditions and practices and thus, are combined with spirituality in order to teach children about the importance of establishing and maintaining relationships with nature and how this has been portrayed through art within earlier generations by both early hunters and also much later the religious specialist in Sámi society in the seventeenth century called noaidi.

Equally, evidence through the art created by the children demonstrates the importance of use of the Sámi language in order to transmit culture and traditions for the purposes of bringing together different generations in order to create a bridge between past and

present. Conversely, where children are given the freedom to reconnect with what was once a forbidden language and knowledge of Sámi pre-Christian religion and related spiritual practices. Whereby the research has presented an example of how learning has taken place in both the classroom and outside at the sacred Alta rock art site, which is linked with the art of the ancestors of the Sámi people of today.

Finally, and with further reference to the creation of the new types of rock paintings created at the Hikivuori site by unknown persons, it seems unlikely the swastika or what might be a solar/lunar symbol was created by the children that attended the summer course from Haihara Art Centre in Tampere, and who took part in the rock painting project. However, the significance of two ritualistic symbols (swastika and lunar/solar symbol) painted on an unusual upright boulder formation which stands slightly away from the side of Hikivuori hill has to be given consideration, with regard to knowledge of the Iron Age period in Finland.

Given the fact the swastika symbol is not widely used in modern times highlights how the person/s responsible for creating the paintings had some knowledge of the value of magical symbolism in relation to usage in a historical context. At the present time, there are no Iron Age rock paintings known in Finland. Therefore, there are no other paintings which bear similar symbolism, thus making these symbols in the Annala area somewhat unique. The painting in the grotto below ground level is also something of a mystery at the present time, regarding its origins, positioning and function in the underground location.

Unlike the rock paintings from the Stone Age period in Finland, which have strong themes of out-of-body travelling in relation to shamanism and hunting, the new paintings at Hikivuori do not exhibit the same compositions. The modern paintings do though; help reflect a much earlier mentality exhibiting both the value and meaning of creating art on boulders and stone surfaces for a variety of different reasons relating to children's education and cultural symbolism whereby the concepts about modern life have been communicated through art. When understood in this light, the research has helped to determine a beneficial example of how cultural heritage has been reused as an inspirational resource for creating dialogue between persons and the landscape and we have been able to see how this has been reflected in the environment.

N.B.

The photographic research and analysis undertaken by photographer Ismo Luukkonen at the Hikivuori site can be found at: <http://www.ismoluukkonen.net/kalliotaide/suomi/hik/hik.html> Anyone who wishes to find out more about Stone Age rock paintings in Finland can do so by visiting: <http://www.ismoluukkonen.net/kalliotaide/suomi/>

Acknowledgements

I would like to express my thanks to the following people for their help in writing this article: Kirsi Ylinen, Ismo Luukkonen, Leena Lehtinen, Eveliina Jantti, Marja-Leena Puronniemi, Ulla Lähdesmäki, Raila Kataja, Ina Beate Pentha, Hans Ragnar Mathisen, Eva D. Johansen, Lauri Pajuoja, and also Maria Huhmarniemi.

References

- Äikäs, T. (2015). *From Boulders to Fells: Sacred Places in the Sámi Ritual Landscape*. - Monographs of the Archaeological Society of Finland 5. Helsinki.
- Aikio, A. & Aikio, A. (2001). Heimovaelluksista Jatkuvuuteen - Suomalaisen Väestöhistorian Tutkimuksen Pirstoutuminen [A Hike to the House of Continuity: The Fragmentation of the Study of History of the Finnish Population]. *Muinaistutkija* 4, 2-21.
- Campbell, L H. (2006). Spirituality and Holistic Education. *Visual Arts Research, Volume 32, No. 1*. Published by University of Illinois Press, pp. 29-34.
- Cunningham, J. J. (2003). Transcending the 'Obnoxious Spectator': A Case for Processual Pluralism in Ethnoarchaeology. *Journal of Anthropological Archaeology* 22 (4), pp. 389-410.
- Fewster, D. (1999). The Invention of the Stone Age Finnish Politics, Ethnicity and Archaeology. In: Hurre, Matti (editor) *Dig It All: Papers Dedicated to Ari Siiriäinen*. Finnish Antiquarian Society, Helsinki, pp. 13-20.
- Fogelberg, P. (1999). *Pohjan poluilla. Suomalaisten juuret nykytutkimuksen mukaan [The north path. Finnish roots in the current study]*. Societas Scientiarum Fennica, Helsinki.

Gjerde, J. M. (2010). *Rock Art and Landscapes. Studies of Stone Age Rock Art from Northern Fennoscandia*. Avhandling for PhD, Fakultet for Humaniora, Samfunnsvitskap og Lærarutdanninng Tromsø: Universitetet I Tromsø. <http://munin.uit.no/handle/10037/2741>.

Hänninen, V. (2004). A Model of Narrative Circulation. In *Narrative Inquiry*. Amsterdam: John Benjamins B.V., vol. 14, pp. 69-85.

Haltsonen, S. (1937). Suomalaisista Taikamerkeistä. *Kansatieteellinen Tutkielma. Kansatieteellinen Arkisto II:1*. Suomen Muinaismuistoyhdistys.

Helander-Renvall, E. (2011) Paradigm Shift on Indigenous Research in the Arctic. In: Ziker, John, P., and Stammler, Florian (eds.) *Histories from the North: Environments, Movements, and Narratives*. Published by Department of Anthropology, Boise State University in Conjunction with Arctic Centre, University of Lapland, pp. 7-14.

Helskog, K. (1987). Selective Descriptions. A Study of 3,500 Years of Rock Carvings from Arctic Norway and Their Relationship to the Sámi Drums. In: Stodder, I. (ed.) *New Directions in Archaeology: Archaeology as a Long-Term History*. Published by the Press Syndicate of the University of Cambridge: 17-31.

Helskog, K. (1988). *Helleristningene i Alta: spor etter ritualer og dagligliv i Finnmarks forhistorie*. Alta, Knut Helskog, distribuert av Alta Museum.

Helskog, K. (1999). The Shore Connection. Cognitive Landscape and Communication with Rock Carvings in Northernmost Europe. *Norwegian Archaeological Review* 32 (2), pp. 73-94.

Helskog, K. (2014). *Communicating with the World of Beings: The World Heritage Rock Art Sites in Alta, Arctic Norway*. Oxbow Books.

Hoppál, M. (2004). Shamanic Traditions as Intangible Cultural Heritage of Mankind. In: Hoppál, M and Kosa, G (eds.) *Rediscovery of Shamanic Heritage. Bibliotheca Shamanistica, Volume 11*. Published for the International Society For Shamanistic Research. Akadémiai Kiadó, Budapest, pp. 211-226.

Jolaremon, (2001). Shamanism. *International Encyclopedia of the Social & Behavioural Sciences*. Available at: <https://www.sciencedirect.com/topics/social-sciences/shamanism> Accessed online on 08 December, 2020, pp. 14032-14035.

Jorgensen, D. (2013). Art History in Remote Aboriginal Centres. *Coolaba, Volume 11*.

Joy, F. (2013). *To All Our Relations: Evidence of Sámi Involvement in the Creation of Rock Paintings in Finland*, in: *Polar Record / First View Article*. Copyright © Cambridge University Press, pp. 1-4.

Joy, F. (2015a). External and Internal Factors: The Desecration and Destruction of Pre-historic Rock Paintings in Finland. In: Leena Heinämäki, Thora Herrmann (eds.) *The Sacred Arctic - Experiencing and Protecting Sacred Natural Sites of Sámi and other Indigenous Peoples*. Published by Springer: http://dx.doi.org/10.1007/978-3-319-48069-5_9, pp. 129-157.

Joy, F. (2015b). The Absence of Sámi History and Cultural Heritage in Children's Education in Finland. In: Heinämäki, Leena, Herrmann, Thora Martina & Raslich, Nichole A (eds.) *Preserving Sacred Sites. Arctic Indigenous Peoples as Cultural Heritage Rights Holders. Jurдика Lapponica 39*. Published by the Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland Printing Centre, Rovaniemi, pp. 21-27.

Joy, F. (2018). *Sámi Shamanism, Cosmology and Art as Systems of Embedded Knowledge*. Doctoral Dissertation. Acta Universitatis Lapponiensis 367. The University of Lapland. URL: <http://lauda.ulapland.fi/handle/10024/63178>

Kare, A. (ed) (2000). Rock Paintings in Finland in: *MYANNDASH: Rock Art in the Ancient Arctic*, Arctic Centre Foundation, Rovaniemi, pp. 88-127.

Kivikäs, P. (1990). *Saraakallio - Munaiset Kuvat*. Jyväskylä: Atena.

Kivikäs, P. (1995). *Kalliomaalaukset: Muinainen Kuva-Arkisto [Paintings on Rock: An Ancient Picture Archive]*. Jyväskylä: Atena.

Kivikäs, P. (2005). *Kallio, Maisema ja Kalliomaalaus [Rocks, Landscapes and Rock Paintings]*. English translation by: Jarmo Kankaanpää. Published: Jyväskylä: Minerva.

Kivikoski, E. (1967). *Ancient Peoples and Places: Finland*. Thames and Hudson, London.

Kawagley, O. (2006). *Yupiaq Worldview: A Pathway to Ecology and Spirit*. Prospect Heights, IL: Waveland Press, Inc.

Lahelma, A. (2005). Between the Worlds. Rock Art, Landscape and Shamanism in Subneolithic Finland. In: *Norwegian Archaeological Review, Volume 38, No1*. Routledge Taylor & Francis, pp. 29-47.

Lahelma, A. (2007). On the Back of a Blue Elk: Recent Ethnohistorical Sources and Ambiguous Stone Age Rock Art at Pyhänpää, Central Finland. *Norwegian Archaeological Review* 40 (2). Published by Routledge. Oslo, pp. 113-137.

Lahelma, A. (2008). Communicating with Stone Persons: Anthropomorphism, Saami Religion and Finnish Rock Art. In Walderhaug, E. & Forsberg, Lars. (editors.) *Cognition and Signification in Northern Landscapes. UBAS International Series*. (University of Bergen) Accessed on 08 May 2012.

Lahelma, A. (2012). Kuka Maalasi Kalliot? [Who Painted the Rocks?]. *Muinaistutkija* 1/2012, 2-22.

Luukkonen, I. (1994-2021). *Suomen Kalliomaalauksia [Finnish Rock Paintings]*. Available at: <http://www.ismoluukkonen.net/kalliotaide/suomi/> Accessed on 29 March 2012.

Magro, G., Ramos de Carvalho, J and Marcelino, M. J. (2014). Improving History Learning Through Cultural Heritage, Local History and Technology. 10th International Conference Mobile Learning 2014. *Sociology - International Association for Development of the Information Society*. Available at: <https://files.eric.ed.gov/fulltext/ED557197.pdf> pp. 34-40.

Mendes, A. J. (2009). *Estudos do Património Imprensa da Universidade de Coimbra*. Coimbra, Portugal.

Nordin Jonsson, Å. (2011). Ethical Guidelines for the Documentation of *Árbediehtu*, Sámi Traditional Knowledge. In: Porsanger, Jelena and Guttorm, Gunvor. (eds.) *Working with Traditional Knowledge: Communities, Institutions, Information Systems, Law and Ethics: Writings from the Árbediehtu Pilot Project on Documentation and Protection of Sami Traditional Knowledge*. Sámi Allaskuvla, Kautokeino, pp. 97-125.

Nunez, M. (1994). Finnish Prehistoric Rock Art and Local Historical Traditions. In: Jalonen, Olli-Pekka (ed.). *Finnish Essays on Arctic Issues*. Tampere Peace Research Institute Occasional Papers No. 54. Tampere (Pikakopia Oy), pp. 54-73.

Pesonen, M and Westermarck, H. (2003). *Suomen Kansa - Mistä ja Mikä?* [The Finnish People - From Where and When?]. Helsingin Yliopiston Vapaan Sivistystyön Toimikunta, Helsinki.

Samer.se. (2020). Gods and Goddesses. Available at: <http://www.samer.se/4597> Accessed on 10 December 2020.

Stefon, M. and The Editors of Encyclopaedia Britannica. (2020). *Leib-olmai*, *Sami* Deity. Available at: <https://www.britannica.com/topic/Leib-olmai> Accessed on 10 December 2020.

Sveen, A. (1996). *Rock Carvings: Jiepmaluokta Hjemmeluft, Alta*. Trykkforum Finnmark AS.

Vinikurova, U. A. (2015). Ecosophy as Awareness of Cosmophysical Origin of Sacred Places of the Arctic Peoples. In: Heinämäki, L., Herrmann, T. m. & Raslich, N. A. (eds.) *Preserving Sacred Sites. Arctic Indigenous Peoples as Cultural Heritage Rights Holders. Jurдика Lapponica 39*. Published by the Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland Printing Centre, Rovaniemi, pp. 28-29.

Vitebsky, P. (2005). *The Reindeer People. Living with Animals and Spirits in Siberia*. New York: Houghton Mifflin Company.

WINHEC. (2009). *WINHEC Research Standards*. - http://www.win-hec.org/files/WinHEC_Research_Standards_February%202011.pdf (21.02.2011).

Interview material

Mathisen, H. R. (2012). Pictures from the "*Báhppajávrrri Skuvla* [Prestvannet School] in Romsa/Tromsø, Norway. Correspondence by email.

Lehtinen, L. (2020). Children's Rock Painting Education at the Kierikki Stone Age Centre and Museum, Il, Oulu, Finland.

Pentha, I. B. (2021). The Development of Teaching and Approaches to Art Education in the Prestvannet School, Tromsø, Norway.

Telephone interviews

Johansen, E. D. (2012). Rock Paintings and Rock Carvings as Educational Resources for Children at the Alta Rock Art Site, Finnmark, Norway.

Kalén, Kr. (2012). Rock Paintings as Educational Resources for Children, at the Västerbotten Museum, Umeå, Sweden.

Pentha, I. B. (2012). Sámi Children's Education at the Prestvannet Skole, Tromsø, Norway.

Puronniemi, M. L. (2013). Modern Rock Paintings at the Base of Hikivuori Hill, Tampere.

Email correspondence

Jantti, E. (2021). How Children Engage with Rock Art Education at the Kierikki Stone Age Centre and Museum, Il, Oulu, Finland.

Kataja, R. (2013). The Swastika Rock Painting at Hikivuori, Tampere.

Lähdesmäki, U. (2013). Hikivuoriasiaa.

Photographic material

Aamulehti (2013). Luolan Salaisuus Loytyy Rummusta. Tampere

Endnotes

[1] See for example the valuable work by Tiina Äikäs from the University of Oulu in her esteemed works: From Boulders to Fells: Sacred Places in the Sámi Ritual Landscape (2015).

[2] See the website <https://www.vbm.se/en/utstallningar/rock-art-in-sapmi/?cn-reloaded=1>