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## Rock Art and Children: Towards an Inter-Generational Perspective on Past and Present Visual Cultures



Sally K. May<sup>1</sup> and Joakim Goldhahn<sup>2</sup>

<sup>1</sup>PERAHU, Griffith Centre for Social and Cultural Research, Griffith University, Gold Coast, QLD, Australia

<sup>2</sup>Centre for Rock Art Research + Management, School of Social Sciences, University of Western Australia, Perth, WA, Australia

### Introduction

There is a growing awareness that children have been overlooked and neglected within archaeological analyses and interpretations of past societies (e.g., Lillehammer 1989, 2015). The reason for this is manifold (see Crawford et al. 2018; Cunnar and Högberg 2015; Derricourt 2018; Langley and Lister 2018), but an apparent difficulty is that it is hard to denote the physical presence of a gendered person through analyses of material culture alone. Children are no exception. As other subaltern groups, children tend to become invisible in archaeological analyses, but the absence of evidence is not evidence of absence. So, how can analyses of rock art be used to study children and childhood in the past?

### Definition

In this entry, we highlight how concurrent research about the interrelatedness of rock art and children might be explored within archaeological research. The reader should be aware that neither “rock art” nor “children” or “childhood” are universal concepts and that the meaning of these notions alters in time, space, and in different cultural contexts. We have chosen to follow Taçon and Chippindale’s (1998) analytical division between informed and formal methodologies within rock art research. We start with the latter and discuss how formal archaeological analyses of rock art can contribute to unfolding children’s role in past and present societies. We then shift perspective and discuss some anthropological case studies where this is revealed through informed methodologies. Our examples are mainly gathered from our previous and ongoing research in northern Europe and Australia; however, we are confident that our findings have relevance for understanding rock art globally.

### Historical Background

Rock art is the most tangible archaeological source material that reveals intangible aspects of humanness, but only rarely has this phenomenon been used to highlight children’s role in the past.

Under influences of formal archaeological analyses (e.g., Bednarik 2008; Garcia 2003; Guthrie 2005; Snow 2006) as well as gender theoretical perspectives (e.g., Hays-Gilpin 2004, 2012; Goldhahn and Fuglestedt 2012), this has slowly started to change (e.g., Brady et al. 2020a; Cooney-Williams and Janik 2018; Goldhahn et al. 2020). Rock art provides a visual account highlighting culturally important objects, animals, social practices, and beliefs, which often include depictions of engendered personhoods, including children. The latter may be revealed through variation in the size of the depicted humans; however, this might also be a way to express social positioning more generally, such as power relations and ideologies, mythological beings, gods and goddesses, and more. This dilemma is hard to resolve, so we focus on possible methodologies and perspectives to explore children's relationship to rock art.

In this context, it is essential to emphasize that rock art constitutes a vital part of past and present societies' visual culture, which means that this phenomenon is related to other material culture we address as archaeologists. Depictions of objects made out of stone, bronze, iron, wood, fiber, etc., relate to the cultural values of real objects used in social practices (Goldhahn 2014). Rock art highlights some of these practices, but far from all. In this context, it is necessary to remember that well-preserved objects of perishable materials indicate that the imagery we see expressed through rock art was also manifested in other media. This could include personal objects and ornaments; clothes; tattoos and body art; decorated houses and huts; boats and other vessels, and more. For example, the visual culture of Bronze Age Scandinavia included figurative imageries similar to rock art that were created out of wood (Marstrand 1967; Oldeberg 1957); painted on wattle-and-daub on houses (Lomborg 1973); engraved and painted on ceramic (Goldhahn 2008a, 2019); cast on bronze objects (Kaul 1998; Goldhahn 2019); engraved on objects made out of deer antler (Frost et al. 2019); decorated bone objects (Jensen 2002); and more.

Rock art is our most trustworthy source about past societies' material culture in many instances.

The beautification of humans in the Late Pleistocene in northernmost Australia through portable art, for example, included ornaments and objects made out of wood, feathers, hair, fiber, plants, ochre, etc., and this is vividly revealed through the astonishing Gwion Gwion and Dynamic Figure rock painting traditions (e.g., Ngarjono et al. 2000; Walsh 2000; Johnston et al. 2017; May et al. 2018). Needless to say, it is infrequent that such objects are discovered through archaeological excavations, which makes rock art an indispensable source of information about the use of material culture in social positioning in the past. The lesson to be learned from these and other examples should be that analyses of past and present visual cultures through formal analyses demand a holistic approach where rock art constitutes an essential source material.

### Key Issues/Current Debates

Key issues in rock art research and its relatedness to children include:

1. How can we, as archaeologists, identify children through analyses of rock art.
2. How can we reveal their participation in the creation and use of rock art.
3. How can we use archaeological context to explore children's relationship to rock art.
4. How can we use informed methodologies to interpret the outcomes of i–iii to broaden our understanding of children's relationship to rock art.

### International Perspectives

#### Identifying Children in Rock Art Assemblages

Depictions of anthropomorphic beings that could be interpreted as children are relatively rarely explored through formal analyses by rock art researchers (cf. Meaden and Bender 2020). Many times children seem to be absent. A possible reason for this might be that the imagery we are analyzing were created and used by



**Rock Art and Children: Towards an Inter-Generational Perspective on Past and Present Visual Cultures, Fig. 1** Example of “processions” from different parts of Scandinavia expressing homogenous and heterogeneous engendered beings dated to the Middle and Late Bronze Age c. 1600–500 BCE. Some of the later examples might depict people of different ages. (Source: reworked after Coles 2003)

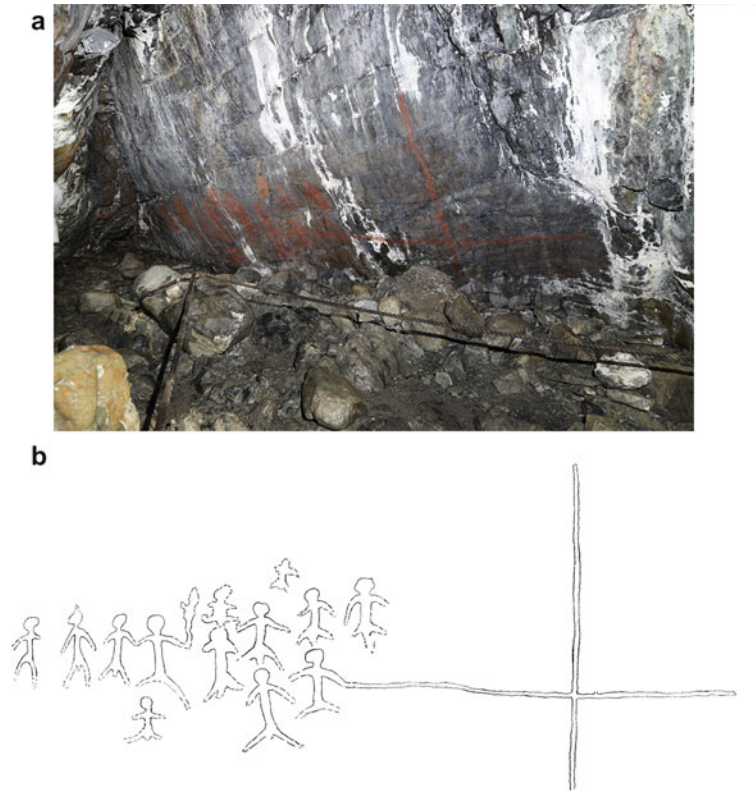
a specific gender of the cultures we explore as archaeologists. For instance, *Imurran* Samburu warriors in northern Kenya still create rock art as part of their cultural identity and practice (see below). The anthropomorphic figures in these assemblages are said to depict dancing warriors or their female spouses (Goldhahn et al. *in press*). Consequently, elders and children are not frequently depicted in Samburu rock art, resulting in homogenous depictions of anthropomorphic beings of a specific age set. However, globally there are many instances where variation in depicted anthropomorphic beings is present and has not been used to address children and childhood. For example, Coles (2003) presents a study of engraved depictions of “processions” from the Middle and Late Bronze Age Scandinavia, here

c. 1600–500 BCE. Sometimes these anthropomorphic figures are being depicted in a homogenous way (Fig. 1); other times, such as in the famous burial cairn Bredarör on Kivik in Scanian (see below), these seem to be engendered and representing both female and male individuals who are engaged in ceremonial practices (Goldhahn 2013). Anthropomorphic beings depicted with weapons and other material culture might be used to engender such imageries (Horn 2017). However, in many cases, these processions seem to include anthropomorphic beings in different sizes and with additional attributes, such as headgears, bird masks, different clothing, weapons, etc., which indicates that they depict something more than a “binary opposition of sexes,” i.e., male and female persons, possibly also children (Fig. 1).

Another example of depictions of different ages and genders is anthropomorphic figures painted in caves along the coast of Mid-Norway. These figures are depicted facing the observer in a relatively static position (Fig. 2). The first impression is that these figures are homogenous. However, a closer examination reveals differences in sizes, and some figures are attributed with objects and headwear, some possibly made out of feathers. Interestingly, the variation in depictions of human figures in the Solsemhula Cave on Leka, dated to c. 2000 to 500 BCE, is replicated in the analyses of human bones that have been found deposited in front of these paintings, where bones of at least a “matrus” (a really old adult), an adult, and a child were identified (Goldhahn 2019: 312–316). Even if there are other possible explanations for these variations, something that always will be the case in archaeological analyses of rock art, the way that the anthropomorphic beings are depicted in our examples implies it is necessary to explore the possibility that some of these figures represent children (Figs. 1 and 2).

A more direct way to find children in rock art is through prints and stencils of human body parts, such as fingers, fingertips, hands, and feet. Prints and stencils of hands are a global phenomenon stretching back to the Pleistocene (e.g., Aubert et al. 2014; Pike et al. 2012; Veth et al. 2018;

**Rock Art and Children: Towards an Inter-Generational Perspective on Past and Present Visual Cultures, Fig. 2** Artwork from the Solsemhula Cave on Leka (Norway). The cross measures  $2.64 \times 3.27$  m. (Documentation by Kalle Sognnes, published with his kind permission. Photo: Jan Magne Gjerde and Joakim Goldhahn)



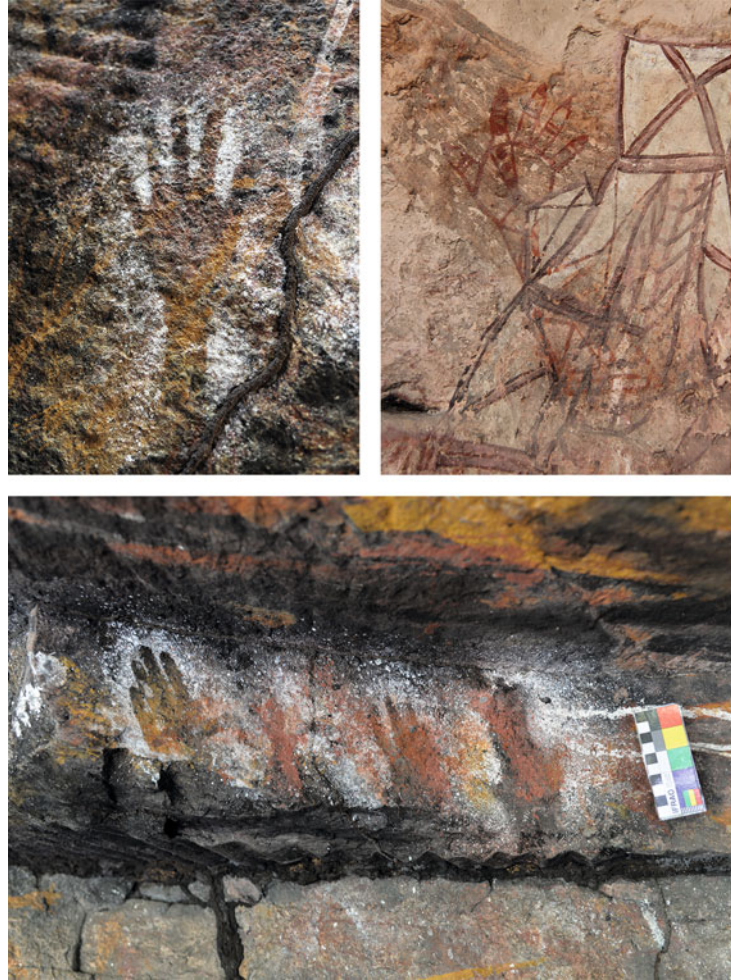
Walker et al. 2018), and similar images are continuing to be made to this very day in certain places, such as Australia. Due to morphological variations within and between different human groups, it has not proven easy to distinguish male from female hand motifs (cf. Bednarik 2008; Gunn 2006; Guthrie 2005; Snow 2006). Recently, research by Rabazo-Rodríguez et al. (2017) has improved the methodology for such analyses. They based their studies on the statistical difference between hand length variation, index finger length, and ring finger length among now living persons. They found that the length of fingers was most statistically significant in distinguishing between sex. In comparison with 21 stencils from the El Castillo Cave in Cantabria (Spain), believed to be dated to the Late Paleolithic, they distinguished eleven male and ten female stencils (Rabazo-Rodríguez et al. 2017, cf. Snow 2013). An apparent weakness with such analyses is that smaller hands interpreted as female can potentially have been

made by adolescents. It is hard to come to terms with similar source-critical issues. However, children's handprints and stencils are easy to identify through their diminutive size (Fig. 3).

The same can be said for prints and stencils of feet, a motif that is also frequently depicted in the form of engravings. This motif also seems to have a global distribution. Analyses of the variation of feet figures from the Bronze and Iron Age in Italy and Scandinavia suggest that these correspond to variations in foot sizes among humans (Arcà 2015; Fossati 1997; Goldhahn 2008b). This indicates that human feet served as a model; sometimes even toes are depicted. Based on the variation of size of the depicted feet, three independent studies on Middle and Late Bronze Age imagery in Scandinavia concluded that most of these images represent feet from children, adolescents, and/or females (e.g., Hauptman Wahlgren 2002; Nilsen 2005; Skoglund 2006). Sometimes, specific rock art sites seem to have been used predominately for depicting feet of children.

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**Fig. 3** Example of children's hand stencils from the Kakadu area in western Arnhem Land, all made by Djimongurr and his daughter Josie Maralngurra in the late 1950s and early 1960s. (Source: Goldhahn et al. 2020)



At Törnsfall 107 in Tjust in south-eastern Sweden, for instance, no less than 51 feet images were found surrounding two Middle or Late Bronze Age cairns (Goldhahn 2012). On the main panel, 38 feet motifs were registered, measuring from 8 to 27 cm in size, i.e., from feet in length of an infant to adults. Twenty-five of these feet figures are arranged in rows, and some of these were partly found outside and partly underneath the cairn (Fig. 4). These engraved feet images measure between 8 and 23 cm. If we assume that these figures depict natural size feet, these would all belong to children between one and eleven years of age. Some research has suggested that these images were first outlined around human feet before being engraved (e.g., Malmer 1981). If this would be the case, the feet

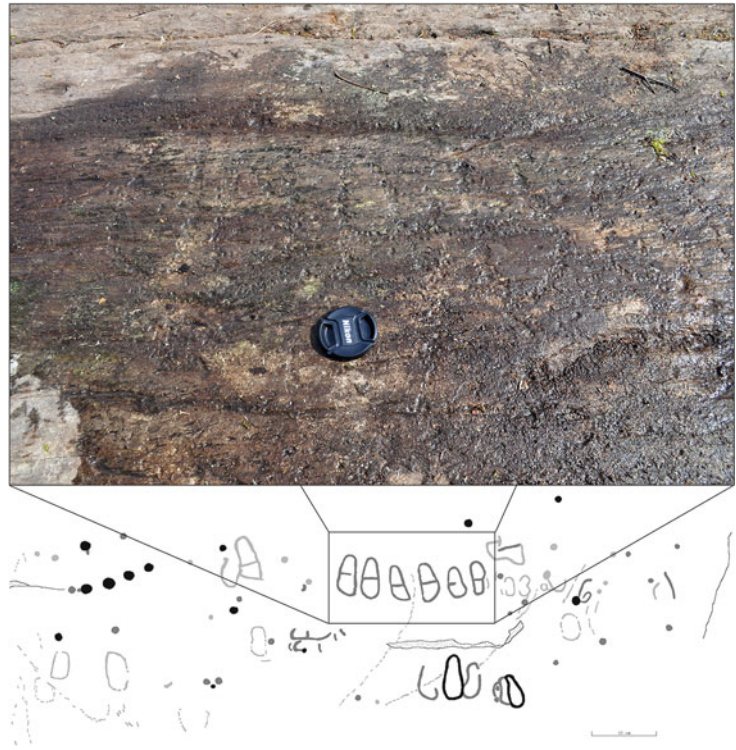
figures from Törnsfall 107 would represent even younger children (Goldhahn 2012).

**Children's Participation in Creating and Viewing Rock Art**

A promising method to explore children and rock art is to analyze the fingerprints left in pigment when rock paintings have been created. Mundorff et al. (2014) has identified an apparent statistic dimorphism of the breadth of the ridge of female and male fingers among modern populations. These variations have been adopted to discuss the authorship of paintings in various contexts (Martínez-Sevilla et al. 2020). It has also been used to reveal children's presence and their participation in creating artwork (Kamp et al. 1999). For instance, Bednarik (2008: 177) has argued

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**Fig. 4** Some of the engraved feet from Tørnsfall 107, the smallest figure is just 8 cm long. Photograph by Goldhahn, documentation shows some of the rows of depictions of children's feet, with the area covered by the photograph highlighted. Scale is 50 cm



that an Aurignacian painted limestone plaque fragment from Hohle Fels in Germany has been decorated with double rows of dots stamped on with juvenile fingertips.

Other direct evidence indicates the presence of children in social contexts associated with rock markings. An often-discussed phenomenon in these contexts is so-called finger flutings found in limestone caves in various parts of the world, e.g., marks resulting after dragging fingers through soft surfaces in the caves. Studies from Australia and Europe have been conclusive in identifying children as among the artists (van Gelder 2015b). Even young toddlers left their finger marks in the Rouffignac cave in today's France (Sharpe and van Gelder 2006a, b).

These findings are in line with evidence of footprints on the floor of Paleolithic caves in Europe used for making rock art (e.g., Clottes 1985), which indirectly links children to the rock art media. In Chauvet, some have argued that most of the marks seem to belong to adolescents and children (Garcia 2003), which is a pattern repeated in other caves (Roveland 2000).

Analyses of the evidence of body parts of children and young adults open up an avenue to interpret them as the artists creating these artworks, and/or that these markings were left in coming of age ceremonies conducted in relation to the rock art media.

**Archaeological Contexts of Children in Association with Rock Art**

A recurrent phenomenon globally is that a rock art panel is dominated by a single figure that distinguishes itself by depicted subject matter, size, aesthetic qualities, and/or skill. Such prominent figures or panels can often be surrounded by artworks that are described as “less skilful” and suggest that the latter might have been created by “children” (e.g., Leroi-Gourhan 1965). Others have used the artworks' height above the ground level to identify children's presence (e.g., Clottes 1995). This has led several researchers to suggest that we are witnessing some kind of apprenticeship system between “master artists” and their “students” (Clottes 1995, see also May 2008; Taylor 1996 for a theoretical discussion), which potentially could be interpreted as the presence of

children (cf. see Högberg 2018 for similar studies of children's relationship flint knapping). Once again, such interpretations are highly likely, with further supplementary methodologies and analyses of the artworks needed to aid interpretation.

Recent theoretical perspectives on “miniatures” and “miniaturization” of material culture has linked this cross-cultural phenomena to children (e.g., Knappett 2012). Langley and Lister (2018), for instance, have argued that such objects were created to be used as children's toys. Recent discoveries of miniature rock art stencils of objects and animals in the Gulf of Carpentaria in Australia, has suggested that these might be connected to children (Brady et al. 2020a). The ongoing discourse about the meaning and significance of miniaturization in archaeological settings, provides yet another argument to highlight the need of incorporating children in our narratives about the past.

Another source for discussing the relationship between rock art and children are burial constructions. Hundreds of rock engravings are associated with burials in northernmost Europe and it has been suggested that these artworks were newly made when these were deposited (Goldhahn 2018). The oldest example originates from the Middle Neolithic B, here c. 2800–2350 BCE, and consists of cup mark stones that been placed in single grave burials belonging to the Corded Ware Culture (Malmer 2002). One of these decorated stones were found in a burial at Kastanjegården in Malmö City (Sweden). It had three freshly made cup marks, and it had been placed over the head of two children that was about five to eight years old when they died (Winge 1976). Among the north European burials with rock art, cup marks stones show the most substantial relationship to children (Fig. 5). As indicated, most of these have been newly refreshed before they were deposited with the deceased (e.g., Goldhahn 2016, cf. Becker 1990:63). Some burials with cup marks (Johansson-Lundh and Rasch 1991) and outcrops with cup marks (Molin 1999) have been used for continuous depositions of deceased children over extended time periods.

In the assemblage of rock art in association with burials, figurative engravings are most common during the Middle and Late Bronze Age, c. 1600–520 BCE. These are usually interpreted as created to celebrate prestigious chiefs and warriors (Kristiansen and Larsson 2005; Ling et al. 2018). The most famous of these comes from the burial cairn Bredarör on Kivik from Scania in southern Sweden (Goldhahn 2013). In the middle of the cairn, a c. 4 × 1.5 m stone cist was found consisting of ten slabs. Eight of these were decorated with over 50 rock engravings facing the deceased (Fig. 6). The intriguing images from this cist have traditionally been interpreted as if they were honoring an individual, often described as a “king,” “chief,” or “warrior shaman” (e.g., Kristiansen and Larsson 2005; Randsborg 1993). However, radiocarbon and osteological analyses of human remains gave the surprising result that the decorated cist had been used for c. 600 years, from 1400–800 BCE. Both inhumation and cremation burial custom was practiced during this time, and six out of seven of the deposited individuals seems to have been under the age of 15. The adult was the youngest burial identified (Goldhahn 2009, 2013, 2019). Other prominent figurative engravings from burials from this period include bones from young adolescents and children (e.g., Arne 1917; Goldhahn 2013), which shows that centuries of archaeologists' preconception distorted our perceptions by excluding children in our analyses and interpretations.

### **Informed Perspectives on Rock Art and Children**

In trying to engender rock art, formal analyses tend to focus on determining the biological sex and identifying the presence of children. We mean that the latter notion is not always articulated but generally means individuals who have not finished their physical growth to be called an “adult.” It is easy to point out both biological and anthropological studies that challenge such modernistic preconceptions. For example, the “marriage age” of individuals in so-called traditional societies is often much younger than today's western societies. It is also easy to point



**Rock Art and Children: Towards an Inter-Generational Perspective on Past and Present Visual Cultures, Fig. 5** Cremation urn from Sandagergard from the island Bornholm in Denmark, containing the remains of a child and that had been covered by a stone-slab-lid with freshly made cup marks. (Photograph by Martin Stoltze, published with his kind permission)

out societies and cultures where an individual is considered an “adult” at a much higher age than among western societies of today. Among Samburu, for instance, a man is first thought to be an adult after he has served as a warrior for c. 15 years (Marmone 2020), e.g., after passing c. 30 years of age. Importantly, it is only during the period a person serves as a warrior, e.g., a specific age set of *Imurran*, that he creates rock art (Fig. 7). Samburu rock art is made as a part of an inter-generational visual culture that signifies the coming and going of a specific age-set of warriors, including specific “warrior” insignia in the form of clothes, hair-style, ornaments, and body art (Goldhahn et al. *in press*). Once again, we find the need to consider a broader set of materialities when discussing a specific society when we try to engender visual culture. This also emphasizes the central role of teaching “children” and “adolescents” in the transmission of cultural knowledge over generations (Gärdenfors and Högberg 2017).

Intergenerational media often plays a key role in the transmission of cultural knowledge among different societies, something that we often experienced in our own fieldwork with Aboriginal people in western Arnhem Land, Australia. Visiting rock art sites evokes memories about

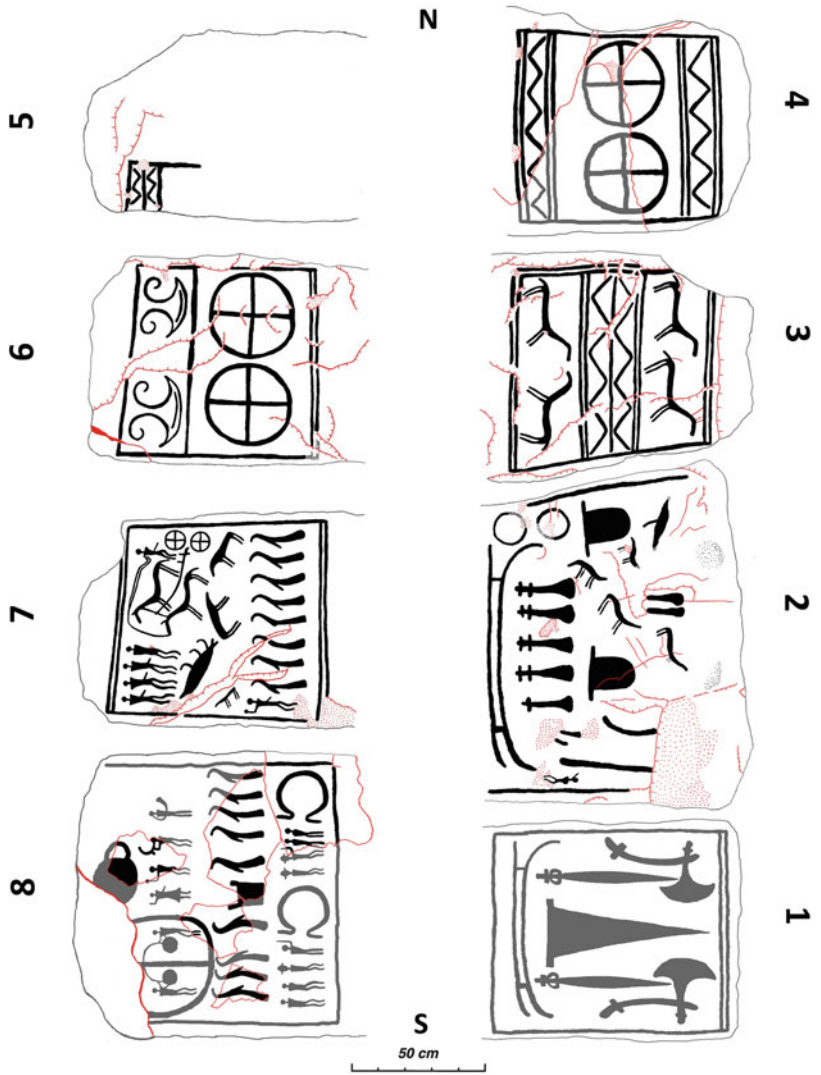
past and present family and kin, and the imagery is actively used to articulate and transmit cultural knowledge to children. Well-known Aboriginal artist Lofty Bardayal Nadjamerrek (1926–2009) provided an account that he often asked his father or grandfather to entertain them with a story, where after they would gather pigment, binders, a brush, and water, and create rock art while they were telling a story or singing a song that unfolded the present-past and future (e.g., Garde 2004; Munro 2010, see also Goldhahn et al. 2020; May et al. 2019; Mulvaney 1996; Munn 1973).

In western Arnhem Land rock art were created as part of a broader cultural belief system that included complex artistic traditions that cut across media (e.g., Taylor 1996). Some of these artworks are argued to have been created for enjoyment and/or to tell an amusing story from everyday life (Chaloupka 1993; Haskovec and Sullivan 1989; Taçon 1989). However, as May (2008) argues, the same artworks could also be used in educational situations where they acted as “gateways” unfolding esoteric cultural values and laws. For example, depending on the audience it may be explained as “just for fun,” or “just a fish,” or for those of appropriate cultural standing, the deeper meanings may be revealed (also Morphy 1999; Brady et al. 2020b).

Our own fieldwork has revealed that children were commonly part of rock art creation, sometimes actively involved in preparing pigments or by requesting to be entertained. Sometimes children are manifested through stencils and motifs of their hands, but other times it is impossible to reveal their presence through analyzing the rock art imagery (May et al. 2019). This also applies to artworks that embody age and gender restricted cultural knowledge. Some of the artworks we documented with Senior Aboriginal Traditional Owners, were created during everyday family visits to rock art sites, in the presence of children, which stands in stark opposition to the restricted ritual and ceremonial contexts these paintings sometime refer to (May et al. 2019). A conclusion we draw from this is that rock art images that depict and embody ceremonial and/or other kinds of esoteric knowledge, are not necessarily created and used in such contexts. And more



**Rock Art and Children: Towards an Inter-Generational Perspective on Past and Present Visual Cultures, Fig. 6** The decorated slabs from Bredarör on Kivik, in Scanina south-east Sweden. (Documentation by Tommy Andersson and Andreas Toreld, published with their kind permission)



Dokumenterad 2014/15 av Tommy Andersson och Andreas Toreld

importantly, such artworks could be created in the presence of children. In the latter scenario, the stories that the artists used to entertain and educate children were adapted to fit to their age and gender, and their level of initiation (Goldhahn et al. 2020).

**Future Directions**

We believe that the inter-generational aspect of rock art has often been forgotten and that it needs to be highlighted in future research relating

to the meaning and significance of this visual culture. As demonstrated above, within archaeological discourses, we do not lack material culture connecting rock art and children, but there is still a general lack of analyses of the relationship between these phenomena. This seems to echo other subaltern groups within archaeology, demonstrating that humanizing archaeology is a battle that has to be won, over and over again. One reason for this could be that formal analyses of rock art strive towards a “grand narrative” and “global perspectives” on rock art, which tend to frame the artworks into general archaeological

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**Fig. 7** *Lmurran* rock art from South Horr, Kenya. Lmapili Lengewa and Leramis Lengewa with some rock paintings that Lmapilis brothers' made in 2005 when they were *lmurran*. (Photograph: Ebbe Westergren, published with his kind permission)



discourses about “art for art sake,” “sympathetic magic,” “structuralism,” “semiotic,” “phenomenology,” “gender,” and more; narratives that seem to neglect children and make them invisible. A fruitful way to reveal the many relationships between rock art and children might be to always include them in our studies, and explicitly argue for when and why they should be excluded. One way to do so, is to work towards the idea of rock art as an inter-generational media aiding societies in the transmission of cultural knowledge and beliefs.

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