Abstract and Keywords

Australia has some of the most complex and extensive examples of modified rock art (e.g., superimposed, re-painted, re-drawn, re-pecked) in the world. Typically used to document style-based chronological sequences and address questions of meaning and intention, less well known are the relational networks within which these ritual modification practices are embedded. In this article we explore the ritual rock art modification relationship to further highlight the value of a ritual-based approach to access and enhance understanding of modified rock art. Central to this approach is the idea that modified motifs do not exist in isolation—their placement, the actions, rules, and structures linked to the modification process, along with the surrounding landscape, are all part of relational networks that extend across multiple social and cultural realms. By identifying key themes associated with this ritual practice, we explore relational qualities to further understand the ritual rock art relationship to broaden archaeological and ethnographic understanding of rock art.

Keywords: rock art, superimposition, ritual, relatedness, ethnography, symbolism

Introduction

Australia is home to some of the most complex and extensive examples of modified rock art in the world, including superimposed, re-marked, re-touched, re-painted, and re-carved motifs. For well over a century, Western-trained academics have used modified rock art to develop style-based chronologies, and to explore continuity and change in the lives of those who created and engaged with such rock art (e.g., Chaloupka 1993; Gunn 2018; Harper 2017; Haskovec 1992; Lommel 1952/1997; McCarthy 1974; Morwood, Walsh, & Watchman 2010; Mountford 1968; Motta 2019; Spencer & Gillen 1899; Walsh 1994; Ward 1992; Watchman 1992). Importantly, in Australia, a growing number of Indigenous explanations and perspectives concerning rock art modification have also
played a key role in communicating to academic audiences and the general public the contemporary social and cultural significance of rock art (e.g., Blundell & Woolagoodja 2005; Mowaljarlai, Vinnicombe, Ward, & Chippindale 1988; Mangolamara, Karadada, Oobagooma, Woolagoodja, & Karadada 2018). Drawing on this extensive body of literature and our own research, this article aims to add another layer of understanding to how we might perceive the production and presence of modified rock art, both as ritualized acts and social practices operating within complex Indigenous networks of relationships and relatedness.

It is generally accepted in archaeological and anthropological discourse that the production and engagement with rock art is a ritual act—a type of repeated, communicative performance or social action that can be used to understand and interpret aspects of culturally ordered social life at various points in time and in a range of contexts (e.g., Goldhahn & Ling 2013; Hays-Gilpin 2004; Ross & Davidson 2006; Whitley 2011). Our aim here is to broaden such understandings to show how the placement, social actions, rules, and structures linked to the modification process are part of a complex relational network that extends across multiple social and cultural realms. In doing so, we continue to build on efforts to highlight how rock art can be viewed as ‘images of relatedness’ (Brady & Bradley 2014), where individual or groups of motifs and sites exist within a network of Indigenous social and cultural relationships in the past and present. To illustrate our point, we use a series of archaeological and ethnographic examples involving modified rock art from across the Australian continent to identify key themes and contexts where the act of modification of preexisting motifs is undertaken in ritual performance.

Defining Ritual

Rituals form a key part of the social and cultural lives of people across the globe. There are many definitions, explanations, and considerations of “ritual” in anthropological and archaeological literature (e.g., Bell 1992; David 2002; Elkin 1964; Geertz 1973; Goldhahn 2016; Hicks 2010; Morphy 1994; McNiven 2013, 2016; Rappaport 1999; Renfrew 1994; Swenson 2015), but consensus about how best to define ritual has yet to be reached. In this article, our core definition of ritual is the performance of a range of repeated, normative behaviours or social actions carried out at specific times or places by individuals or groups. These performances or social actions are usually defined as symbolic and meaningful; they are thought to communicate messages, ideas, and values; and they typically follow some form of set orders or procedures that show that these actions are enmeshed in a nexus of relatedness. The form and duration of these normative behaviours or social actions can be varied and repeated, for example, over a day, a year, or thousands of years. Our approach to the question of whether rock art is ritual in nature relies on rock art meeting our ritual-focused criteria. If, as we described above, a ritual action implies the performance of a range of repeated, normative behaviours or social actions, then where rock art can be clearly embedded in this framework it is by definition ritualistic.
In presenting our definition and description of ritual, we recognize that identifying the meanings or meaningfulness of similar repeated, normative behaviours or social actions performed at specific times or places can be interpreted differently according to their social and cultural contexts. For example, in some countries, hunting is a leisure or recreational activity guided by government regulations concerning set-times for hunting throughout the year, limits on animals hunted, and so on, whereas in Indigenous contexts, hunting can be an intimate affair that is grounded in the context of reconnecting with supernatural spiritual or ancestral beings (Brightman 1993; Rose 1992; Villerslev 2007; Viveiros de Castro 2012; see also McNiven, this volume). Distinguishing ritual from non-ritual contexts and actions using an etic analysis that is defined by an ontology founded on naturalism could be construed as ethnocentric. Overcoming ethnocentrism is a key reason why many scholars (including ourselves) now embrace interpretative frameworks acknowledging a broad continuum of ritualized practices from the mundane to profane (i.e., Bell 1992; see Berggen & Nilsson Stutz 2010; Bradley 2005), with a focus on the performative, symbolic, communicative, intentional, relational, repetitive, and agentic aspects of social practices. In the following discussion, we do not focus on whether rock art modifications should be considered “secular” or of a ‘magico-religious’ nature, but rather on how emic and etic perspectives can broaden understandings of modified rock art.

**Ritual and Rock Art**

Ritual-based explanations for the production of some (but not all) rock art have been proposed by researchers around the globe for several decades. In most instances, these explanations have relied on the perceived relationship between religious or belief-based rituals and rock art. For example, the neuropsychological model posited that shamans undertaking rituals involving altered states of consciousness illustrated their visions on rock walls (e.g., Clottes & Lewis-Williams 1996; Lewis-Williams & Dowson 1988; Lewis-Williams 1981; Whitley 2000). In Europe, Palaeolithic rock art was previously linked to ‘sympathetic hunting magic’ by drawing on ethnographic recordings of the ritual creation of rock art in central Australia (e.g., Bégouen 1929; Breuil 1952; Reinach 1903). In analysing these attempts to explain rock art in ritual contexts, Ross and Davidson (2006: 306) point out that

the quite reasonable inference in many of these studies is that rock art results from ritual activity but it may well be that not all art recorded at such locations was produced for ritual purposes or during ritual performance. The ability to separate parts of rock art assemblages that formed an integral part of ritual performance from those created in different social contexts, would provide a clearer understanding of the role of rock art in ritual practices.

Ethnography has played a critical role in identifying magico-religious rituals involving rock art. Whitley’s (2011) global review of rock art, ritual, and religion provides several examples of rock art’s link to magico-religious ritual contexts. Informed by ethnography primarily from the United States and Australia, the direct-historical approach1, and
ethnographic analogy, examples of magico-religious rituals involving rock art abound and include:

- Vision quests by ritual specialists such as shamans (e.g., Lewis-Williams 1981; Whitley 2000);
- Puberty and initiation rites (e.g., Hays-Gilpin 2004; Keyser & Whitley 2006);
- Rites associated with ‘power manipulation’, such as healing, renewal, fertility, increase, maintenance, sorcery, and rain-making (e.g., Cole 2010: 24; Rose 1942); and
- The modification of existing motifs as part of ceremonies and rituals (e.g., Blundell & Woolagoodja 2012; Spencer & Gillen 1899, 1927).

Ross and Davidson (2006) present the most explicit attempt to link rituals to rock art in archaeological contexts through their Ritual Form Model (RFM), a methodology designed to assess ‘the potential for identifying ritual structure in rock art assemblages’ (2006: 305). The RFM uses an archaeological lens to identify contexts where rock art can be linked to ritual activity and production. It draws heavily on Rappaport’s (1999) seven key structural features of ritual (Ross & Davidson 2006: 312; see also Renfrew 1994) and focuses on identifying key ritual attributes:

- Invariance,
- Repetition,
- Specialized time,
- Specialized place,
- Stylized behaviour/stylized form,
- Performance and participation, and
- Form, which can hold and transfer a canonical message.

An attractive feature of the RFM criteria is that they do not focus solely on a motif in isolation, but also take in its relationships to place, cultural practices, and changes through time. By analysing rock art through these criteria, Ross and Davidson argue that ritual structures or ritual contexts can be identified archaeologically (see below).

Other approaches to describing ritual and rock art draw attention to the practice and implications of re-marking. Morphy (2012: 297) describes the ritual action associated with Australian rock art as iterative, or the “repetitive element of art practice in which variations of a particular design or schema are replicated over time or existing images are re-defined or repainted”. He also notes that the repeated actions involving re-marking rock art also serve as a means for artists to learn more about the style(s) or design conventions used to make rock art, and the meaning and relationships of motifs to Ancestral Beings (also referred to as Dreamings\(^2\) or other aspects of life) (Morphy 2012: 297).

Elsewhere in Australia, McNiven and Russell’s (2002) description of place-marking rituals undertaken by Aboriginal peoples on the colonial frontier is an example of ritualized prac-
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tices involving rock art. They note that place-marking has been a key feature of resis­
tance activities between Aboriginal people and Europeans, typically undertaken on the
“far side” of the frontier, away from Europeans, and designed to ‘affect the nature of fron­
tier encounters and control of lands’ (2002: 28; see Chaloupka 1993; David & Wilson
2002; Mulvaney 1992). Thus, the repeated and performative elements of place-marking at
a specific time and place and as part of a defined cultural context—the colonial frontier—
means that rock art in this context can also be considered a ritualized practice.

Superimpositioning, the repeated layering of one motif over another, and other tech­
niques of modifying existing rock art also possess the core criteria of ritual action given
their performative and repetitive elements. Modifications of distinguishable rock art is
recorded across Australia, and in some regions, such as western Arnhem Land in the
Northern Territory, and the Kimberley region in Western Australia, they can often feature
quite dense layering of motifs (Figures 1 & 2). Superimpositions are most often used by
archaeologists to develop style-based chronological sequences and, as we argue below,
can, in many cases, act as markers of ritualized practices through their intentional place­
ment and repetitive nature. The act of modifying existing motifs through superimposition­
ing and motif modification is not an event or activity that occurs by happenstance but by
its very nature is an intentional performance.

![Complex panel of superimposed rock art from Jawoyn Country, northern Australia](image)

*Figure 1* Complex panel of superimposed rock art from Jawoyn Country, northern Australia

(courtesy of the late M. Katherine; photograph by R. G. Gunn)
Unravelling visual layers using formal methods represents a key step to further understanding their ritualistic dimensions and relational contexts of production (see below for examples). While such analyses have been identified as a key element in rock art studies for some time, what is comparatively less well known are the relational networks within which such ritualized practices are embedded. Given that repeated modification fits the definition of a ritual action, what are the contexts of these performative acts, and their relational contexts and networks? To answer these questions, we explore rock art modification using archaeologically and ethnographically informed examples.

**Rock Art Modification—Formal Perspectives**

Katharine Sale (1995: 128; cf. Lewis-Williams 1974) provides one of the first detailed discussions devoted specifically to rock art modification. She notes that the terms archaeologists, ethnographers, and Indigenous communities use to describe modification techniques, such as re-done, freshening, re-paint, renovate, renew, and retouch, are highly variable with different nuances depending on the perceptions and emphases of each researcher. Our definition of rock art modification largely follow Sale’s terminology (cf. Gunn 2019; Motta 2019).

Understanding the modification process using a formal perspective begins with identifying superimpositioning in the rock art record (e.g., Chippindale & Taçon 1993; Gunn, 2018; Haskovec 1992; McCarthy 1974; Motta 2019). A stratified sequence formed by the layering of motifs signals a relative time sequence from the creation of one rock art motif
to another (i.e., the underlying motif (or motif part) was created before the overlying one; Figure 2). The time difference between these events can vary from a few moments (e.g., Goldhahn, May, Maralngurra, & Lee 2020) to many thousands of years. At any point in time, an existing motifs can be re-marked. Re-marking is an encompassing term that can involve multiple techniques such as re-painting, re-pecking, and re-drawing, and it indicates a clear awareness of the earlier motif. It can be a partial or a complete rendering that by definition must use the same technique and follow closely the outline and form of the original motif, although it is not limited to the use of the same colours. Whereas Sale uses the term re-marking in a broad sense to cover a range of re-marking processes, we add further types of re-marking:

Re-touching: the embellishment of an existing motif. Examples include adding an outline and body features (e.g., eyes, claws) or ornamentation (e.g., body designs) or changing the colour of existing features such as eyes.

Alteration: additions that alter the pose or status of a motif, such as the incorporation of weapons or accoutrements. Modification of this type changes the nature of the motif, and possibly its meaning.

Amendment: involves detecting/identifying ‘an earlier rendition of an image that differs from the realisation of the final image ... amendment is present when the final version of a painting is seen to differ from its underlying preparatory outline’ (Gunn 2019: 90).

Erasure: where an existing motif has been erased with a uniform wash and then a new motif painted on the washed area.

Retouch by scarring: where an existing motif is scarred to the extent that it can be poorly visible or entirely obliterated, such as later pecking over parts of an earlier motif. This process can involve abrading, direct pounding, or gashing/gouging. In some instances, this can be related to maintenance or increase rituals (e.g., Mulvaney 2009).

While descriptions and definitions of specific methods of modification are important, the key point that emerges is that each modification event is a ritualized practice in itself. By modifying an existing motif, an artist is consciously and intentionally performing a social action (re-painting, re-pecking, etc.) at a specific place, following a specific procedure (the act of modification) and is being used to communicate some form of message or idea.
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Archaeological Approaches to Ritual Rock Art Relationships

To demonstrate the utility of the RFM, Ross and Davidson (2006) applied Rappaport’s (1999) seven criteria for ritualism to a dataset of over 20,000 motifs from 285 rockshelter and open sites from sandridge deserts and gorge complexes in the arid zone of central Australia. In the context of rock art modification, the criterion ‘specialised places’ was met as extensively layered motifs was fixed in a specific and specialized location of repeated visitation. Ross and Davidson note that ‘engravings on some [rock] faces in the region are so dense that it is now impossible to identify individual images suggesting that marking of this panel was either undertaken by large numbers of people or frequently carried out’ (2006: 322). The ‘performance and participation’ criterion was similarly met with superimpositions in the form of ‘[r]emarking, repainting, outlining and abrading of existing motifs’ providing ‘the strongest archaeological evidence for participation by people, other than the original artist, in the production of art’ (Ross & Davidson 2006: 324).

Other researchers have employed Ross and Davidson’s RFM model. For example, Jones and May (2015) focused on a specific motif type—Northern Running Figures (NRF) of western Arnhem Land—to determine whether ritual performance was implicated in the making of rock art. Similar to Ross and Davidson, they used instances of modified rock art, in this case, the intentional placement of paintings of NRF motifs over older motifs, to determine whether NRF met the criteria of Repetition, Specialised Place, and Performance. Their focus on a specific style led them to also meet the Stylised Behaviour/Stylised Form criterion, concluding that ‘ritual social function on NRF art is signalled in many ways’ (2015: 65).

Quantifying Ritualized Modification Events through Time

The frequency and structure of ritualized modification events can be identified by quantifying the number of motif layers or by dating individual pigment layers on a motif or panel. Such formal methods enable the recognition of multiple acts of motif-making and modification, which we suggest represents a persistent ritualized practice.

At Undiara (Intyeyerre) waterhole, an important ritual site in Arrernte Country in central Australia, a large (545 cm x 205 cm) red and white striped painting is ethnographically known to be associated with the Kangaroo intichiuma increase re-painting ritual (Spencer & Gillen 1899, 1927). During visits to the site in the 1990s, one of us (RGG) recorded that the white paint used in the re-painting was ‘up to 4 cm thick and produced a three-dimensional relief that cut across the undulations of the vertical rock wall’ (Gunn 2000: 117). In the Kimberley region of northwestern Australia, where re-marking events have been extensively documented, Morwood, Walsh, and Watchman (2010: 6) identified a ‘Wandjina-style snake depiction’ consisting of thirty-eight superimposed layers, with the lowest and earliest layer dated to 375±35 BP (see also, e.g., Clarke 1976). At Nawarla Gabarmng in Jawoyn Country on the Arnhem Land plateau, Harris matrices were used to provide a
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graphic representation of forty-nine superimposed layers of painted motifs on one of the site’s forty-two art panels (Gunn 2018) (Figures 1 & 2).

In these examples, the quantification and antiquity of the layered motifs within panels and sites also share attributes of the RFM, namely, Repetition, Specialised Place, and Performance and Participation, strongly suggesting ritualized practices in connection to modified rock art. Moreover, Morwood, Walsh, and Watchman’s (2010) documentation of thirty-eight layers of re-painting revealed not only a relatively short time span for the remarking events on a single motif, but also a good example of Morphy’s (2012) iterative, ritual action where replication signalled both continuity and ideology, and the reproduction of knowledge (learning).

Rock Art, Ancestral Beings, and the Spiritual Realm

In many areas of Australia, Ancestral Beings ‘placed themselves’ onto rock—manifested and materialized as rock art—after completing their epic creative journeys across the landscape. In doing so, the motifs act as reminders to individuals and communities of the existential needs and ritual obligations of life, including obligations to care for these motifs over time (e.g., Arndt 1962; Blundell & Woolagoodja 2005, 2012; Crawford 1968; David 2002; Gunn 1992; Merlan 1989). In an Indigenous Australian context, to physically engage with these rock art materialisations typically equates to engaging with associated spiritual powers. The results of this engagement could be both positive and negative. For example, touching rock art could potentially be harmful for uninitiated people who did not follow proper cultural protocols (Chaloupka 1993; Layton 1992), while in other cases, re-marking could have positive outcomes if such protocols were followed (see below). By repeatedly engaging with rock art linked to Ancestral Beings through re-marking, the associated ritual can be viewed as part-celebration, part-commemoration, and part-social obligation.

One of the best-known re-marking events involving Ancestral Beings in Australia concerns the Wanjina of the Kimberley, in the continent’s northwest. Here researchers have been documenting Wanjina re-painting events since the 1930s (e.g., Crawford 1968; Elkin 1930, 1948; Lommel 1952/1997; Love 1930; O’Connor, Barham, & Woolagoodja 2008). Upon finishing their creative journeys across the Kimberley landscape, the Wanjina returned to the spirit world by entering the walls of rock shelters and in doing so left their imprints as paintings (Blundell & Woolagoodja 2005, 2012; Crawford 1968; see also Munn 1970). Wanjinas also gave birth to the clans with which people affiliate and relate to each other, and through which obligations and responsibilities were handed down (Utemara & Vinnicombe 1992; Mangolamara, Karadada, Oobagooma, Woolagoodja, & Karadada 2018). The large, bichrome and polychrome Wanjina motifs have, over many years, been re-painted by the Ngarinyin, Worora, Wunambal and Gaambera clan members on whose land they appear. As sentient Ancestral Beings, the re-painting events keep
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the Wanjina ‘fresh’ so that they ‘ensure the arrival of the annual rains and instruct their human descendants in their dreams’ (Blundell & Woolagoodja 2012: 474).

In central Australia, where motifs of Ancestral Beings are depicted in more or less abstract forms, the situation is similar to the Kimberley region: the paintings are large, bichrome designs in highly visible positions within rock shelters. Many are embedded in intichiuma ceremonies designed to reproduce and increase animal populations or other specific features of the environment (e.g., rain, fire, plants). In the late nineteenth century, anthropologists Baldwin Spencer and Frank Gillen (1899, 1927) documented several intichiuma ceremonies involving ritual re-painting. The elements common to these ceremonies were as follows:

• The site is usually well known to all members of a community but may be visited only by select individuals and/or only during times of ceremony.

• The site is one of several associated/linked sites dotted across the landscape, and the associated ceremony must not only be attended by the site’s owner but also overseen by the site’s managers who come from an opposite moiety. Owner and manager groups are defined by kin-based moieties, with the managers assuring that the performance of the owners is undertaken correctly (see the discussion of the role of junggayi and gidjan below).

• The involvement of a small number of senior men (owners and managers) with appropriate totemic affiliations with the site’s associated Ancestral Being.

• A ritualized path approach to the site.

• A number of activities involving tactile handling of ritual objects accompanied by chanting.

• The act of modifying (re-marking, altering, or superimposing) the painted motifs by one or more senior men, accompanied by chanting by other members.

• A ritualized retirement away from the site.

In the Kimberley and central Australian examples, re-painting rituals involving powerful Ancestral Beings are embedded in relational networks that emphasize reciprocal relations with resources (food, rain, etc.), the well-being of people, Aboriginal worldviews, interactions with other clans and moieties, reaffirmation of identity, and links to Country.

Among the Wardaman of the Northern Territory, the painting and subsequent re-marking of buwarraja (Dreaming) motifs reaffirmed the identity of the associated Ancestral Beings, connections to clan estates, and in some cases, resistance to European invasion (David & Wilson 2002). Several key locations are associated with highly distinctive buwarraja paintings—very large, visually dominating pairs of striped polychrome anthropomorphs of fresh appearance. Based on archival and excavation data, archaeologists have argued that these paintings were created, and in some cases subsequently modified, as a response to the European invasion of Wardaman lands. At Yiwarlarlay (Delamere Station), the re-marking of the Lightning Brothers Ancestral Beings was documented on several occasions during the 1900s (e.g., Arndt 1962; Barrett & Croll 1943; Davidson 1936;
Harney 1943; see also David, McNiven, Flood, & Frost 1990), while at Mennge-ya, the home of the White Cockatoo Ancestral Beings, excavations revealed phases of re-painting during the early European-contact period (David, McNiven, Attenbrow, Flood, & Collins 1994). By re-painting motifs of powerful Ancestral Beings, the paintings have been interpreted as (1) symbols of a resistance-based response to the particularly violent European contact period; and (2) a reaffirmation of people’s relationships to lands occupied by Europeans (David & Wilson 2002; cf. Mulvaney 1992). In doing so, the re-painting event can be characterized as a ritualized practice given its performative, intentional, and repetitive nature at a specific place and within a specific temporal context.

Another key aspect of relatedness between Ancestral Beings, rituals, and rock art is the role of pigment\(^7\) and colour (see Huntley, this volume). In the 1980s in western Arnhem Land, Taçon recorded how Aboriginal people used the application of fresh pigments to dull or faded paintings through re-painting to make the paintings ‘bright’ again and infuse them with the ‘power or life-force’ of Ancestral Beings. He noted:

> Painting some creatures with brilliant ‘rainbow’ colour thus enabled Aborigines to tap into the Ancestral force believed to be inherent in the landscape. This is also one of the reasons particular pieces were repainted or superimposed over. The retouching and repainting changed the shelter art back from dull to brilliant, and allowed Aborigines to make contact with the continuing cycle of spiritual and physical existence. In the process it reaffirmed the Aboriginal past and present for the artists and their extended families.

(Taçon 1991: 197)

Taçon noted that fish motifs were frequently repainted. Fish were often given a privileged status in western Arnhem rock art because they were considered ‘powerful ancestral species and as symbols of power’\(^8\) (Taçon 1989: 367). They were frequently re-painted as part of ritualized practices: ‘when paintings began to fade they had to be renewed with polychrome, rainbow colour or replaced with fresh images’ (Taçon 1989: 368). In doing so, the paintings were used to educate younger generations about the power of, and connections to, ancestral forces (Goldhahn, May, Maralngurra, & Lee 2020; see also Taylor 1996).

Thus, re-painting periodically restored or increased the world’s vitality (cf., Mountford 1956: 214–215), and reaffirmed relationships with Country and Ancestral Beings—all are important dimensions of social and existential identity.\(^9\)

**Kinship and Reaffirming Connections with Country**

The act of re-marking is also guided by complex rules established through kinship and social organisation. For example, re-painting rituals associated with Wanjina are clan-based, relating to the identity of the Wanjina ancestor (see above). In this context, Blundell...
(1980: 106) notes that ‘in order to ensure the continuation of world order, clansmen must annually retouch the paintings in their own estate’; this process not only ensured the maintenance of resources but also reinforced ‘ties of clan solidarity’. Blundell (1980: 113) notes that in cases where a clan became extinct, ‘the responsibility for the clan estate and its paintings passes ‘through the wunan’ [world order that connects people and all their material and spiritual associations, including through clan affiliation]’ and, as such, ‘the responsibility for vacated [clan] estates falls to a clan within the same moiety’ (1980: 113; see also Blundell & Woolagoodja 2005: 28–35). Thus, the annual ritual acts of re-painting the Ancestral Beings are also intimately related to the clan-based rules of relatedness.

Likewise, as part of her long-term ethnographic research with the Wardaman, Merlan (1989: 17; see also Kelly, David, & Flood 2021) draws attention to kin-based dimensions of re-marking buwarrja paintings, noting structured rules and exceptions:

[T]hough informants often emphasised that (paintings and other rock art figures) which are buwarrja are not of human origin, nevertheless they also emphasise that such figures can and should be painted over by people to make them new … Ideally, the renewal of paint at particular sites is said to be the special concern of those patrifiliatively linked to them, but inquiry shows that informants know of renewal done by others (eg, at the Lightning Brothers site).

Smith (1999: 195-196) further highlights such complexities when describing re-painting in the Barunga region of southern Arnhem Land, Northern Territory. She notes that in this part of Australia, patrilineal moieties play a central role in how people order the world, including rock art. When Ancestral Beings created the earth, everything (people, animals, plants, places, colours, and pigments) was positioned into one of two alternating and opposing moieties—Dhuwa or Yirritja. By virtue of their moiety affiliation, all people have a designated responsibility for Country—a reciprocal custodial relationship—either a gidjan (owner) or a junggayi (custodian or manager). Smith notes that ‘the renewal of rock paintings is also subject to the Junggayi relationship between moieties. Only Yirritja people are permitted to renew (repaint) rock paintings on Dhuwa land, and only Dhuwa people can renew rock paintings on Yirritja land’ (Smith 1999: 197). Here the act of re-painting is entirely reliant on gidjan-junggayi and Dhuwa-Yirritja relationships.

In western Arnhem Land, a person has particular obligations and responsibilities as junggayi in his/her mother’s, and mother’s mother’s, clan Country (Berndt & Berndt 1970; Taylor 1996; see also Maddock 1970). Other-than-human beings, such as some Ancestral Beings, spirits, animals, environmental features, objects, and stars, were also, and continue to be, assigned to specific moieties and semi-moieties (Table 1). The rights to paint and re-mark rock art were based on one’s relationships to these other-than-human beings. For example, in western Arnhem Land a member of the ngaraidgu moiety and jarijaning semi-moiety would stand in particular relationships to a range of other-than-human beings to be positioned and authorized to paint and re-paint certain motifs associated with their own semi-moiety (Table 1). However, any re-painting of important rock art motifs needed to be sanctioned by senior Traditional Owners of the clan country on which the motif was
found. The most suitable artist to execute such ritualized re-marking, a *junggayi* from a moiety that manages the clan’s country (estate), would be appointed after necessary negotiations with the *gidjan* of the estate ‘owning’ moiety (see, e.g., Taylor 1996: 91).

Table 1: Example showing the structure of the ngaraidgu moiety, and semi-moieties in the Gunwinggu area of Gunbalanya in western Arnhem Land, and how other-than-human beings (referred to here as “symbols”) were placed into the system (Berndt & Berndt 1970: 65).

<table>
<thead>
<tr>
<th>Moiety</th>
<th>Semi-moiety</th>
<th>Symbol</th>
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<tbody>
<tr>
<td>ngaraidgu</td>
<td>a. jarijaning</td>
<td><em>gundung</em> (sun)</td>
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<tr>
<td></td>
<td>b. jariburig</td>
<td><em>gunag</em> (fire)</td>
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*jarijaning*, sun: saltwater crocodile (sometimes wrongly called alligator) and freshwater (long-nosed) crocodile; barramundi fish; two varieties of turtle; spotted cat; leech; echidna (in one version): three varieties of goanna, including *galawen*; one variety of wallaby; a round but otherwise scorpion-like creature; several kinds of birds, coastal as well as inland, including pelican; falling star; *mangoidband* ‘water peanut’; *djedbar* and *deidjani* roots.

*jariburig*, fire: shark; small turtle; dugong; dingo; buffalo; bullock; horse; several kinds of bird, including kingfisher and brolga, the *djuri* parakeet whose coloured feathers are used in sacred *marain* string; and (in several versions) the *bugbug* pheasant; two varieties of land snake; cicada; *gadderi* wild bee.

That said, there are few documented examples that reveal how, why, and by whom such re-painting events occurred in western Arnhem Land. The best-documented case took place in the Anbangbang Main Gallery rock shelter at Burrungkuy, also known as Nourlangie Rock in Kakadu National Park, situated in Warramal clan Country (e.g., Chaloupka 1982: 1993). Here the most recent paintings were made by Nayombolmi (c. 1895–1967) and Old Nym Djimongurr (c. 1910–1969) in the 1963/1964 wet season. Nayombolmi was of the Yirritja moiety, and Old Nym Djimongurr was from the Dhuwa moiety. Besides retouching, altering, erasure, amending, and re-painting motifs in the shelter, these senior men also created ‘new’ motifs consisting of human-like shapes, fish, and Ancestral Beings (Haskovec & Sullivan 1989; May et al. 2019: 13). At the time, Nayombolmi acted as *junggayi* for the area (May et al. 2019), so this performative and intentional event, involving the act of re-marking existing motifs, would most certainly be another example of a ritualized practice of rock art modification that was embedded in the relatedness of the kinship domain.
Rock Art Modification, Ritual, and the Colonial Frontier

An example of ritualized rock art occurring in a colonial setting is the re-marking of existing, traditional motifs with new raw materials. In the south-central Kimberley, O’Connor et al. (2013) describe two rock art styles and production techniques—black dry pigment motifs and fine scratch-work motifs—in the context of ritual responses to colonial events and continuity of graphic systems. They note that in contrast to the contemporaneous Wanjina motifs, black dry pigment motifs are small, with little structure, and consist largely of linear designs, irregular shapes, hand outlines, and anthropomorphs (2013: 544). Such pigments are frequently used to retouch ‘existing motifs by outlining the painted figures or highlighting or refreshing certain features of painted figures’ (e.g., Wanjinas) or to amend anthropomorphs by adding new features (e.g., headdresses) (O’Connor et al. 2013: 544–545). The fine scratch-work motifs are shallow incisions likely made by using metal tools (e.g., screwdrivers, knife blades, fencing wire) (O’Connor et al. 2013: 548). At the Stumpy Soak 1 site, O’Connor et al. observed that ‘in all cases where painted motifs and scratch-work overlap, the scratch-work images are executed over the painted art. The fact that the scratch-work anthropomorphs are clearly superimposed over red painted figures but appear to reproduce the subject and posture of the painted anthropomorphs indicates they were created after the painted art but reference the same stylistic and symbolic system’ (2013: 549).

Both the black dry pigment and fine scratch-work motifs typically occur as the most recent layer on panels throughout the region, and they have been placed into the most recent phase of the Contact period in the Kimberley rock art sequence (O’Connor et al. 2013: 540). Yet, rather than motifs depicting introduced subject matter, O’Connor et al. suggest that the overwhelming focus on re-marking and/or creating ‘pre-European’-style motifs formed part of maintenance rituals performed to reinforce or reemphasize connections to traditional subject matters and graphic expressions (see also Frederick 1999; Taçon, Kelleher, King, & Brennan 2008). As such, Kimberley artists and their communities actively reinforced their connections with traditional graphic systems by adapting ritualized modification practices of rock art to include black dry pigment. In doing so, they were using ritual modification as a symbol of resistance to intrusions into Country by Europeans.

Increase rituals involving rock art modification in contact-themed settings have also been documented elsewhere (see McNiven & Russell 2002). For example, on Groote Eylandt, Rose (1942: 175) described how one painted axe motif featured fresh white paint on its sharper cutting end. When he asked an Aboriginal man accompanying him why the fresh paint was applied, the man replied to ‘make ‘em sharp’, and reported that ‘an Aborigine had painted the axe-edge afresh in order to make his own axe sharp, presumably by suggestive magic’. 
Elsewhere, modification rituals involving sorcery and depictions of Native Police have been documented from Cape York Peninsula in north Queensland. Trezise (1993: 51) reported how seven white hand stencils superimposed over a painting of a snake injecting poison into Native Police were ‘the signatures of the small guerrilla band harrying the Black Police’. At a rock art site at Mingaroo Hill, Cole (2010: 24) similarly recorded a line of ‘shallow, pounded marks’ superimposed over paintings of Native Police. George Musgrave, a senior Kuku Thaypan man working with Cole (2010: 24), interpreted these marks as being made by ‘flogging the rock with a stone while singing, clapping and using special words’—another indicator of a ritualized practice based on its performative and intentional nature undertaken at a specific place and laden with specific meaning and symbolism.

**Contestation, Controversy, and Political Matters in Rock Art Modification**

The issue of rock art modification catapulted into the public’s consciousness in the late 1980s when a series of re-painting events occurred in the Kimberley region of Western Australia. In 1987, the Ngarinyin Cultural Continuity Project, funded by the Australian government, set out to re-paint Wanjina sites as part of a training program for younger generations of Ngarinyin and ‘rejuvenate ritual and ceremonial practices for the Ngarinyin people’ (Mowaljarlai & Peck, 1987: 71). Opposition came from some archaeologists, rock art enthusiasts, pastoral owners, and members of the public who considered these acts of re-painting by youths with ‘non-traditional’ pigments as ‘desecration’ or ‘defacement’ of ‘universal heritage’ (e.g., Walsh 1992; see Bowdler 1988 for a review; see also Ward 1992). As noted above, such criticisms overlooked the role that ritual participation played in the Wanjinas’s meeting of social obligations and responsibilities (Blundell & Woolagoodja 2012: 474; Mangolamara, Karadada, Oobagooma, Woolagoodja, & Karadada 2018). It also bypassed Traditional Owner concerns for the mentoring of youths into important dimensions of culture, including cultural continuity, knowledge transfer, and the health and well-being of the Ngarinyin community.

More recently, the ritual of re-painting has been documented in relation to Native Title concerns and contested landscapes. In 2017, the Wabubadda Aboriginal Corporation (representing the Jirrbal language group) invited Alice Buhrich to record the Snake Cave site in Silver Valley (Cape York Peninsula, Queensland), where a re-painting event had occurred in 2014. In recording the site, Buhrich documented a deteriorated but visible snake motif that had been painted over with a new, considerably larger, red and white snake motif measuring over 24 m in length (Buhrich 2017: 151). Buhrich noted that the Snake Cave site was situated in an area over which the Jirrbal had recently placed a Native Title claim and of which they were in dispute over ownership with another Aboriginal community. The Jirrbal had no knowledge of the snake having been re-painted and interpreted the unauthorized re-painting as a ‘statement of ownership by one group over another in a contested native title landscape’ (Buhrich 2017: 217). The implications of the
re-painting involving a powerful visual symbol were set in a volatile political context where the intentional superimpositioning of a new snake to ‘replace’ an earlier, faded version was employed. In this case, the large, visually dominating painted symbol had multiple layers of meaning, reaffirming cultural identity but also contesting connections to Country. This politically motivated event can be interpreted as a ritual action, given its performative and intentional dimensions undertaken at a specific place and laden with specific symbolism.

Conclusion

As noted above, the act of modifying rock art in Australia through re-marking and superimpositioning is not an event or activity that occurs by happenstance. Rather, it is an intentional and repeated performance or social action shaped by a range of cultural factors, including the persisting importance of particular subjects such as Ancestral Beings. The act of modifying existing motifs has, as David (2002: 50) writes, a ‘performative dimension’ and something that implies ‘a conscious awareness of the act, and intentional actions for something’. Yet the products of such intentional and performative events—modified motifs—visually show only some outcomes of the ritualized acts. Embedded also are complex connections that guide the inner workings of decision making and ritual orchestrations. In considering how ritualized practices relate to rock art as a meaningful phenomenon, the examples discussed here reveal the depth of overlap in the themes identified (relationships to Ancestral Beings and the spiritual realm, kinship, connections to Country, colonial frontiers, and contestation and politics), supporting the idea that rock art modification implicates deeper, socially performative processes. Hence, Wardaman rock art of relatively recent times expresses experiences with Europeans, clan and kinship-based networks of reciprocity and obligations, and the reaffirmation of group identity and connections with Country (for further details, see Kelly, David, & Flood 2021).

Such interrelated dimensions of rock art modification further highlight the central role relatedness plays in the lives of Aboriginal peoples. Rose (2001: 105) captures the essence of connections when she notes that ‘relatedness is the meat of life, situating people’s bodily presence in shared projects that link human and nonhuman interests around intersecting and crosscutting contexts of tracks, countries, totems, and sites. Every discrete category is linked to other discrete categories through kinship, and is crosscut by other discrete categories’. As an event involving the intentional and repeated performance of a social action, the modification of rock art is likewise steeped in networks of relationships, traditions, and change.

As a final point, what is also important to recognize in the examples presented here is that the ritual action of re-marking involves subject matter (e.g., specific Ancestral Beings) that are regionally specific. That is, Wanjina appear only in the Kimberley, the Lightning Brothers only in the Victoria River District, and so on. What remains to be seen is whether patterns of re-marking can also be identified within groups linked by songlines involving Ancestral Beings who traveled great distances (e.g., Arndt 1965). By doing so,
we may add another element to understanding the nature of ritual practices and the in­terrelatedness of rock art across space.

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Rock Art Modification and its Ritualized and Relational Contexts


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Rock Art Modification and its Ritualized and Relational Contexts


Notes:

(1) The direct-historical approach is an interpretive method that draws on the ethnographic record to understand past human behaviour through its archaeological record. It relies primarily on documenting continuities in the material correlates of cultural activities (e.g., stone artefact manufacture, iconography).

(2) In Aboriginal Australia, the Dreaming was a time of world creation where Ancestral Beings or Dreamings shaped and named all parts of the land and waterways and transformed parts of their bodies, knowledge, and creative forces into landscape features, animals, plant, and natural phenomena such as stars and the moon (among other things).
Aboriginal people consider Ancestral Beings to be alive with an active and creative presence in the landscape and seascape.

(3) Relational networks are the webs of connections that link and structure the many different aspects of people’s lives such as kinship, language, ceremony, relationships to land, and interaction with others.

(4) ‘Country; in an Aboriginal sense, is a concept that refers to a ‘bounded geographical area consisting of interrelated, interdependent elements including people, animals, plants, Ancestral Beings … and other types of spirits … that act together to create a life-sustaining whole” (Brady & Bradley 2016: 85; see also Rose 1996).

(5) Sometimes referred to as leaving their ‘shadows’ on the rocks (see, e.g., Blundell 1980 for the Kimberley, and Arndt 1962 for the Victoria River District).

(6) O’Connor and Arrow (2008) have identified other examples of contact-themed modified (re-painted) rock art in the Kimberley (e.g., schooners, ketch-rigged vessels).

(7) In some cases, specific pigments related to Ancestral Beings (e.g., red ochre as the blood of an Ancestral Being) were used to create rock art and infuse it with power (e.g., Chaloupka 1993: 83–86; Taçon 2004).

(8) For example, the Barramundi Ancestral Being is known for its creative power and is responsible for creating the East Alligator River (Gunn 1992).

(9) Similar examples concerning the power and symbolism of colour can be found in bark paintings from the Arnhem Land region (e.g., Morphy 1989; Taylor 1996).

(10) See also Smith (1999) for an example from the Barunga region (Northern Territory) where the patrilineal moiety system guides the re-marking process.

(11) A similar example was observed by RGG when, during a Native Title claim in the Northern Territory, a bichrome turtle motif that he previously recorded was erased by a competing claimant group. The turtle was the totem animal of the main claimant group, and the act of erasure was seen by the main claimant group as a sign of the competing claimant group’s rights to the land.
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