Chapter 1

Ritual and Relationships: Background

1.1 Introduction

An extensive range of engraved and pigment rock art sites are found throughout the central Australian arid zone. Much of the assemblage, across all media, is characterised by panels of repeated motifs produced using a similar core motif vocabulary. Although there are detailed ethnographic accounts of Aboriginal beliefs and practices from the region dating from the late nineteenth century, the relationship between repeated panels of motifs, other rock art forms and the behavioural contexts in which each form was produced in the past has not been analysed. Theoretical approaches adopted in recent rock art research throughout the world have explicitly or implicitly invoked ritual as an activity associated with rock art but the articulation between the form of rock art and ritual behaviour is rarely made clear. This research investigates the relationship between parts of the central Australian rock art assemblage and the universal structural form resulting from ritual behaviour. I propose that there is a ritual basis for much, but not all, of the rock art assemblage of central Australia.

Research for this thesis was undertaken through an Australian Postgraduate Award (Industry), an Australian Federal Government program under which strategic partnerships are set up between industry and academic institutions to investigate research questions of mutual interest. The Industry Partners supporting this research are the Parks and Wildlife Commission of the Northern Territory (PWCNT) and the Department of Lands Planning and Environment, Cultural Resources Division, Northern Territory Government (DLPE). This thesis presents an interpretive framework from which the agencies can make informed management and conservation decisions and develops an understanding of the relationship between rock art and other archaeological evidence in the arid zone. Working in collaboration with the Industry Partners, I have defined the nature and documented the richness of
the rock art assemblages and the contexts in which they occur within central Australia. The research questions, formulated below, are framed within these parameters.

1.2 Industry Partners

Each of the Industry Partners holds different legislated responsibilities in relation to rock art sites in central Australia. DLPE is responsibility for the conservation and management of cultural heritage resources, both inside and outside National Parks, under the *Heritage Conservation Act of 1991*. PWCNT parks and reserves are established and managed under *The Territory Parks and Wildlife Conservation Act* wherein PWCNT are charged with the responsible for the protection and conservation of a representative sample of the Territory's native vegetation, wildlife and natural environments. The governance of parks and reserves is guided by plans of management approved and given force by the Legislative Assembly. Where cultural heritage issues arise in parks and reserves, both agencies are involved although, in practice, PWCNT are viewed as the principal government body responsible for the day-to-day management of thousands of art sites within parks and reserves throughout the Northern Territory. Amongst the stated aims of PWCNT are the 'protection of cultural and historic sites of significance ... Aboriginal culture, past and present, and European historical sites.' These aims relate directly to all archaeological sites within parks including rock art sites (Plates 1.1, 1.2 1.3 and 1.4). At the regional level, the Industry Partners have a duty to survey and record cultural resources in central Australia and hold the responsibility, alongside Aboriginal Custodians, of determining how these resources are best managed. The agencies are also responsible for providing visitor interpretation at cultural sites and assessing the impact and conservation threats associated with visitors, native fauna and natural weathering processes.

Prior to the commencement of this research, no regional central Australian archaeological rock art synthesis had been attempted. Documentation of rock art sites within parks and reserves, including some outstanding individual studies, has been carried out in the past as part of management or conservation strategies undertaken as consultancies on a site-by-site basis. As a result, there is no regional framework
available from which either agency can make informed planning, management or conservation decisions, either within parks or in the region as a whole.

An additional area of concern is that individual rock art management consultancies have lacked the scope to set the rock art assemblages recorded into an archaeological context so that there has been little understanding of the relationship between rock art and other aspects of the archaeological assemblage (but see Smith & Rosenfeld 1992). This has hindered the development of integrated regional archaeological models incorporating rock art. Loubser (2001:88) has argued:

The range of significance values and the condition of the place and the surrounding area must be assessed before making any conservation management recommendations. ...Significance values of places with rock imagery and the surrounding area are made more meaningful when viewed in a regional environmental and cultural setting.

Individual consultancy reports have, however, emphasised the Indigenous, archaeological and heritage significance of central Australian rock art sites so that there is a growing awareness amongst the agencies’ management and staff, and the general public, of the unique qualities engendered in the cultural heritage of the region. This has led to a continued increase in visitor numbers at PWCNT parks and reserves and has lent an urgency to this research.

1.3 Rock art and ritual

Towards the close of the nineteenth century, ethnographers Spencer and Gillen (1899) published their first book on the customs and beliefs of central Australian Aboriginal people (Chapter 3). This, and subsequent publications (1904, 1912, 1927), included first-hand accounts of Aboriginal explanations and interpretations of rock art assemblages in central Australia. These accounts, supplemented by correspondence between Spencer and British anthropologist, Sir James Frazer (Marett & Penniman

1 The terms ‘ceremony’ and ‘ritual’ have been used interchangeable by many researchers. When a distinction is made, ceremony is generally regarded as a form of ritual, in which the emphasis is on symbolic acknowledgement and demonstration of a social situation whereas ritual procedures are believed to have a validity of their own, and have reference to supernatural powers (see Rappaport 1999:38-39). I have used the term, ritual to cover both meanings (following Rappaport). The term, ceremony, has been used when discussing the research of others who have adopted this term.
1932; Mulvaney et al. 1997) were to become highly influential and formed the basis from which generalisations about ‘primitive’ cultures and belief systems were formulated (e.g. Frazer 1901,1920) and on which rock art researchers drew in seeking explanations for the production of Palaeolithic cave art in Europe. As Ucko and Rosenfeld (1967:116-138) have observed, French researchers such as Reinach (e.g.1903), Bégouen (e.g.1929) and Breuil (e.g. 1952) used ethnographic parallels based on the premise that both central Australian Aborigines and Palaeolithic cave artists were hunter-gatherers and were therefore likely to have had similar ‘primitive’ belief systems. Further, the researchers perceived similarities between European subject matter, where animals were the focus of analysis, and the totemic belief systems of central Australian Aborigines in which each person related to a species of animal or plant. Comparisons between the contexts in which rock art was produced were also used to substantiate claims for similarities as access to European cave art was physically restricted and access to the most sacred central Australian rock art sites was culturally restricted. Drawing on these perceived parallels, researchers inferred that Palaeolithic art, like central Australian rock art was produced as a form of ‘sympathetic hunting magic’ (Ucko & Rosenfeld 1967; Bahn & Vertut 1988:149-158) presumably in ritual circumstances.

Spencer and Gillen’s publications document only one increase ceremony involving the painting of rock art during which a large striped panel was repainted as part of a ritual to ensure a plentiful supply of kangaroos, a prime food source for central Australian Aborigines (Spencer & Gillen 1899:193-201, 1912:93-97 at Undiarra; see also Marett & Penniman 1932:15-17; Chapter 3). While Spencer and Gillen recorded additional interpretations of individual motifs, many of which were related to sacred or ritual activities, the sample from which interpretations of European Palaeolithic cave art were derived for almost half a century was thin. The claims that European Palaeolithic art was produced as ritual or ‘sympathetic hunting magic’ fell from favour as later researchers (e.g. Leroi-Gourhan 1965) eschewed the use of direct ethnographic analogies and a variety of other theoretical approaches were adopted (see Conkey 2001 for a comprehensive review). Significantly, later ethnographic research in central Australia (e.g. Edwards 1966, 1968, 1971; Gunn 1997a; Meggitt 1962; Mountford 1948, 1955, 1960, 1968, 1976; Myers 1986; Strehlow 1947, 1965, 1970, 1971) supports Spencer and Gillen’s contention that much of central Australian
rock art, at least in the recent past, was associated with ritual activities although there are few documented cases where the nature of the relationship between ritual and rock art is explained (Chapter 3).

Nevertheless, ethnography has continued to provide useful information from which hypotheses relating ritual to the production of art in Palaeolithic Europe have been formulated. Meg Conkey (1980) developed a theoretical framework that addresses the relationship between the form and structure of art and the aggregation of people in the past. Her framework was formulated from the ethnographic observations of Yellen (1977) and Lee (1979) amongst the !Kung San in which the *primacy of ritual* as the reason for aggregation was emphasised. Conkey hypothesised that art at aggregation sites where affiliated groups of people came together, would be characterised by a greater diversity of design elements and structural principles relative to dispersion sites that were essentially campsites in foraging territory where small groups of people engaged in subsistence practices. Conkey (1980:610, 612) argued that the activities or processes that would contribute to, or even be ‘central to,’ the integration of the larger groups ‘are likely to be ritual and cultural in nature’. As predicted in her model, Conkey (1980) found greater diversity in design elements and structural principles at Altamira when she compared designs on engraved bones and antlers from Altamira and other Lower Magdalenian period sites in Cantabrian Spain. From this, she concluded:

...that otherwise dispersed engravers contributed to the engravings at Altamira, which may well be concomitant with a social aggregation of some size and extent.

Conkey 1980:620

In a more recent study within Australia, Brett Galt-Smith (1997) tested Conkey’s (1980) hypothesis of aggregation and dispersion on a rock art assemblage in order to characterise the form of the art assemblage related to different types of aggregation and ritual in central Australia. The project was particularly well placed to address these questions as ethnographic data could be used to analyse the types of aggregation and the circumstances under which aggregation took place so that most rock art sites could be assigned to one of three categories; regional aggregation for large ceremonial gatherings, local aggregation related to clan based ritual or dispersion for foraging and subsistence activities. The ethnography did not, however, provide details on the *relationship* between the rock art assemblage and the activities that were performed at
each site category so that we are no closer to understanding the types of behaviour that may have resulted in the assemblages seen at sites where people gathered unless we assume that the ethnographic present extended into the distant past, an assumption fraught with difficulties (Wylie 1985). Galt-Smith's results confirmed that generally, rock art assemblages reflect (cf. Conkey 1985:305) the different types of aggregation that took place at sites with diversity more evident at sites where large groups of people gathered in the recent past. Furthermore, Galt-Smith's results confirm Conkey's prediction that there are likely to be many forms of aggregation and that a straightforward dichotomous structure may be too coarse to reflect the varying types of aggregation human populations practised in central Australia in the past.

What is not made explicit in Galt-Smith's ethnographic summaries, as the data are not available, is the relationship between the rock art assemblage evident today and the types of behaviour during aggregation or dispersion situations when rock art was produced, nor are the dynamics of this relationship made clear in his results. While he recognised this problem in his discussion of the engraved assemblage when he stated 'that the considerable time depth of the engraved assemblage may produce diversity unrelated to aggregation and dispersion settlement patterns' (Galt-Smith 1997:101, see also Conkey 1980:620), this is, as far as we know, equally true for the more recent painted assemblage (see also McDonald & Veth in press, cited in Gibbs & Veth 2002:14). I contend that the aggregation and dispersion model is not formulated in a manner aimed at addressing such questions but rather it has been used successfully to develop a clearer understanding of prehistoric demographies and their signature in art assemblages (e.g. Conkey 1980; Galt-Smith 1997). While Conkey (1980:612) hypothesised that 'the activities or processes that would contribute to the integration of the larger group are likely to be ritual and cultural in nature' she further stated that these activities 'are unlikely to leave direct archaeological indications'. I suggest that new theoretical frameworks will have to be developed if the social dynamics that link aggregation and ritual to particular rock art assemblages are to be understood.

Ethnography has continued to provide fertile ground for rock art researchers worldwide. David Lewis-Williams (e.g. 1981,1997, 2001) drew on ethnography derived from observations of shamans' performances during rituals in South America
Rock art, ritual and relationships

and additional worldwide neuropsychological research to formulate a theory from which he sought explanations for the form and content of southern African San rock art and the Upper Palaeolithic cave art of Western Europe. His theory, based on the premise that all human brains experience the same neuropsychological universals while in trance states induced during ritual, claims that all participants will become aware of the same entoptic phenomena. Hence, it is suggested that rock art resulting from such experiences incorporates a similar range of mostly geometric forms or 'phosphenes' and other typical indicators of trance states (e.g. Lewis-Williams 1981, 1997, 2001:332; Turpin 1994; Whitley 2000). Lewis-Williams has attributed the production of vast amounts or rock art to entoptic phenomena so, by extension, to trance states induced during ritual performances. Ritual is again identified as the social context in which rock art was produced. The lack of specific ethnographic evidence for the inducement of trance states through any physical or psychological means, or the use of mind altering drugs (pituri or native tobacco are only a mild stimulants and not psychotropic, see Chapter 4) during Australian Aboriginal ritual performances in the recent past, is likely to have played at least some part in discouraging the adoption of this approach within Australia (cf. Bednarik 1984; Clottes & Lewis-Williams 1996; Sale 1992). Leaving aside the problems I perceive with this particular theory (see Chapter 3; cf. Noble & Davidson 1993:126-131), Lewis-Williams’ useful approach provides an example of the potential of ‘borrowing’ universals from other disciplines as a means to develop our understanding of the complexities of human visual art systems.

Over the last two decades in Australia, interest has again turned towards the ceremonial or ritual context in which rock art was produced although research questions have not been couched in these terms. The association of rock art with ritual has resulted from two separate, but interwoven strands of archaeological inquiry. The first has been a theoretical perspective that sees art as a form of communication used as an adaptive strategy in the mediation of social relations through information exchange (e.g., Gamble 1982; McDonald 1994; Morwood 1987; C. Smith2 1989; Wobst 1977). The second has been the concept labelled ‘intensification’ where changes in the late Holocene archaeological record are

2 Unless otherwise indicated ‘Smith’ refers to Mike Smith. Claire Smith will be referenced as C. Smith.
attributed to growing social, economic and technological complexity (Lourandos 1983, 1997; but see Bird & Frankel [1991] for a critique of the social evolutionary paradigm and the archaeological data on which Lourandos’ assumptions are based). Implicit in the understanding of increased social complexity has been the exchange of information at large ceremonial gatherings.

‘Intensification’ has been identified in rock art assemblages in the increased numbers of sites within widely separated regional areas of Australia during the late Holocene and in the evidence for the emergence of regionally distinct art styles (e.g. David & Chant 1995; Morwood & Hobbs 1995). The increase in the number of art sites in particular regions has been supported by archaeological evidence for the opportunistic use of abundant seasonal resources, often requiring the introduction of new processing technology. It has been argued that the introduction of new technology has provided the resources necessary to facilitate the gathering of large groups of people for ceremonial activities (e.g. Bird & Frankel 1991:9; Flood 1987; Lourandos 1983, 1997; Morwood 1987; Smith 1988:43) but the specific role that rock art might have played in these ritual activities or in ‘social complexity’ has not been articulated.

Morwood (1987:339) proposed that in southeastern Queensland, new strategies, including the establishment of alliance networks, were developed to increase carrying capacity following major environmental changes in the post-Pleistocene period. Although he argued that ‘it is not possible to distinguish between purely economically and purely socially motivated population movement’ from the archaeological record, he was able to draw upon extensive ethnographic evidence for ritual and ceremonial practices to reinforce claims that such events may have provided the context in which information was exchanged and social allegiances forged. A consequence of these activities is seen to be an increase in the production of rock art but the particular role that rock art may have played or the context in which it was produced is not made explicit.

Information exchange theory has provided a more expansive explanation for the structure of earlier rock art assemblages and the emergence of distinctive regional art styles in Australia in the mid to late Holocene. Gamble (1982, but see also 1999) drew upon the ethnographic research of T. G. H. Strehlow (1970) and Gould (1980) in
the central Australian arid zone to formulate his theory. Kinship and totemic affiliations formed the basis for alliance networks. Small groups of people dispersed across vast areas of desert came together from time to time at ceremonies, which maintained alliances and permitted the sharing of information about resources and social conditions. In ethnographically recorded cases, ritual activities provided a medium for the transference of information (Strehlow 1947, 1965, 1970, 1971). Gamble argued that stylistic similarities identified in Venus figurines found across Europe and attributed to the Palaeolithic were indicative of alliance networks. Gamble further contended that such alliance networks provided a risk-sharing strategy in times when climatic conditions in Europe were extreme. The figurines were seen as a means to communicate between widely spread groups who shared 'a common conceptual framework' (Gamble 1982:99). Visual objects or images were perceived as a low cost means of sending and decoding messages between groups that met infrequently (Wobst 1977). As Gamble (1982:99) explained:

Visual communication may be sufficient to sanction and direct behaviour at moments of contact and thereby make social intercourse more predictable when it does take place.

While I agree with Gamble's contention that open social networks appear to be a feature of poor environments (as they were in central Australia in the recent past) and that visual methods of information exchange could be a cost effective means of assisting interaction between groups, Gamble's hypothesis does not elaborate on the social circumstances under which visual methods may have been used to transfer information nor how a 'common conceptual framework' evolved in disparate groups. Neither does he consider why female figurines would have been the medium for this "necessary" information exchange.

Australian rock art researchers have argued that the changes in rock art styles from relatively homogeneous to regionally distinct in the mid to late Holocene, indicates a closing of social networks. Researchers have attributed the closing of networks to differing factors, for example: Lewis (1988) contended that in Arnhem Land, changes in art styles were an expression of new territoriality resulting from changes in population distribution brought about by a rise in sea levels; Morwood and Hobbs (1995:181) argued that increase in population and more intense use of resources in
southeastern Cape York resulted in the delimiting of territorial boundaries; David and Chant (1995:514) suggested that increased regionalisation in southern Cape York resulted from increase in population densities with more formalised interactions between neighbouring groups.

In each of these studies, competition for resources has been identified as the underlying mechanism for the stronger differentiation between groups articulated through stylistic differences in rock art assemblages. More recent rock art is seen as emphasising group identity (Weissner 1983). However, ethnographic and archaeological evidence for extensive trade routes and exchange of goods and ceremonies (Davidson et al, in press; Gibbs & Veth 2002; Graham & Thorley 1996; McBryde 1987; Mulvaney 1976; Poirier 1992; Ross 1997; Roth 1897) in the late Holocene throughout Australia suggest that alliance networks remained open despite increased competition for resources. Thus it would seem that the relationship between rock art, information exchange and group identity is likely to be far more complex than the opposing ‘bonding’ or ‘bounding’ functions (C. Smith 1989) attributed to rock art in the past. It may be that the increase in alliance networks and trade in goods and ceremonies posed a threat to the viability of groups so that it became necessary to emphasise corporate identity (Ross 1997). Increased interaction provided the circumstances under which corporate identity needed to be marked. At the same time, the need to facilitate trade and maintain alliances with outside groups to obtain marriage partners, to access resources in times of environmental stress and to secure valued trade items would also have been necessary. As I have argued elsewhere (Ross 1997), contemporaneous but diverse aspects of the rock art assemblage could have functioned in these differing capacities. Ritual may well have provided the context in which such alliances were cemented.

The premise behind the argument for a nexus between style and alliance networks is that shared style can only be maintained through shared understanding or information sharing. Information must also be shared across boundaries as differentiation can only be maintained if there is some degree of shared understanding across the boundary (Ross 1997). In a previous publication (Ross 1997), I contended that the relationship between open social networks and unpredictable environments and closed social networks and rich environments as espoused in the information exchange
Rock art, ritual and relationships

theory (Gamble 1982; C. Smith 1989) has proved to be far too coarse-grained (see also McDonald & Veth in press, cited in Gibbs & Veth 2002). As such, the theory is not very useful as an explanatory tool in understanding the complex relationship between people, rock art and the environment in Australia. The ways in which rock art (or art objects) and the stylistic behaviour that produced them have been used in information exchange, and *the context* in which meanings were shared and maintained remains poorly understood. The role that rock art played in such exchanges and the intended audiences on these occasions has not been investigated. Why would the making of rock art and/or the particular images made have been meaningful to the individuals or groups involved or implicated?

The antiquity of the totemic belief system of the Australian Aboriginal Dreaming and the associated ritual practices recorded in ethnographic accounts (Chapter 3) have been the focus of a recent study by Bruno David (2002). Following Mike Smith (1988), David reviewed the excavated evidence for a number of sites in central Australia identified with ritual in the ethnographic records of Spencer & Gillen (1899, 1904, 1912, 1927) and Strehlow (1947, 1965, 1971). Excavation data from four locations, Therreyererte (Smith 1988), Rainbow Valley (*Urre*), Smith 1988), Kuyunba (Greathouse 1985, Napton & Greathouse 1985, [*Kweyunpe*] Smith 1985) and Keringke (Stockton 1971) were used to support Smith’s (1988:327-332) argument that rituals associated with these sites probably had a time depth dating back to between 1,400 and 600 years ago when the first signs of intensive human activity at these locations were recorded in the archaeological record. Further, Smith contended that the introduction of seed grinding technology evident in the archaeological record at this time provided an economic means to facilitate large-scale gatherings. A concomitant increase in ochre fragments in excavated sediments was interpreted as indicating that the use of ochre, usually associated with ritual activities, had become more common. While David (2002:50) recognised that rituals are ‘frameworks for actions that are ... socially mediated ... codified ... performed ... aimed at achieving something ... and consciously engaged’ he did not consider the possible role that the *extensive rock art assemblages at all four* of these locations may have played in ritual

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3 Locations in central Australia are sometimes identified under their Aboriginal names or with alternative spelling to that in current use. Alternatives used in relevant literature will be bracketed in italics.
activities although he did consider assemblages in the other regions included in his study. Going further, David (2002:59) appeared to rule out the very possibility that rock art may have been integral to ritual performances by quoting Kimber and Smith’s (1987:236) reconstructed version of a ceremony at Therryererte in which the authors stated that the only traces of rituals likely to remain even after a short time, are stone artefacts and hearths.

Clearly, a new theoretical framework needs to be formulated under which past ritual behaviour might be linked to the form and structure of rock art assemblages so that we might gain a better understanding of the types of human behaviour that produced the assemblages visible in central Australia today.

Conkey (1985) has recognised the potential of identifying ritual communication in past material culture, particularly rock art and portable art objects. These identifications will depend on the particular contexts of the materials and on their structural properties. Formalised repetitive, rule-bound systems for the creation of material forms, and formalised repetitive rule-bound contexts for the use of these forms are those features most likely to characterise material ritual communication. If archaeologists adopt a regional and diachronic perspective ..., they can theoretically identify, ...relative amounts or degrees of ritual communication.

Conkey 1985:305

Conkey (1985:305) warns that the relationship between structure, context and ritual outlined above and identified by Bloch (e.g.1986) in anthropological studies should not be taken as a tested proposition or general law applicable to all societies. The more recent work of Roy Rappaport (1999) has elaborated Bloch’s earlier research on ritual and in his final synthesis, Rappaport described what he identified as ‘the unique structure of ritual’ universal to ritual whatever the content of individual performances.

In this thesis I will propose a theoretical framework based on Rappaport’s ‘unique structure of ritual’, one which aims to identify the relationship between rock art and ritual. I will explore the potential of the theoretical framework by investigating ‘the regional and diachronic perspectives’ (Conkey 1985:305) of the central Australian rock art assemblage. The theoretical framework is outlined in Chapter 3.
1.4 Questions addressed in the thesis

The broad questions addressed in this thesis seek to identify the social and geographic contexts in which rock art in central Australia was produced in order to provide an interpretive framework from which government agencies can make informed management decisions. In particular, analysis aims to investigate the ritual contexts in which the central Australian rock art assemblage may have been produced by exploring the potential of a theoretical framework developed from the anthropological research on ritual undertaken by Rappaport (1999). Specifically, can ritual be invoked as the context in which aspects of the central Australian rock art assemblage were produced?

1.5 What is rock art?

In a recent Australian publication on the dating of rock art, the editors chose not to use the term ‘art’ because of its ‘unscholarly presumptions and Western connotations’ (Ward & Tuniz 2000:6; see also Soffer & Conkey 1997:2-3) preferring instead the term ‘marking’. Chippindale (2001:13-14) took up this issue and argued that ‘there is a good and established habit of using the word “art” in Australia for the markings on rocks’ and that the term, ‘marking ...emphasises the technical and physical act’ and diminishes the status and value of the art (but see Tomásková 1997:268-9).

While accepting that the use of the term ‘art’ carries cultural baggage, the use of the alternative ‘mark’, is likely to cloud the issue even further as this term has been used by a number of researchers to describe a variety of different aspects of the art assemblage (e.g. Davidson & Noble 1989; Marshack 1991; Mountford 1968; Rosenfeld 1999). Mountford (1968) used the term to differentiate engravings from rock paintings while Rosenfeld used the term to describe a portion of the rock art assemblage including abraded grooves, battered rock edges and pecked pits which she has argued do not reflect the construction of a formal system of graphic units and cannot therefore be called ‘art’. Marshack (1991) and others (Davidson & Noble 1989) at the centre of the debate about the origins of symbolic behaviour, have used the term 'marks’ rather than ‘art’ in a similar manner to describe the scoring found on
bones as a means to differentiate them from other engravings whose symbolic content is not under question.

Searching for a term used by Indigenous Australians, Sutton and Anderson (1988: 3-4, 243) stated that ‘each of the various Aboriginal languages has a term that essentially means sign, design, pattern or meaningful mark’ (e.g. *kuruwarrri* in Walpiri). On a broader scale, anthropologist, Richard Anderson (1990:7) who studied art in ten societies spread across the world, found that ‘most languages do not have a word that means the same thing as the English word “art”’. As consensus on a definition on what constitutes art amongst art historians, curators, government funding institutions and anthropologists is unlikely today (see Davidson 1997:125; Tomášková 1997:268-9), comparisons with other languages are problematic. Further, the inference that the conceptual motivation and the complex intellectual constructs that are involved in the production of visual imagery may be different in other societies, while likely, cannot be clarified when prehistoric rock art is being studied. Therefore a definition of art from the researcher’s perspective is the only viable option available to archaeologists. As Conkey (in press) argued in relation to the term art: ‘it is not so much the label itself that is the problem but that what we mean by it is often left unexamined’. Therefore I have outlined the intended use of the term ‘art’ in the following section and argue that the word ‘art’ provides an inclusive term for the concepts under discussion in this thesis.

Art is defined here in broad operation terms as ‘*deliberate communication through visual form*’ (Layton 1992:1). As I have argued elsewhere (Ross 1997:22), this definition of art has three parts; the intentions of the maker, the visual form itself, and the potential message (Conkey 1990:11) received by the viewer. The motif or form is the visible part of a symbol system and is a referent for something else: that is, it is the physical entity that encodes the potential message. The message communicated to the viewer depends upon the cultural milieu of the viewer. If the viewer shares the same background in visual literacy with the producer, the message communicated by the form, may be very similar to that intended by the producer (Morphy 1991:145; C. Smith 1994:10-34). From an archaeological perspective where prehistoric art systems are being studied, no such coalescence is possible. As Davidson (1997:128) points out, the analysis we undertake as archaeologists ‘stands outside that original
meaning' as we are 'unable to become partners' in the semantic systems of past societies.

While this warns against the search for original meaning in art, as archaeologists (or viewers) this tripartite concept of art emphasises the 'interaction between the human agents and the material' (Davidson 1995:892; see also Conkey 1989; Noble & Davidson 1996) and demonstrates that the form is the communicative link between artist and viewer. I contend, following Conkey (1989), that analysis of form and its context of production thus provides a means of assessing aspects of how the art system operated. Such an approach to prehistoric art 'lifts the heavy semantic load' (Wobst 1994) because it is the relationships between art and the contexts of its production that informs, rather than the content of the art itself (Conkey 1989; Morphy 1999:21).

Conceptualising art in this way sees art as the end product of a practice rather than as an object, and by perceiving art as evidence of practice, it remains connected to the participants (Conkey 1989:153). As Davidson (1995:892) emphasised, it is through human agency that marks become meaningful; without the cognitive capacities of both the artist and viewer, art would remain meaningless marks. Therefore, patterns observed in archaeological data can be used to formulate hypotheses about the actions of the artists and the reasons such patterns were produced in particular contexts (Conkey 1989, in press; Davis 1990). It is the interrelationships between the artists’ choices (the organising principles) that provide the patterns that characterise the art system. The specific
choices made by artists when producing art are those that a researcher seeks from the archaeological record. Therefore, I argue (see also Conkey 1997) that many aspects of the assemblage such as site location, site visibility and site context are areas that would be the subject of human choice (Chapter 4). We would expect, then, that much of the information that can be useful to archaeologists studying rock art is 'beyond art' (Conkey 1997). The emphasis has shifted from the rock art alone to the analysis of the relationships between the art and the geographic and cultural contexts in which it was produced.

Davis (1990:27) has warned against the limitations of the analysis of the patterns produced from the study of ‘relationships’ on their own. While it is understood that the selection of certain organising principles were:

...made by some individual or group acting in a certain way for a certain purpose and with certain habits, knowledge, and values ... this possibility cannot be confirmed *from within the stylistic description itself*  
(Davis 1990:27 emphasis in the original).

An understanding of the social context in which the art was produced can only be formulated in conjunction with other supporting ecological, cultural or archaeological evidence.

In this thesis, I have proposed a theoretical framework derived from Rappaport’s (1999) research on ritual in order to identify structural features that may indicate that ritual behaviour was one context in which the central Australian rock art assemblage was produced. An analysis of the relationships between the ‘multi-scalar contexts’ (Conkey 1997:345) in which rock art has been produced will identify the structural principles underlying the assemblage. These will be compared with the universal structures resulting from ritual behaviour outlined in Chapters 3. This is a new approach to the exploration of the form that rock art might have taken when produced in association with ritual performances. I will review other contemporaneous archaeological, ethnographic, geographic and historic evidence in order to provide independent support for the structure or patterns revealed in the analysis.
1.6 Layout of the thesis

As the conceptual framework I am adopting in this research is contextual, information pertaining to the geographic context within which the rock art of central Australia has been produced is outlined in the following chapter. The descriptions of the region focus on those aspects of the ecology relevant to archaeological analysis. The cultural and research contexts associated with the production of rock art in central Australia are presented in Chapter 3. I have analysed and outlined the ethnography of central Australia to draw out evidence pertaining directly to the production, form, function and meaning of rock art as understood by Indigenous Custodians since European contact. However, as this thesis deals with a largely prehistoric rock art assemblage, explanations for the patterning discerned in this thesis are not derived primarily from these findings. Previous rock art studies undertaken in the region are reviewed in Chapter 3 and the aims and results of these studies are considered against the theoretical perspectives adopted in this thesis. In particular, the ethnographic evidence I have identified for the use of rock art in ritual will be outlined, the definition of ritual explained and the theoretical framework through which ritual will be identified in the archaeological record of central Australian proposed.

Chapter 4 outlines the methods and research design adopted in the thesis and defines the categories of data collected. Further, the relationship between particular data categories and the types of human behaviour that may be inferred from them are explicitly articulated.

In Chapter 5, I describe the richness and diversity of the rock art assemblage and present the results of analyses directed towards developing an understanding of the structures and relationships within and between the geographic and inter-panel, inter-site and inter-complex features of the assemblage. Chapter 6 outlines a relative chronology formulated from multiple strands of evidence incorporating all media. Chapter 7 presents spatial analyses that distinguish how aspects of the assemblage identified in the previous two chapters are structured within panels, sites, complexes, and across the region and speculates on the possible cultural differences that may have contributed to some of the variation identified.
In Chapter 8, the distinctive form and composition of the art assemblage identified in the previous three chapters is compared to the structures outlined in the theoretical framework identifying ritual behaviour. Aspects of the central Australian rock art assemblage produced in a ritual context are identified.

In the final chapter, the interpretive framework that I have outlined for central Australia is summarised. The theoretical framework identifying ritual behaviour associated with the production of rock art is evaluated. Chronological issues are addressed and directions for future research flagged. In conclusion, issues arising from the research that are pertinent to the management and conservation of central Australian rock art are presented.
Chapter 2

Geographic Context: Central Australia

2.1 Introduction
In this chapter, I define and describe the study area and the physical aspects of the landscape in which the research was undertaken. Rather than a broad ranging description of the arid zone, this chapter focuses on aspects of the topography, geology, climate, vegetation and fauna that I consider may be relevant to the archaeology of the region.

2.2 The study area
The study area lies in the centre of the Australian continent and encompasses the southern third of the Northern Territory within the region that is managed by PWCNT (Southern Division) and the Alice Springs office of the Department of Lands, Planning and Environment, Northern Territory Government. It is bounded in the north at latitude 22° S, in the south at latitude 26°S, to the east at longitude 138° and to the west at longitude 129° and covers an area of approximately 316,750 square kilometres (Figure 2.1). The boundaries are defined by government agencies for practical management purposes and therefore terminate at the Territory borders. Although the entire area falls within the much wider arid zone, the study area is neither a distinctly bounded biogeographic area (Thackway & Cresswall 1994), nor a cultural bloc (Berndt 1959; Strehlow 1965) occupied by the same Indigenous group today or in the recent past. Therefore, the study area is not constrained by the current distribution of Indigenous linguistic groups or restricted to a single biogeographic zone but provides a contiguous block of diverse landscape across which rock art can be surveyed and analysed.

The study area is loosely described in this thesis as ‘central Australia’ but as Thorley (1998a:20-23) demonstrated in his comprehensive review of the use of this term in previous archaeological and anthropological studies, ‘central Australia is a widely used term which lacks definition’ (see also Kimber 1991:1; Bowman 1989:5).
Rock art, ritual and relationships

Strehlow (1965:121-3) defined the region in linguistic terms as the ‘Aranda Speaking Area’ and drew the western boundary aligned roughly with the path of the Finke River. The area to the west of this boundary was identified as the Western Desert ‘culture bloc’ (following Berndt 1959:84) and includes a vast area to the south and west occupied by Western Desert Language speakers. Strehlow (1965) and later Gould (1978:85-92), Gould & Saggers (1985:124) and Gunn (2001) argued that the cultural differences (such as differences in ritual activities and art assemblages) evident between the Arrernte (or Central Desert) and their Western Desert neighbours were largely the result of the differences in the environment. The major difference between the two regions is the availability of more reliable water sources in the east although areas along the eastern boundary of the Western Desert are, in fact, relatively well watered (Thorley 1998a:22).

A broad biogeographic scale was adopted by Smith (1988:60) to define a more general central Australian arid zone for his regional study of settlement patterns and similar broad scaled geographic definitions of central Australia have been outlined for regional rock art research by Galt-Smith (1997:40) and Gunn (1995a:117). Broad-scaled biogeographic definitions are the most appropriate for archaeological research as, contrary to culturally defined areas, they are independent of contemporary indigenous language boundaries and therefore do not presuppose a projection of the current demographic settlement patterns back through time.

The study area is centred round the discontinuous block of parallel ranges including the MacDonnell Ranges, Chewings Range, Heavytree Range, James Range, Krichauff Range Waterhouse Range, Ooraminna Range and Cleland Hills (Gunn 1995a; Galt-Smith 1997:40). These mountain ranges formed in Early Carboniferous time during the Alice Springs Orogeny about 340 –310 million years ago. During this time, pressure from the north faulted the basement and folded the Palaeozoic and Proterozoic sediment in the Amadeus Basin creating upthrust ranges with an east-west axis (Thompson 1995:80). The highest peaks are not much more than 1,500 metres above sea level and the lower ranges just a few hundred metres above the surrounding plains. The intense folding caused by the Alice Springs Orogeny has resulted in the creation of steep to near vertical cliffs in many of the ranges with a resistant quartzite bed forming the summit ridge (Thompson 1995:41). Small shallow caves, where rock
Rock art, ritual and relationships

art is commonly found, have eroded into the bases of the escarpments, ridge lines and remnant outliers.

Rock art complexes are also found in the narrow gorges cut into the sandstone and quartzite of the ranges by the flow of water in rivers such as the Finke, Ellery and Hugh (Plate 2.1). These ephemeral rivers have followed the same general course south through the ranges for about 100 million years gradually dissecting the ranges (Thompson 1995:89) to form open rocky gullies, steep sided gorges or wide sandy-bottomed gaps. Rainwater catchment flows into the headwaters of these rivers in the ranges and is retained within the gorges, gullies and gaps in deep, shaded plunge pools, long pools or waterholes constricted by rocky bars, or in small rockholes or crevices (Mabbutt 1971:69) providing a valuable water supply long after the rivers have ceased to flow. People are also drawn to the breaks in the ranges as they generally provide the most direct and accessible route through the rugged ranges. The central ranges are surrounded by extensive flat sand plains, with the outlying Dulcie Range in the northeast and the George Gill Range rising 'island-like' (Smith 1988:8) in the southwest. The ranges and sand plains run out to the sand dunes of the vast Great Sandy Desert to the west (Plate 2.2), the Simpson Desert to the southeast and the Tanami Desert to the north.

2.3 Climate

The region today is described as arid (Mabbutt 1983:1) or semi-arid (Newsome et al. 1996:291). While temperature, humidity and wind pattern are highly predictable on a seasonable basis (Griffin & Friedel 1996:272), rainfall 'is amongst the most variable on earth' (Jacobson 1996:7). Under the present climate, the mean annual rainfall is less than 250-350 mm across the study area but Figure 2.2 demonstrates the inconsistency in rainfall that produces a pattern where periods of extreme drought are punctuated by flooding rains. Rainfall has a seasonal pattern resulting from incursions of the northern monsoonal system during summer but this influence is less evident in the south of the study area (Griffin & Friedel 1996:272). Downpours produce short-lived flows throughout the river systems, none of which reach the coast. Rather, periodic flows are absorbed into the sandy river bases or terminate in floodouts, small salty playa lakes or shallow clay pans that fill following major rains but dry out rapidly under the high evaporation rate (Jacobson 1996).
Figure 2.2 Annual total rainfall, Alice Springs (Bureau of Meteorology, Alice Springs, data 1940-2000).

Groundwater supplies protected from evaporation may continue to flow under the sandy river channel long after surface waterholes have dried out and can be accessed in places by digging into the sand or gravel of the riverbed to provide an additional source of water in dryer periods (Mabbutt 1971:69; Strehlow 1947:60). The ranges and the riverine corridors have therefore provided favourable habitats for past human settlement within the wider desert (Smith 1988:8).

Daytime temperatures in summer regularly exceed 35° C. but in winter the temperature can drop to a freezing -8° C. at night with an accompanying frost. Although the winter days are usually sunny, a chilling wind frequently whips through the ranges reducing daytime temperatures and driving humans and animals alike to seek out protected sunny corners in rockshelters or gorges.

2.4 Vegetation

The extremes in temperature and the low and unpredictable rainfall limit the range of plants in most of the region to those well adapted to drought-prone environments. Areas that have a ground cover of grasses, scrubs and forbs in a good season, will become denuded or sparsely covered as vegetation dries up during prolonged droughts, thus it is the extreme variability of the vegetation cover between good and bad seasons that characterises the central Australian region (Latz 1995). In general,
River channels, where some moisture is available, are lined with large river red gums (Eucalyptus camaldulensis) and floodplains or ephemeral swamps support coolibah (Eucalyptus microtheca), reeds and grasses (Eragrostis spp.) (Plate 2.3) (Griffin & Friedel 1996:278). These areas stand out as winding green corridors against the sparser vegetation of the open plains. The shaded and more humid environment of the sheltered gorges support a variety of relict plants such as cycads (Macrozamia macdonnellii) and palms (Livistona mariae), survivors from times when the region enjoyed a more moderate climate (Latz 1996:227). The soils within the ranges are shallow and rocky favouring low woodlands where acacia species, especially mulga (Acacia aneura), predominate with sclerophyllous hummock grasses (Trodia spp.) covering the slopes (Griffin & Friedel 1996:277). In the driest and most nutrient poor soils of central Australia on the sand plains and dune fields (Plate 2.4), vegetation is dominated by spinifex species (Triodia spp.) (Latz 1995:9.), and to the south and west of Alice Springs, these areas are dotted with majestic stands of desert oaks (Allocasuarina decaisneana) (Urban 1990:17).

Latz’s (1995) analysis of the role that plant species played in the diet of Aboriginal people in central Australia in the recent past, demonstrated that Aboriginal people relied heavily on a wide range of plants to supplement their diet. Rather than depending on a few staples, seeds, fruits and tubers collected from more than 140 species of plants were gathered opportunistically and utilised according to the location or harshness of the season. Aboriginal people also exploited the particular survival attributes of desert vegetation to increase the production of plant material for consumption. Many desert plants produce a rapid flush of growth immediately after rain so that seeds or fruit could be gathered in great quantities by Aboriginal groups moving into areas where localised rain had fallen, even when other regions remained in the grip of drought. In addition, most central Australian grass species thrive on fire so that by burning patches of the landscape, Aboriginal people were able to harvest the grass seeds, rhizomes and other basal organs, which shoot rapidly after being fired, and hunt the animals drawn to the fresh green pick which emerged after the fire (Latz:1995). The widespread adoption of technology for the milling and grinding of seeds about 1000 years ago also broadened the range of plant material available for consumption in the desert regions (Smith 1986a). Aboriginal people in central
Australia had developed a range of strategies to optimise the use of plant foods within their diet.

### 2.5 Fauna

Like plants, the animals of central Australia are adapted to the extremes of the environment in a number of different ways, as Newsome *et al.* (1996) explain. Eruptive species which breed immediately after rain irrespective of the season in which it falls, include several bird species (zebra finch *Taeniopygia guttata*, budgerigar, *Melopsittacus undulatus*) and native rat species (plague rat, *Rattus villosissimus*). In contrast, seasonal breeders such as emus and dingoes rely on a range of seasonal flushes so may fall prey to prolonged drought. Macropods are opportunistic breeders able to postpone foetal growth until more favourable conditions prevail; that is, young are not produced until seasonal conditions are favourable for their survival.

The opening up of central Australia to pastoralism in the late nineteenth century and the concomitant introduction of feral animals such as rabbits, cats and foxes has had a marked impact on the native fauna of the region (Gibson & Cole 1996:311). In the absence of any substantial archaeofaunal remains, ethnographic records (e.g. Spencer 1896) therefore, provide the most reliable means to ascertain the range and population of animal species that were hunted by Aboriginal people.

Emus were recorded as scarce by ornithologists less than twenty years after the introduction of pastoralism (Spencer 1896). Earlier reports (G. Lindsay reported in the Adelaide Observer December 17, 1887:20, cited in Newsome *et al.* 1996:295) of emus being frequently sighted and shot for food to the east of Alice Springs in 1887, indicate that the emu population was much higher prior to the introduction of grazing. While emus are rarely seen in central Australia today, emus and emu tracks feature prominently as subjects in engraved and pigment rock art assemblages (Plate 2.5), which suggests that this species played a significant role in the cultural lives of past Aboriginal groups.

Other large game such as macropod species remain common, with the ‘quintessential inhabitant of the region’ (Newsome *et al.* 1996:293), the Red Kangaroo (*Macropus rufus*), found on open country along the streamlines and floodouts in substantial
numbers. Smaller species such as black footed rock wallabies (*Petrogale lateralis*) and euros (*Macropus robustus*) are found on the rockier slopes and in the ranges. Macropod tracks constitute a significant proportion of imagery within all rock art assemblages in the study area.

A number of smaller animal species identified as major characters in central Australian Aboriginal mythology (Spencer & Gillen 1927; Strehlow 1947) such as the western quoll (*Dasyurus geoffroii*), bandicoot (*Perameles eremiana*), burrowing bettong (*Betongia lesueur*), mala (*Lagorchestes hirsutus*) and possum (*Trichosurus vulpecula*) are now rare or extinct (Gibson & Cole 1996:310) but in the past were hunted by Aboriginal people for food and for decorative tails and fur. Reptile fauna is extraordinarily diverse with 130 species recorded within the study area (Kerle & Fleming 1996:354-6). Lizards formed an important component of the Aboriginal diet especially in the sand dune deserts (Lockwood 1964), and snakes and lizards are a common subject in the rock art assemblage. Fishes are mostly restricted to the Finke River drainage system where nine species have been recorded (Kerle & Fleming 1996:357). Fishes are incorporated into the mythology of locations along the river (Dennis Ebatarintja personal communication) but have not been identified in the rock art. Honey ants (*Camponotus inflatus*), frogs (e.g. *Cyclorana spp.*) caterpillars (e.g. *Hepialidae spp.*) and insects all contribute to the desert diet (Gould 1980) and are prominent in the mythology and art, although not in figurative form.

### 2.6 Summary

In summary, the study area incorporates a variety of ecological regions and topographic landforms within the Australian arid zone. Although the rainfall is highly unpredictable, plants and animals are adapted to the extremes of the environment and survive the dry times to flourish or breed-up when seasonal conditions are favourable. Past human populations have utilised a wide variety of resources in an opportunistic manner rather than depending on a regular round of seasonal abundance.

In the following chapter, I will review ethnographic sources to identify descriptions of rock art or visual imagery and the explanations for the meaning, function and origin
provided by Aboriginal people in the past. In addition, I will review the aims and conclusions of past rock art research within central Australia in order to place the current study into a research context.