

THE CONTEMPORANEITY OF ART AND DEPOSIT

The problem, previous approaches, current aims

We can ... base a dating system on clearly defined stylistic conventions which encompass a whole system of reference and through which secure bonds may be established between stratigraphically dated mobile art objects and parietal works, the latter generally lacking a datable context. (Lorblanchet 1977:56)

Here, the contemporaneity of different archaeological elements in shelter art sites is explored. The assumption that occupation evidence and art were produced at the same time, and that the two are complementary forms of evidence for the group(s) which produced them, is addressed. This assumption was not a new one when this research was originally undertaken, having formed the basis for many analyses in Australia and overseas (e.g. in the USA - Geib and Fairley 1992; Geib *et al.* 1986, Gunnerson 1969, Lipe 1970, Lister 1964, Schaafsma 1985, Talbot and Wilde 1989; in Europe - Bahn and Vertut 1988, Begouen and Clottes 1985, Cartailhac and Breuil 1906, Conkey 1978, Gonzales Echegaray 1974, Lorblanchet 1977). In various Australian regions the assumption has often been explicit (or even implicit) in more generalised analyses (e.g. Chaloupka 1977, 1994; Morwood 1979, 1992b; Taçon 1989; Taçon and Chippindale 1993) with the age of art phases being tied to phases of occupation evidence. While a common assumption, the contemporaneity of art and occupation evidence has rarely been investigated on a regional scale.

A number of Australian shelter sites have been excavated previously with the intention of indirectly dating the art. Specific chronologies have been extrapolated to other sites or broader regions on the basis of stylistic criteria and comparison (e.g. Beaton 1991b; David 1994; Flood and Horsfall 1986; Frost *et al.* 1992; Morwood 1979, 1986, 1992b; Rosenfeld *et al.* 1981; Ward *et al.* 2006). Some shelter art sites have been excavated in order to characterise their lithic assemblages, and it has been assumed that the art and the deposit were contemporaneous phenomena (e.g. Quinnell 1975, Wright 1971). Other art sites have been excavated and little or no effort has been made to marry the art with the deposit (e.g. Attenbrow 1987; Attenbrow and Negerevich 1981, 1984; Beaton 1991a, 1991b; Cox *et al.* 1968; Mulvaney and Joyce 1965; White and Weineke 1975).

While the assumption of contemporaneity and occupation evidence is broadly based, there can be no definitive correlation between art production and the domestic use of shelters.

In some social contexts, art and its production take place in the ritual sphere. In such situations, a nexus between domestic evidence and art would not be expected, e.g. art associated with mortuary practices in central Queensland (Morwood 1979). Other models have proposed an inverse relationship between art and occupation evidence. Morwood (1986) suggested that the proliferation of art in south-eastern Queensland was linked to declining use of shelters for habitation as art in the region began to function as broad scale communication. There are instances where the contemporaneity of art and deposit would not be expected.

Several Sydney shelters have been described as 'important ritual galleries' (Elkin 1949, McCarthy 1961) with the implication that these probably were restricted (or 'closed') to parts of the social group (i.e. based on age, level of initiation and gender). There is no ethnohistoric

evidence about the social context of art production in the Sydney region at contact (Chapter 3). In the absence of traditional knowledge about this art's function and production, the possibility of art having either ritual and/or secular functions requires consideration.

Over 65% of shelter art sites also have recognisable occupation deposit (i.e. from surface evidence²⁷) which provides strong support for pigment art having a domestic function, if contemporaneity is a valid assumption.

The only way of fully testing contemporaneity would be through a comprehensive effort to obtain direct dates for the pigment art (using Accelerator Mass Spectrometry ('AMS') radiocarbon and companion techniques, e.g. Rowe 2001) at a number of excavated (and dated) occupation sites. There is no other way to verify that the two sorts of evidence were produced at exactly the same archaeological time (see Chapter 10).

For this research project a number of motifs were dated using AMS. At the time, progress was slow, due to the pioneering nature of this technique, restricted funding and technical problems in setting up facilities in Australia. The myriad potential sampling problems and interpretative pitfalls introduced by the experimental nature of these techniques also meant that limited time could be spent on this aspect. A small number of sites have been dated by this process in the greater Sydney region (McDonald 2000c; McDonald *et al.* 1990). One of these sites was the UDM shelter excavated for this research (chapter 8). In the absence of sufficient uncomplicated dating results, this chapter demonstrates a conventional methodological approach to investigating the assumption of contemporaneity of habitation and art production. This is done at the site specific and regional levels.

It is assumed that the engraved and pigment art in Sydney were produced by the same group(s) of people over the period that the region was occupied. The concept that occupation evidence and art are different components of the same culture is implicit to this assumption. Based on the Sydney Basin's occupation indices, it can be assumed that the majority of the Sydney Basin art dates to within the last 4,000 years. Sheltered art sites are the focus of this analysis since these are the locations which provide the evidence of art and occupation in close proximity.

Testing the assumption of contemporaneity at a regional scale presents different challenges. Many sites have no datable evidence, either in the pigment sequence or the archaeological deposit. Often the context of the art in a site does not allow for its relative age to be judged, e.g. engravings located on sloping shelves not covered by deposit. Some art assemblages create analytical difficulties in broader terms. These include sites which have:

- only one phase of occupation evidence but several phases of art present, either stylistically distinct motifs or obviously episodic art production;
- several phases of occupation evidence but only one art phase present;
- artistic evidence which demonstrably postdates the occupation evidence; or,
- obviously ancient art which is accompanied by more recent occupation evidence.

Archaeological phases or cultural periods by their very nature 'collapse' periods of time in terms of the individual or even generations. Direct correlations between 'an individual site occupation' and 'a specific artistic production episode' could rarely be expected [cf. Cosquer Cave provides such a unique opportunity (Clottes and Courtin 1993, d'Errico 1994)]. Artistic trends over centuries or even millennia are often the usual scale of prehistoric art analyses, although the successful use of AMS dating may alter this situation (Clottes and Courtin 1993, Cole *et al.* 1994, Geib and Fairley 1992, McDonald 2000c, McDonald *et al.* 1990, McDonald and Veth 2008).

²⁷These figures are based on 1994 NPWS (now AHIMS) site records. CHM test excavation programmes in the Sydney region have demonstrated that more than 80% of shelters with Potential Archaeological Deposits (PAD) and open PADs i.e. with no visible (surface) archaeological remains are indeed archaeological sites once excavated (Attenbrow 1987, Attenbrow and Negerevich 1981, Koettig 1985, McDonald 1985b, McDonald *et al.* 1994).

Regional patterning operates multifariously and ‘many important processes and institutions operated at and should be understood at a variety of scales of inclusion’ (Conkey 1987:70). We need to understand the complexities of intra-site patterning from individual sites, as well as regional patterning which results from viewing the material at a broader perspective.

The assumptions of this research were intentionally ‘telescopic’. The assumptions of contemporaneity are first explored at a finer scale with the potential for anomalies being identified prior to exploring the regional trends. The sites purposively excavated for this research represent a miniscule sample for the region. These excavation results, however, combined with evidence from other excavated and dated art shelters, can be used to predict how reliable this approach is.

The four sites excavated for this research (chapters 6-8) all contained evidence for the episodic production of the pigment art. Yengo 1 also contained an engraved panel partially covered by occupation deposit. The two Yengo sites, located only 10m apart, contained very different art assemblages. Different degrees of direct and indirect association between the art and the deposit were demonstrated in these four sites.



Figure 9.1: The four shelter art sites excavated for this research.

This chapter reviews and analyses the previously excavated shelter art sites in the Sydney region. Regional patterns in shelter site usage are identified and the ramifications of these discussed. A discussion regarding the validity of assumptions made regarding the contemporaneity of art and occupation evidence concludes this chapter.

Regional patterns for the Sydney region

The problem of demonstrating contemporaneity between art and deposit relates primarily to the fact that parietal art, until recently, could not be directly dated. Theoretically AMS radiocarbon dating is the solution to this issue, but this technique is still in its adolescence (Keyser 2001) because of the relative newness of the techniques and the lack of theorising about applicability of these techniques to art assemblages generally (see Beck *et al.* 1998; Bednarik 1996; Hyman and Rowe 1997; McDonald 2000c; McDonald *et al.* 1990; Rosenfeld and Smith 1997).

Direct dating techniques involve the collection and dating of small samples from art (e.g. pigment, charcoal, beeswax) or from crusts and/or deposits overlaying (or underlying) art motifs (e.g. oxalate crusts, desert varnish, and mud-wasp nests). Accelerator Mass Spectrometry (AMS) is the most widely used technique because it requires much smaller samples than conventional radiocarbon (ca.0.0005 gram versus 5 grams: see Rowe 2001). AMS counts the number of radiocarbon (^{14}C) molecules (as a ratio to carbon) in any organic material. The main difference between this and conventional radiocarbon dating, is that AMS counts the actual ^{14}C atoms – as opposed to the number of atoms that decay over a given time period (Rowe 2001). Charcoal is the most common archaeological material used for dating and, although there are certain identified caveats, i.e. potential contamination and the old wood/fossil charcoal problems, the techniques for dating charcoal are reliable and well tested.

Researchers have experimented with a number of other materials and techniques. These have included plasma-chemical extraction of organic carbon from inorganic pigments (Hyman and Rowe 1997), fibres found in paints (Watchman and Cole 1993), beeswax (Nelson 2000), blood residues (Loy *et al.* 1990, although see Nelson 1993, Gillespie 1997), oxalate crusts (Watchman 1993a) and optically stimulated luminescence dating (OSL) of mud wasp nests over or beneath rock-art (Roberts *et al.* 1997).

Focussed dating programmes have resulted in chronological control in a number of countries – but only in the order of only c.100 radiocarbon art dates have so far been published (Rowe 2001: 148). In Australia, other researchers have dated charcoal, beeswax, oxalate crusts, Bradshaw figures and plant fibres in paint (David *et al.* 1999, Nelson 2000, Roberts 1997, Watchman *et al.* 1997). A current ARC Linkage Project on the Canning Stock Route aims to target a range of pigment styles in an ambitious attempt to provide a chronology for the recent art and dreaming stories (Tjurkurrpa) in the Western Desert (McDonald and Veth 2005, 2008; McDonald and Steelman 2008).

Unless both the occupation evidence and the art have been dated, the association between the two types of evidence is not easily proved. Direct associations, e.g. where art is covered by dateable deposit or has been detached from the wall and is buried, are rare – and these mostly only indicate minimum dates.

Occupation sites providing a dateable context for art in the Sydney region are extremely rare. So far, only engravings have been found in suitable contextual locations – and the art covered in these situations is not representative of most of the engraved art in the region. Pigment art is not generally preserved below deposit (because of the acidity and moisture). There is one shelter art site on Cowan Creek (Mega Midden: McDonald 1987) in which several metres of midden deposit has built up to within a metre of the roofline. White hand stencils occur across the back wall very close to the current surface of the deposit and clearly must have been produced before the deposit accumulated to its current level. There is a possibility that pigment art exists below the deposit in this shelter (preserved by the alkaline deposits) and that an association could be achieved in this location.

In the Sydney region the problem is further exacerbated by the fact that the drawing technique predominates. Drawing involves the use of dry pigment as a crayon – not the preparation of paints, which involve grinding, use of binders, mixing palettes and so on. This lack of pigment preparation suggests that the likely residues of such activity might not be expected in the deposits to the same degree as in regions where painting predominates (e.g. the Australian arid zone, Kimberley, Arnhem Land and Laura). Faceting of ochres would not be expected – nor would

preparation palettes. Crayon ochres would occur in a much less predictable manner, i.e. as a result of being dropped or fragments breaking off during the act of drawing. Further, the ubiquity of charcoal in Sydney pigment art production means that any large pieces of charcoal in the deposit could potentially have been used for art production.

Whether lack of pigment preparation or taphonomic factors is the cause, very few excavated shelters in the region have provided evidence which assists in the indirect dating of pigment art production. Of the 31 shelters excavated in Upper Mangrove Creek, only one had ground ochre: and this site had no parietal art (Attenbrow 2004: Table 4.5). It is possible that excavated ochres have not been recognised by archaeologists who are excavating without an art research focus, especially since these types of remains when they are found, are usually highly fragmentary. Further, much of the red and yellow pigment which is found in shelter sites is only gradationally finer in grain size and friability than natural ironstones which are ubiquitous across the Sandstone Formation. It is interesting that the shelters excavated for this research all contained buried pigments (either pipeclay or ochre). Perhaps this can be attributed to the fact that these sites all had major art assemblages, hence increasing the probability for this type of material to be deposited, and recovered.

Prior to this research, 35 art shelters in the Sydney region had been excavated (Attenbrow 1987; Attenbrow and Negerevich 1984; Clegg 1979; Cox *et al.* 1968; Koettig 1985; MacIntosh 1965; McDonald 1992a; Menses (in) Miller 1983; Moore 1970, 1981; White and Weineke 1975). While many of these authors discuss the art located in these excavated shelters, only one of these excavations was undertaken with the expressed aim of contextualising the art (MacIntosh 1965).

Most (78%) of these art sites were excavated for cultural heritage management purposes (Table 9.1). Eighteen of the 25 salvaged art shelters were excavated in the Upper Mangrove Creek catchment (Attenbrow 1981, 1987, 2004; Gunn 1979). Two other shelters were investigated for management purposes i.e. prior to the installation of protective cages (Clegg 1979, Menses 1970's in Miller 1983). No detailed excavation report exists for either of these sites. Charcoal samples, however, were submitted from both of these shelters and dates for these deposits are available (McDonald 1992a, Miller 1983, Mackay and White 1987). Five of the excavated art sites had broader research questions: contact between the Hunter and the Hawkesbury (Moore 1981) and characterising coastal stone tool assemblages (e.g. Cox *et al.* 1968).

Here the data from some of these excavated shelter art sites is discussed to highlight the potential for interpreting the contemporaneity of art and deposit. By analysing the occupation patterns demonstrated by these sites, general patterning across the region can be defined.

Table 9.1: Excavated shelters with art in the Sydney region.

AHIMS #	Site Name	Published / Reference	Dates (years BP -uncalibrated)	Lab-ID	Art details	Sequence?
[Southern Sydney]						
52-2-37*	Bull Cave	Miller 1983	1,820 ±90	SUA-2106	white stencils,	b/r/w
			<1,050 ±90		blk and red drwg	
52-3-30*	Audley	Cox <i>et al.</i> 1968	no		w and r stencils	st/r/w
			(midden/occ)		b,r andw drwgs	/b/b+w
	BC1	Attenbrow and Negerevich 1984	no		b drwg	no
52-2-771*	BC2	'	no		bl, r drwg + y paint + prints	y/red
52-2-774*	BC5	'	no		blk drwgs	no
52-2-778*	BC9	'	1,630 ±90	SUA-1746	blk drwgs	no
52-2-1031*	M11	Koettig 1985	480 ±70	SUA-2255	w stencils	no
			1,520 ±70	SUA-2256		
			2,220 ± 70	SUA-2257		
45-6-602	HLD	White and Weineke 1971	5,240 ± 100	SUA-60	red h stencils	no
			870 ± 95	SUA-59		

AHIMS #	Site Name	Published / Reference	Dates (years BP -uncalibrated)	Lab-ID	Art details	Sequence?
	Bindea Rd	Attenbrow and Conyers 1983	2,340 ± 100	BETA-5887	?	?
[Northern Sydney]						
37-5-1*	Yengo1	McDonald 1995	5,980 ± 290	ANU-6059	engravings	
			4,590 ± 300	ANU-6055		
			2,750 ± 220	ANU-6215	w,r,b drwg+ paint	yes
			1,950 ± 400	ANU-6054	w,y,r,b stencils	
			540 ± 180	ANU-6058		
37-5-2*	Yengo2	McDonald 1995	still to come		w,b,r + y drwg paintings + stencils	yes
37-6-349	Big L	Moore 1970	2,495 ± 105	SUA-756	w stencils+paint	no
			930 ± 50	ANU-648/2		
45-2-39?	MR1	Moore 1981	2370 ± 100	SUA-387	R paint	no
			5,820 ± 110	SUA-564		
45-3-317*	Dingoand Horn	MacIntosh 1965	581 ± 120	GX-70	r/w, r, y and b drwg	
			144 ± 125	GX-69	w stencils	yes
45-3-787*	Black hands	Attenbrow 1987	3,040 ± 85	SUA-932	b, w, r + w stenc + polychrome	yes
45-3-1207	Dingo	Attenbrow 1987	1,840 ± 60	SUA-2166	?	
45-3-1528	Elonga'd Fig	Attenbrow 1987	1,810 ± 80	SUA-2170	?	
45-3-789*	Roo+Ec'idna	Attenbrow 1987	6,700 ± 150	SUA-2172	b drwgs	No
45-3-776*	Loggers	Attenbrow 1987	530 ± 85	SUA-1124	b, r,w, b+w,	yes
			2,480 ± 60	SUA-2165	incised engrav	
			11,050 ± 135	SUA-931		
45-3-1165*	White Fig	Attenbrow 1987	5,230 ± 70	SUA-2167	?	
45-3-1159*	Wolloby Gully	Attenbrow 1987	400 ± 60	SUA-2168	b, w	yes
45-3-1179*	Emu tracks2	Attenbrow 1987	3rd - 1st mill		engravings	no
45-3-1164	one tooth	Attenbrow 1987	2nd?-1st mill		?	
45-3-1161	low frontage	Attenbrow 1987	1.5 mill		?	
45-3-1168	Elongarra	Attenbrow 1987	1.5 mill		?	
45-3-1201	McPherson	Attenbrow 1987	1st mill		b drwg	
45-3-1174*	Bird Track	Attenbrow 1987	1st mill		b, w, b+w (out, o/i)	no
45-3-1160	Boat Cave	Attenbrow 1987	1st mill		?	
45-3-1170*	Venus	Attenbrow 1987	<1st mill		b, r drwg	
45-3-1210*	Ti-tree	Attenbrow 1987	<1st mill		b drwg	
45-3-1196	Mangrove mansion	Attenbrow 1987	<500 yrs		?	
45-3-1204	Firestick	Attenbrow 1987	<500 yrs ?		?	
45-6-150*	Milligans	Clegg 1979	5,340 ± 105 BP	SUA-?	b dr'wg, engrav	yes
			800 ± 90			
45-6-72*	Angophora Reserve AR1	McDonald 1992a	2,000 ± 150	ANU-6584	b + r drw'gs	no
			1,750± 90	ANU-6923		
			1,150 ±100	ANU-6583		
45-6-1614*	Great Mackerel	McDonald 1992b	3,670±150	ANU-6615	red stencils	yes
			560±160	ANU-6372	b,w drw'gs +	
			220±120	ANU-6370	w stencils	
45-3-1114	UDM	McDonald 2000c	1,220±120	ANU-8134	white stencils	yes
			1,860±70	ANU-8135	bl + wh drw'g	
			1,540± 60	ANU-8133	red stencils	
			4,030±140	ANU-8132	engravings	

Henry Lawson Drive

The art assemblage at this site is described as:

Rock paintings on the back wall of the shelter above the shell midden area. They were situated about one metre above floor level and comprised at least seven red stencilled hand-prints (sic) which are only just visible. Some red ochre elsewhere on the walls indicates that other art had previously been present. (White and Weineke 1975:7)

Two dates were obtained for the site. The older ($5,240 \pm 100$ BP) derived from the excavation outside the shelter and predates the main midden occupation phase (White and Weineke 1975: Figure 7). A backed blade was associated with this dated charcoal sample. The base of the midden inside the shelter was dated to 870 ± 95 BP.

The artefact assemblage retrieved from the 36cm of deposit below the midden was small ($n=246$). It included backed artefacts but no bipolar or use-polished material. The date returned is slightly older than expected and its derivation (outside the dripline) means that this may have been subject to a number of taphonomic agencies (see also Hiscock 2003). The possibility of this being a faint signature of early to mid Holocene occupation in this part of the region is posited by Hiscock (2003) - a possibility reinforced by the discovery of an early Holocene open site in Tempe (JMcD CHM 2005c).

The rock art in this shelter could relate to either occupation period. However, the fact that the art is very faded, and that it occurs only 1m above the present ground surface, suggests that the stencils predate the midden period and relate to the lower units which were more than 45cm below the current surface level. Adult hand stencils rarely occur low on shelter walls, and certainly, stencilling one's hand below waist-height (approx. 1m) would be extremely awkward. Given the build-up of the floor level over time, it seems reasonable that the stencils predate the midden and the roof-fall period and could be contemporaneous with the earlier occupation period, c. 5,800 years ago.

Mill Creek

The M11 site contains faded white stencils of human hands and macropod feet (Koettig and McDonald 1984, Koettig 1985).

The deposit at this site was dated to between c.500 - 2,200 BP (see Table 9.1). Two main phases of Middle and Late Bondaian occupation were found. The earlier phase of occupation was the main one, with artefact densities three times higher than recorded in the upper assemblage. No excavated pipeclay was reported, although the poor state of preservation of the faunal remains suggested that the survival chances for this would be low. The preservation of faunal material is best in the earlier layer, and the absence of bone from the upper levels is stated as 'noteworthy' (Aplin 1985:82).

The production of the art here may have taken place during the more intensive middle Bondaian phase. Occupation at this time was more intensive, and a correlation between the faunal remains (including macropod) and the art (stencilled macropod feet) is possible. It is unlikely that a macropod's feet would have been stencilled without the beast also being consumed (or at least deceased!).

It is argued that the production of white stencils at this site took place between c.2,200 and 1,500 years ago.

Barden's Creek

Only one of the four excavated art shelters in Barden's Creek was dated (BC9; $1,630 \pm 90$ BP). Based on an age-depth curve, occupation in this site is estimated to have commenced between

3,500-3,000 years ago (Attenbrow and Negerevich 1984:143). The stone tool assemblage was characterised as mainly Middle Bondaian, with a sparse Late Bondaian phase.

The small (<20 motifs) art assemblage comprised faded black drawings of anthropomorphs and a quadruped. Charcoal was found in greatest quantities throughout the dated occupation layer.

While a correlation between charcoal rich layers in the deposit and charcoal drawings is not conclusive, it is not an unreasonable assumption. As this shelter had several phases of occupation, concluding contemporaneity of the art with one particular phase of deposit is difficult. The production of charcoal drawings at BC9 probably dates to somewhere in the last 1,600 years.

Bull Cave

The art from this shelter was recorded in detail by the Sydney Prehistory Group (1983). The art here includes several contact motifs amongst its complex assemblage of black and red drawings and white hand stencils. The contact motifs are large bulls executed in traditional techniques; outlined and infilled drawing. One complete bull is red; the other black. Both have white eyes.

Schematically, while obviously being bulls, their feet are not bovid and their heads are bird-like. Clegg (1981) argued that these bull drawings depict the cattle that went missing from the early days of the colony (in 1788) since these cattle were polled, unlike their 61 progeny which were eventually found in 1795. He also argues for a developmental schema whereby the earlier (red) drawing of the two is more bird-like than bull-like, while the later black version is more schematically 'correct'. The bull's feet were obviously problematic for the Aboriginal artist, because these were unlike any native fauna. From a distance these would have been concealed by grass: a similar argument was mounted by Percy Trezise (at a conference in 1988) in relation to depictions of diprotodons).

The analysis of the excavated occupation deposit did not attempt to correlate the art with the deposit (Miller 1983). A cited date of c.1,800 years BP (Table 9.1) for the main phase of this silcrete rich assemblage may well be associated with the majority of the art present in this shelter. The bulls obviously post-date the majority of the art – and can be taken as evidence that rock art was still being produced at contact (McDonald 2008). Koettig's (1985) re-analysis of the Bull Cave material indicates that an undated Late Bondaian assemblage is in the top spit. The contact art may correlate with this the terminal (undated) phases of occupation at this site. Otherwise this art has inconsistent dated excavation evidence.

Mangrove Creek

The Mangrove Creek sites (Attenbrow 1987, Gunn 1979, MacIntosh 1965) are discussed in more detail in Chapter 10. Two of these, however, are discussed here. The Dingo and Horned Anthropomorph shelter is discussed as this site was excavated with the expressed purpose of dating the art. Emu Track 2 is discussed as this site demonstrates a situation of potential ambiguity.

Dingo and Horned Anthropomorph

The art at this shelter is located on two separate panels. The main panel, after which the site is named, is in a large circular alcove and contains an aesthetically pleasing composition of two red culture heroes (horned anthropomorphs), two dingoes and two echidnae. The other art panel has a complex panel of drawings and stencils. There is an engraved fish on the sloping rock panel at the base of this panel and a number of grinding grooves on a platform outside the dripline.

Two dates were obtained from a pit, excavated near the horned anthropomorph panel (Table 9.1). No lithic or faunal assemblage is described from this particular excavation, but clear stratification of charcoal (some hearths) as well as the two 'red powdery' strata amongst the yellow sand was found. MacIntosh argues that these powdery strata represent the two artistic

episodes at the sites. The older date was collected from a sample below the darker red lens in which one piece of faceted pigment (the same colour as the dingo and horned anthropomorphs) was found. The pigment from between 24-27cm depth was described as having ‘three of its eight sides ‘rub-polished’’ (MacIntosh 1965: Plate V).

The other dated sample came from above the upper lighter red layer, only 4cm below the surface (MacIntosh 1965:92-3). This more recent date cannot be correlated with the art at the shelter (see discussion Chapter 7).

Emu Tracks 2

At Emu Tracks 2, 15 engraved emu tracks were recorded as being level with the current surface of the deposit. It is generally assumed (Clegg 1978; Morwood 1979, 1992; McDonald 1993b; Rosenfeld *et al.* 1981) that engravings on vertical shelter walls are contemporaneous with living surface 35-50cm below the engravings.

On the basis of artefact typology, the occupation of this shelter commenced sometime c. 4,000 years ago (Attenbrow 2004: Table 6:2). The major occupation of the shelter is thought to have occurred in the 3rd millennium (in the Middle Bondaian). The basal levels at Emu Tracks 2 were c.80cm below the current surface, and thus it could be assumed that these engravings relate to the main, Middle Bondaian occupation of this shelter.

However, the morphology of the shelter and nature of the engravings (residual Panaramitee) suggest that this may not have been the case. The back wall and bedrock in the shelter is steeply sloping. The single (50 x 50cm) test pit excavated here had contracted significantly at its base, and it is possible that evidence of the site’s earliest occupation, towards the front of the shelter, was undetected by this very small sample (Val Attenbrow, pers. comm., 1991). While a minimum age of Early to Middle Bondaian is suggested by the dated deposit in this site (Chapter 10; Table 10.7), the art may indeed be older.

Based on this shelter’s art evidence, this art is placed at older than 5,000 years BP (Chapter 7).

Angophora Reserve

The main occupation phase at this site was between c. 2,000-1,200 years ago. The art consists of small assemblage of faded black and red fish and macropod drawings. There is no obvious association between the deposit and art here, mainly because these are spatially separated by more than 10m (McDonald 1992a: Figure 2).

The art has the potential to be dated, using AMS on the charcoal pigment or on oxalates within the silica coating which has covered several of the motifs. The art has been severely vandalised in recent years, and the risks of charcoal contamination are high. The silica coating, however, offers good dating potential (Watchman 1994).

Audley

The 38 motifs at this site were described by Maynard as being ‘not all done at the same time, but on several occasions, to which different fashions in colour and form were appropriate’ (Cox *et al.* 1968:99). The art sequence here was described as white stencils and red followed by white, and black and white bichrome.

Several phases of occupation deposit were observed, although these were not dated and appeared to ‘offer no index of chronology ...’ (Cox *et al.* 1968: 99). The earlier phase of occupation included artefacts, with charcoal and a few shells. The later phase comprised tightly packed shell midden (Cox *et al.* 1968: Figure 1).

The shells weren’t analysed but were apparently ‘estuarine species readily comparable with those recovered from a rock shelter some three miles downstream at Gynea Bay’. Bone material

was in quantities ‘insufficient to allow any useful identification’. Human skeletal remains were found in this site (Cox *et al.* 1968: 94, 97).

Other excavations in shelters across the region have revealed similar patterns of occupation (Attenbrow 1992; Clegg 1979; Glover 1974; McDonald 1992a, 1992b; Megaw 1974) and, from the limited information provided, the Audley shelter seems to have a similar occupation history to a number of other decorated shelters in estuarine locations.

The phases in the art are also suggestive of similar trends noted, particularly in the Great Mackerel shelter (Section 6.3). In both shelters there is an earlier phase of red pigment followed by a later phases comprised of white stencils and black and white bichromes.

The absence of dates, shell or lithic analysis makes drawing conclusion difficult. Based on similar trends identified elsewhere (and particularly the absence of backed artefacts) the upper midden unit (possibly associated with white stencils and black and white bichromes) at Audley may be late Bondaian, while the earlier occupation unit (possibly associated with red paintings) may be early Bondaian.

Daley’s Point (Milligan’s)

The Daley’s Point shelter (north of Broken Bay) was excavated by John Clegg prior to regulators constructing a metal grid to protect the art from vandals. The art consists of charcoal drawings and pecked outline engravings (fish?/echidna? and macropod) low on the sloping back wall.

The site is stated to have been occupied ‘for between 200 and 600 years from 900 to 700 years ago, or 1100 to 500 years ago’ (Clegg 1979:2). This is interpreted as meaning a date obtained for the occupation level was 800 ± 100 BP, although this interpretation is clearly only one of many. A basal date is firmly stated as being $5,340 \pm 105$ BP (SUA-?: not referenced).

Clegg observed change over time in the occupation material ‘the stone artefacts are low down. All the fish-hook stuff is right on top. The lower shells are larger than the upper shells’ (Clegg 1979:3). Attenbrow’s (1979) analysis of the molluscan remains confirms that a vast quantity of shell (69kg) was removed from one square. The majority of this (82.6%) was *Anadara trapezia*.

The pigment and engraved art is interpreted here as being associated with the main, midden occupation phase. Its production is thus tentatively placed within the last millennium.

Conclusions

Of the 35 shelter art sites excavated in the region, 22 have been dated (Table 9.1). A careful reading of the original excavation reports allows an inferred age for the art in many instances - assuming that the art generally correlates with more intensive occupation. No temporal trends in art styles are suggested based on this data. Diachronic change is explored in chapter 10, at which times these trends are further discussed.

The length of time that sites with art have been occupied and the main phases of occupation at each (Figure 9.2) confirm the general occupation trend for the region (chapter 4). The fact that this occupation pattern is mirrored by shelters with art is considered significant. These decorated shelters document a very similar pattern of behaviour to habitation sites generally. This similarity supports the contiguity of use of these locations for general occupation and for the production of art.

Three sites excavated specifically for this research demonstrated different approaches to testing and establishing the contemporaneity of art and occupation deposit. In all cases it is possible to conclude that particular elements of art production were contemporaneous with particular phases of the occupation evidence.

At Great Mackerel, the more recent occupation phase was established as contemporaneous with the more recent art phase. Both art and occupation suggested the presence of women at the site and on this basis it was concluded that the two were recent and contemporaneous. The more

recent occupation layer contained white pipeclay, a material present only in the more recent art phase. The earlier occupation at this site seems to represent short, sporadic visits, possibly by hunting parties. While it was not possible to conclusively demonstrate the contemporaneity of the earlier occupation with the older rock art, it is possible that these may also have been produced contemporaneously.

At Upside-Down-Man shelter, occupation occurred between 4,000 and 1,200 years ago. Two main phases of Pre-Bondaian and Middle Bondaian (Attenbrow's Phases 1 and 3) occupation were documented interspersed with sporadic occupation, possibly Early Bondaian (Attenbrow's Phase 2).

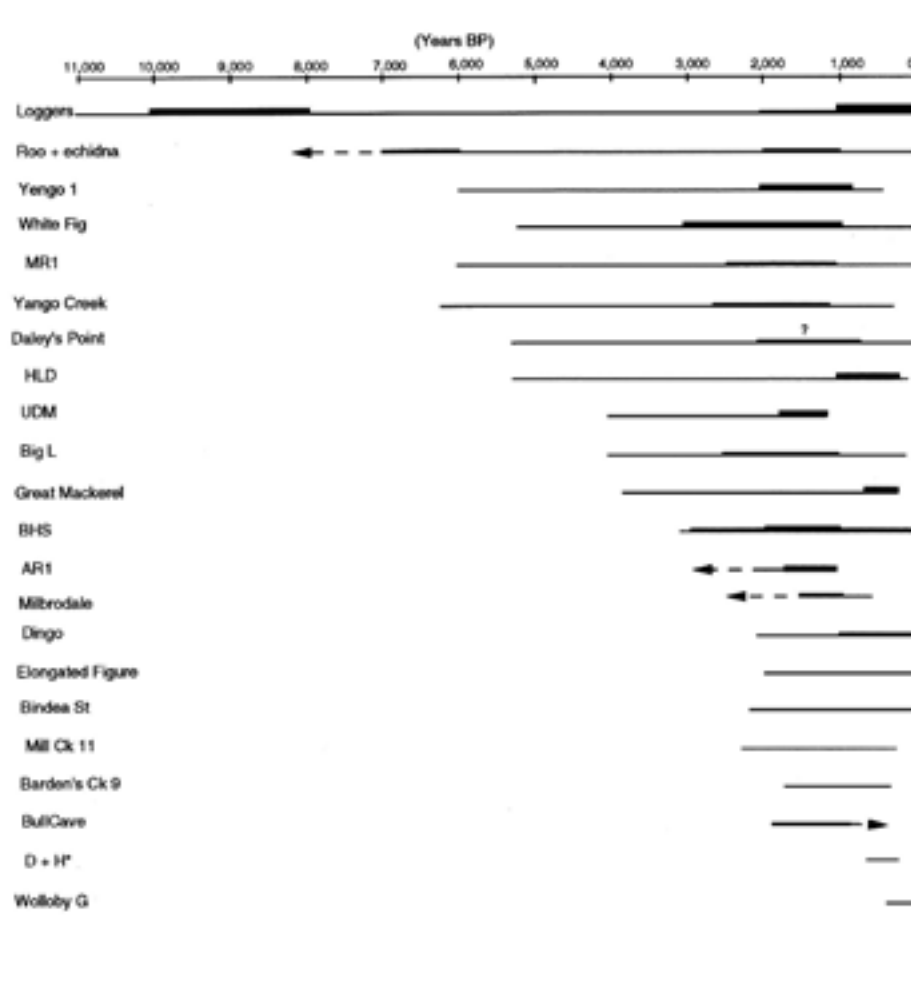


Figure 9.2: Dated shelter art sites showing length of occupation and period of most intensive artefact accumulation.

The art here provides evidence for episodic production. Small quantities of pigment and pipeclay were found throughout the most intensive period of the shelters usage (c.1,500-1,200 years ago). This suggests that most of the more recent pigment art was produced during the later, and main, habitation of the shelter.

AMS dating was used in an effort to date one of the terminal motifs of the assemblages. Unfortunately, contamination issues means that this was inconclusive. Assessing the age of the earliest art production here is even more difficult. It is argued that the earlier pigment art is older than middle Bondaian in age. The figurative schema of the pecked engravings represents a conceptual and stylistic development from iconic to figurative. The pecked figurative motifs are a transitional form of the regional Panaramitee style (which is thought to be pre Bondaian in age).

A transitional form would be expected to be younger than the Yengo 1 engravings (a minimum of 5-6,000 years) but older than the Bondaian art which predominates in the region.

On this basis, it is argued that two of the UDM pecked human figures are contemporaneous with the earliest use of the shelter for occupation. The seemingly late date (i.e. 4,000 years BP) for the oldest lithic assemblage found here suggests that this may also be a 'transitional' assemblage. The anomalous nature of both the art and the stone assemblage is again suggestive of contemporaneous events.

The Yengo 1 site provided a more conventional set of data for the establishing the age of its art. The partially buried boulder at the front of the shelter provided the opportunity to indirectly date the regional Panaramitee style engravings by association with deposits. It is argued that these are pre-Bondaian in age (dated here to between 5-6,000 years). The occupation evidence, including pigment and ground edge fragments, established the contemporaneity of the most recent phase of occupation with the production of pigment art and the sharpening of ground edged implements. The morphology of the shelter floor assisted in this interpretation (given the ceiling height prior to deposition).

In the Great Mackerel and UDM sites, the earlier pigment art consisted of red stencils and red paintings. At Yengo 1 and UDM, the earlier art forms were pecked engravings.

At UDM use of the shelter for habitation appears to have ceased around the turn of the last millennium. After use of the shelter for camping ceased, it is possible that art production continued. There is no evidence in any of the sites excavated for this research that art production continued until European contact, i.e. there are no post-contact motifs. At the Great Mackerel site, the terminal phase of the shelter's occupation probably coincided with European contact. Use of the shelter *per se*, may have finished abruptly. The terminal dates in Yengo 1 suggest usage up until just prior to contact.

Only the ambiguous AMS evidence from the UDM site suggests that art production in shelters might have continued once these were abandoned as places of occupation - as does possibly Bull Cave.

In all shelters tested, it is argued that the main phase of pigment art production coincided with the most intensive occupation period. In multi-phased art sites, earlier low intensity occupation appears to have had an artistic component: also of low intensity. The assumption that art production and shelter occupation coincide, is argued as being valid.

These results broadly demonstrate evidence for diachronic change in pigment art over the period of the region's occupation. The clearest evidence for this is in the presence of engraved motifs. While the majority of these are not in datable contexts, the Yengo 1 excavation supports the contention that this style of art predates the bulk of the art in the Sydney region; as has been demonstrated elsewhere in Australia (e.g. the arid zone, central Queensland, north Queensland, Victoria River Downs, etc.).

The results support the model (McDonald 1991:83) of an earlier, low density artistic tradition predating the main occupation and main artistic period of the region. Only a small number of shelter sites contain residual Panaramitee engravings: this earlier low density art phase matches other forms of early occupation evidence (e.g. Attenbrow 2004; JMcD CHM 2005a, 2005b). This suggests a continuing tradition over time for the contemporaneity of art and occupation in shelter sites of the region.

This is highly suggestive about the role this medium played in terms of information exchange theory. If art is being produced in shelters where the community group is spectator – where there is an open social context, then this art is functioning very differently to art being produced 'in private' or closed social contexts.