

The archaeology of the Dome Gorge in the Dâureb/Brandberg, Namibia: Themes, content and context

Goodman Gwasira
University of Namibia

Abstract

The Dâureb' Brandberg, Namibia's highest mountain, is one of the most well documented rock art regions in the world. All in all almost 900 sites comprising of almost 50 000 individual images were recorded in the Dâureb. However the rock engravings' which have been found in the Dome Gorge remain relatively sparsely researched. The Dome Gorge is a unique site in the sense that paintings and engravings converge and in some cases superimpose each other. The aim of this research was to understand the entire corpus of the area through conducting empirical documentation of the site. Altogether seven different types of combinations of engravings and paintings were observed in the data. The study also investigated the spatial patterning of the rock engravings in the Dome Gorge and established an empirical description of the distribution and figuration of engravings based on quantitative analysis.

Introduction

The Dome Gorge (variably referred to as the Grosse Dom Schlucht), is located on the south-western edge of the Dâureb at the inter-face of the Namib Desert and the semi-arid plains of western Namibia. It is found between the Numas and Amis gorges. The lower Dome Gorge is mainly characterised by dolerite boulders which are suitable for executing engravings, compared to the upper reaches of the mountain which are predominantly composed of granite boulders (MacCalman, 1964/65; Ouzman, 2002; Diehl, 1990 as cited in Lenssen-Erz 2001). According to Lenssen-Erz (2006) the absence of engravings in the upper Dâureb cannot be explained by the argument that there exists a lack of suitable rocks to engrave on, but rather that the "...general contextual notion" did not allow engravings to be made there (p.435). In addition to the rock art, the gorge also has associated archaeology which can be dated to the last 500 years and falls into the Brandberg Culture Classification (Breunig, 1989). Some stone artefacts belonging to the Wilton Phase have also been identified in the gorge. Other archaeological remains found in the Dome Gorge include grit-tempered pottery that is associated with the stone circles (Ouzman, 2002), rubbing stones and few scatters of ostrich egg shell fragments.

A few publications on the Dome Gorge exist (MacCalman, 1964/65; Viereck, 1967; Rudner & Rudner, 1970; Scherz, 1975; Pager, 2006; Lenssen-Erz & Gwasira, 2010) in addition, prior to the fieldwork for this study, very few expeditions with the specific aim of studying the rock engravings of the Dome Gorge had been carried out. The "MacCalman Expedition of 1962" resulted in a brief publication that provides a basic description of the site. Scherz (1975, p.215) made a more extensive but selective documentation of the rock art of the

Goodman Gwasira is a Lecturer of Archaeology in the Department of Geography, History and Environmental Studies (History Section), University of Namibia. He specialises in the Middle Stone Age and Holocene archaeology. His research interests include landscape setting of rock art, palaeo-environmental reconstruction, public archaeology and the evolution of modern humans. E-mail address: ggwasira2001@yahoo.co.uk

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Dome Gorge; he noted that some of the engravings resemble those from Rooiplat, which is located in the same Omaruru district as the Dâureb. According to Scherz (ibid), the engravings also resemble those from Otjikoto south in north central Namibia. Scherz (ibid) made another observation that the engravings could have been made at different times. He based this assumption on the fact that some of the engravings appear to be older due to heavy patination. However, patination may not be a reliable indicator of the antiquity of engravings since many climatic and environmental factors can contribute to a faster or slower rate of patination. Scherz, however, did not give significant attention to the unique congruence of engravings and paintings in the same site and even to the superpositioning of paintings on engravings. He did, nevertheless, note that such a phenomenon existed (Scherz 1975, p.215).

Ouzman (2002) investigated the Dome Gorge and observed that there are both "Bushman" and Khoekhoen engravings that are identifiable in the same site. The distinction was mainly based on the pecking technique applied in both circumstances, with the "Bushman" peckings tending to be finer than the random peck marks associated with the Khoekhoen geometrics. This distinction made by Ouzman challenges the traditional interpretation of geometrics, which favoured viewing them as " designs 'seen' by the shamans while in an altered state of consciousness" Ouzman (2002, p. 3). Entoptic phenomena, as an interpretive framework, have been discussed in detail by Lewis-Williams and Dowson (1988). The alternative model suggested by Ouzman (2002) that attributes the authorship of geometric engravings to the Khoekhoen suggests that they may be linked to other explanations such as girls' initiation, astronomy or even group identity (Smith and Ouzman, 2004; Morris, 1988). Since little research has been conducted on rock engravings in Namibia, the study will rely on research carried out on rock engravings in South Africa (Morris, 1998; Dowson, 1989, 1992; Smith & Ouzman, 2004). It will also draw on the methods used to study the rock paintings of the upper Dâureb (Lensesen-Erz, 2001) and on Scherz's (1975) pioneering work, for comparative purposes. The study aimed at describing the rock art of the Dome Gorge in general, hereby establishing statistical and stylistic distributional patterns. This paper describes the sites where combinations of engravings and paintings occur in the same sites (mixed sites).

Previous rock art research in the Dâureb

The archaeology of rock art has a long tradition in southern Africa; developing from the efforts of amateur enthusiasts into a scientific discipline. Rock art researchers have tended to treat paintings and engravings separately. In so doing, the paintings have received more attention than the engravings; therefore remaining relatively less researched in comparison to paintings (Dowson, 1992). However, in the case of the Dome Gorge and Twyfelfontein, rock paintings and engravings were made in the same setting. In extreme cases such as the Dome Gorge, there is even some superpositioning of the two genres of rock art. Thus, the Dome Gorge is of paramount importance in the sense that it provides a relative stratigraphy based on the superpositioning of paintings on engravings or engravings on paintings. It also comprises settlement remains consisting of stone structures that formed the bases of huts, stone chambers or cairns and stone walls (MacCalman, 1964; Viereck, 1967; Ouzman, 2004). Similar stone structures have been studied in the Hungrob Ravine, Dâureb, by Kinahan (1984, 1991) and in the wider surroundings of the Dâureb (Speich, 2010). There has been a systematic study of rock art in Namibia for 48 years which has resulted in the establishment of a huge database; however, thus far it remains dominated by paintings while engravings are less addressed.

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In Namibia, rock art research is intricately connected to the Institute of Prehistoric Archaeology, *Institut für Ur- und Frühgeschichte*, at the University of Cologne (Pager, 1989, 2006; Scherz, 1970, 1975; Wendt, 1976; Lenssen-Erz, 1998, 2001; Richter 1991; Breunig, 2003; Vogels, 2009). The main focus of the Cologne project was to develop a systematic inventory of Namibian archaeology. Before the inception of the rock art documentation project in 1963, rock art in Namibia was recorded by amateur enthusiasts such as colonial officials and missionaries. As early as 1877, the Reverend C. G. Büttner, who was a missionary from the *Rheinische Missionsgesellschaft* stationed at Otjimbingue in the former Damaraland, published an article in the *Standard Mail* (South Africa) on rock art in Namibia which is believed to be the first publication on Namibian rock art³.

Colonial officials, Jochmann and Maack, are credited with making the first reports on the rock art of the Dâureb. Jochmann published the first rock art copies from the Dâureb (1910) while Maack is acknowledged in the history of the Dâureb rock art research for his encounter in 1918 with a frieze that was later to be known as the "White Lady"⁴ (Lenssen-Erz & Erz, 2000). This encounter also attracted the interest of the eminent international rock art archaeologist Abbé Henri Breuil, who conducted a study of the Maack Shelter in the Tsisab Ravine that culminated in his 1955 publication of "The White Lady of the Brandberg" (Breuil, 1955).

Empirical research of rock art in Namibia can be traced back to the chemist Dr. Ernst Rudolph Scherz, who began as an amateur in 1930 and was an assistant to Abbe Breuil. As early as 1937, he developed a card system for recording rock art sites. In 1963, he was contracted by the University of Cologne to record all the rock art found in Namibia. Through a grant from the *Deutsche Forschungsgemeinschaft* (DFG), Scherz was to map and document all engravings in Namibia⁵. However, due to old age, Scherz could not work in the Dâureb and thus in 1977 Harald Pager was contracted to document the rock art of the Dâureb (Lenssen-Erz, 2001; Lenssen-Erz & Erz, 2000). After the passing away of Pager in 1985, Tilman Lenssen-Erz carried on with the work, not by recording further rock art systematically, but by publishing the Pager volumes. While all this effort was placed on systematically recording the rock art of the Dâureb, only the paintings received attention while the engravings, mainly found in the Dome Gorge, remained undocumented empirically.

Partly, this was due to the fact that Pager believed that his mandate was to record the rock art of the upper reaches of the mountain while Scherz was responsible for the lower parts (Lenssen-Erz personal communication September 2010). Despite this, Scherz visited the Dome Gorge and made some selective recordings of the paintings and engravings. In cases where engravings and paintings were combined, he recorded some selected paintings and ignored the engravings. Omitting engravings could have been a result of a different research agenda or interest.

In addition to the efforts of the Cologne project in documenting the rock art of the Dâureb, the Dome Gorge has been described by Ouzman (2002). Ouzman (2002, p.3) identified four components of the rock art as "... bushman rock paintings, bushman rock engravings, the gong rock and Khoekhoen rock engravings". He suggested that the interplay of these forms of rock art in the landscape indicates a "mutual use of the landscape" (ibid, p. 2). Although he identified 21 "pulses", 43 sites were documented during the field work of the present author and these form the basis for the description of the Dome Gorge rock art that follows below. The research region is delineated below in Figure 1.



Figure 1: Location of the Dome Gorge in the Dâureb (After Lenssen-Erz & Gwasira 2010:216; Fig 1)

Data collection

The data presented in this paper was collected between September and October of 2009. The fieldwork was carried out in cooperation with the University of Cologne and the University of Namibia. In addition to research staff from the respective universities, participants also included local residents of Uis and members of the Dâureb Mountain Guides (a community project for young mountain guides).

All the sites presented in this study were documented following standard field methods that were developed for the Heinrich-Barth-Institute by Lenssen-Erz (2004). The standardisation of field practice is important in ensuring that the rock art and its setting is documented in a way that will allow common storage and retrieval of data from sites that are found in the same region in addition to ensuring that data can be compared to sites from other regions as well. It was the intention to collect as much information as possible about the sites and their contents for preservation purposes. As Loendorf (2001, p. 55) aptly observes: “... if rock art is not rapidly documented and conserved, most of it will be destroyed” (see also Mazel, 1982).

Four main rock art recording techniques were applied in the field; site recording using four site record forms, photography, sketches and tracing. The four site record forms captured a variety of data ranging from contextual information, motifs, relief situation and some specific data relating to engravings only.

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The site context form recorded data about both engravings and paintings, while focusing predominantly on the setting in which the sites are located. In addition, GPS coordinates were recorded for each site using a hand-held e Trex Garmin GPS. However, the coordinates are not presented here because the conditions of the research permit from the National Heritage Council of Namibia do not allow publication of site coordinates where no management plan exists.

Each site was recorded fully photographically following a standard site photography method developed by Lenssen-Erz. Tracings were only made at the sites where superpositions existed. The paintings were traced in pencil while the engravings were traced using a fine liner. In some cases, it was decided to trace engravings and paintings on different sheets so that the superpositions could be clearly distinguished. Paintings were recorded by tracing a continuous outline around all anthropogenic colour areas, sparing all exfoliated and faded areas, thus not reconstructing figures but documenting the present state of preservation. Engravings were recorded by tracing a small semi-circle around each peck-blow visible in the rock surface.

Furthermore, some site sketches were made in order to later identify the position of paintings and engravings on the panels. All data was entered onto an Excel spread sheet to create an electronic database which was subsequently also analysed using Excel.

Dating engravings in the Dome Gorge

One of the problems of dating prehistoric art, according to Butzer et al. (1979), is that it is not found within cultural stratigraphy. It is important to note here that there are different types of rock art. Art *mobilier*, or mobile art, could be found in culture stratigraphy if it was abandoned at some point in time. Classical examples of this are the Apollo 11 slabs from southern Namibia, which were dated to 25,000 BP uncal. (Wendt, 1976). This site is believed to be even older as Vogelsang et al. (2010) demonstrate that calibrated dates radiocarbon date for the layer in which the painted slabs were found is between 31100 and 32900 cal BP (Vogelsang, et al. 2010, p. 202), dates that are supported by OSL data from this layer of around 30000 BP (ibid. p. 214). In this case, the dates do not demonstrate the age of the art per se, but the period from which the slabs were abandoned. Another example of datable art from Namibia are the 36 pieces of exfoliated rock art that were recovered from the Riesenöhle in the Dâureb that produced a ^{14}C age of 2,700 cal. BP (Conrad, et al. 1988). Another reason why it is difficult to perform direct isotopic dating of engravings emanates from their nature; unlike paintings that contain carbon accretion, albeit in small quantities, engravings do not contain organic material that is datable (Butzer, Fock, Scott and Stuckenrath, 1979). Nevertheless, archaeologists have in the past used a range of methods of dating rock art such as stylistic typologies, sequences of superpositioning, patination and archaeological associations. Butzer, Fock, Scott and Stuckenrath (ibid) argue that stylistic typology is problematic because of the variations and idiosyncrasies that are encountered in motifs. Some relatively new methods have been applied to rock engravings such as micro-erosion analysis (Bednarik 1992, 1997, 2002). A critique of methods used in dating rock art is presented by Bednarik (2002). Rocks that are found in open spaces in arid environments are more prone to disintegration than those found in shaded areas. In the case of the Dome Gorge, all the sites documented during the fieldwork consist of vertical walls and /or boulders that are exposed to climatic fluctuations which in turn may affect the condition of the rock art.

The absence of contextual archaeological finds at most of the sites in the Dome Gorge makes it complicated to date the engravings by association (Lenssen-Erz & Gwasira, 2010).

Some assumptions have however been made by MacCalman (1964/64:92) who suggests an age of 5,500 years. It is generally accepted that hairline engravings represent the oldest technique of depicting petroglyphs (see Beaumont & Vogel, 1989; Butzer, Fock, Scott and Stuckenrath, Morris, 1988; Otto, 2006). Some engraved portable art from Wonderwerk Cave have been dated to between at least 10,000 years old (Thackeray, Thackeray, Beaumont and Vogel, 1981). Some almost completely patinated naturalistic hairline engravings were encountered in the Dome Gorge and based on their presence, and in some cases their similarity with their South African counterparts, it is safe to suggest that the rock engravings of the Dome Gorge may be as old as hairlines reported from other southern African rock art sites; that is, they belong to the Late Stone Age. However, there are also additional younger engravings which belong to a herder tradition as observed by Ouzman (2002, p.3).

Associated archaeology

The rock art from the Dome Gorge and its associated archaeology has, to some extent, been previously described by MacCalman, 1964/65 (see also Viereck, 1967; Scherz, 1975; Ouzman, 2002). The most common archaeological features of the Dome Gorge (excluding the rock art) are some stone structures that are reminiscent of those described from the Hungrob Ravine (Kinahan, 1991). Stone structures, according to Jacobson (1997, p.73), are a "... wide spread occurrence in this region west of the 200 mm isohyet between the Omaruru and Kunene Rivers and generally date to between 800 and 600 BP" (see also Speich, 2010). They are thought to be indicative of the presence of small stock herders in the region and particularly representative of bases or remains of Damara settlements (Jacobson, 1997; see also Jacobson and Vogel, 1975; Carr, Jacobson and Vogel, 1976; Vogel and Visser, 1981; Breunig, 1986; Kinahan, 1991; Speich, 2010). The stone structures range in size from one to two metres in diameter and are on average one meter high. In some cases, the structures were constructed in such a way that they incorporate some engraved rocks. At least in one of the stone circles, some stone artefacts, bone remains and grit-tempered pot sherds were found (see also Ouzman, 2002). The stone artefacts belong to the Wilton industry (Rudner and Rudner, 1970), while the pottery belongs to the Brandberg Culture described by Breunig (1986, 2003). None of the material culture was collected during the field work since the aim of the field work was to survey and document the rock art only.

Some rock gongs and instances where flakes were intentionally removed from engraved rocks appear in the archaeology of the Dome Gorge. Altogether, seven rock gongs were recorded during the field work and a possible rock gong was recorded at site D09/36; they are all located on a steep edge of the valley (the highest being found on site D09/22 approximately 20 meters up the slope from the river bed) and this, according to Ouzman, (2002) amplifies the sound. Some tonal points can be observed on the rock gong. Ouzman (2002) reports on the tabular two-part rock gong found on site D09/08. Some five more rock gongs were recorded on this site.

The association of rock gongs with rock art has been observed in many places in Africa since the publication of the first documented rock gongs from Birnin Kudu in Nigeria by Brian Fagg (1956). Rock gongs are defined as "... natural rock boulders, slabs, spalls and exfoliations ... which vibrate with a ringing tone when struck and which also show indisputable evidence of having been used as percussion instruments" (Fagg 1956, p.17). A survey of literature on rock gongs reveals that since the first publication by Fagg, they have been encountered in places such as South Africa (Goodwin, 1957; Rifkin, 2009; Ouzman, 2001; Smith and Ouzman, 2004), Botswana (Rudner, 1965), Zimbabwe (Robinson, 1958)

and Uganda (Lanning, 1958, 1959). Steven J. Waller's publication 'Rock Art Acoustics in the Past, Present and Future' in 2002 lists other major world regions where rock gongs are found and, in some circumstances, in association with rock art. In Namibia, rock gongs have been known to exist in close association with rock art at sites such as Twyfelfontein (Scherz, 1975), Rooipunt and Okaturua (Scherz, 1970). The rock gongs of the Dome Gorge have been reported by Scherz (1975) and Ouzman (2004). However, as alluded above, more rock gongs were encountered during the field work for this study than reported before.

Researchers have occupied themselves with trying to understand the meaning and use of rock gongs for some decades. One of the main lines of interpretation was that they could have been used during rites of passage such as circumcision or initiation of girls during marriage. Fagg (1956) reports having observed brides in Bimin Kudu visiting a cave prior to their wedding ceremony that was in the same site with rock paintings and a rock gong on the day of their weddings in the 1950s. Although there was no direct association between the observed practice, the rock art and the rock gong, Fagg assumed that there could have been some connection. Examples of rock gongs being used in secret religious ceremonies connected with initiation rites have been recorded among the pastoralists at Nok in Nigeria (Goodwin, 1957). A further use as "alarms" warning people of the advancing enemy was recorded among the Nok in Nigeria by Fagg (1957). Lanning (1958) provides an account of how the "rock drum" was used during rain making ceremonies among the pastoralist Hima at Bigo bya Mugenyi in western Uganda. From all these examples, two factors are recurring: firstly, although the rock gongs are found in close association with rock art, there is no evidence of the direct association and mutual use of the two forms of artefacts (except for the Bigo bya Mugenyi case); secondly, the rock gongs appear to be associated with pastoralists although there are cases such as at Koranaberg in South Africa where they are associated with the San rock art (Rifkin, 2009). In the Dome Gorge the rock gongs are associated with rock engravings and Ouzman (2002) suggests that the gong rocks could have been a cultural signature of the herder community (see also Ouzman and Smith, 2004). He argues further that their co-existence with the rock art points to a mutual use of the landscape by both the hunter-gatherers and the herders (Ouzman, 2002). Dating rock gongs is as problematic as dating rock engravings because in both cases there is no datable organic material. More attention is still required for rock gongs in Namibia and, in particular, for those from the Dome Gorge because of the unique setting in which they are found in congruence with paintings and engravings in the same landscape. The documentation of associated archaeology in this gorge is by no means complete; it fits a different research aim and will therefore not be considered in this paper.

Context and distribution of sites

The rock art sites are distributed along an east to west axis that covers approximately 1,000 meters. Most of the sites (44%) are located at the foot of elevation along the banks of the gorge. There are five painted-only sites and of these, three are found at the beginning of the rise of a slope. The engravings are placed along the banks of the gorge, vantage points and terraces. The mixed sites (with paintings and engravings) are found in five settings: water-shaped valleys, narrow passages, exposed hill, entrance to the valley and at the beginning of the rise of a slope. Among the mixed sites, 36% are mainly found on the foot of elevation and 28% at water-shaped valley settings. Another relatively common setting for mixed sites is narrow passages that account for 24% of the mixed sites. Isolated mixed sites are found at the entrance to the valley and at an exposed hill. Mixed sites account for 58% of the total number of sites while the frequency of engraved-only sites (30%) is almost double that of painted-only sites (12%). Table 1 shows the distribution of sites along the Dome Gorge according to location and genre of art.

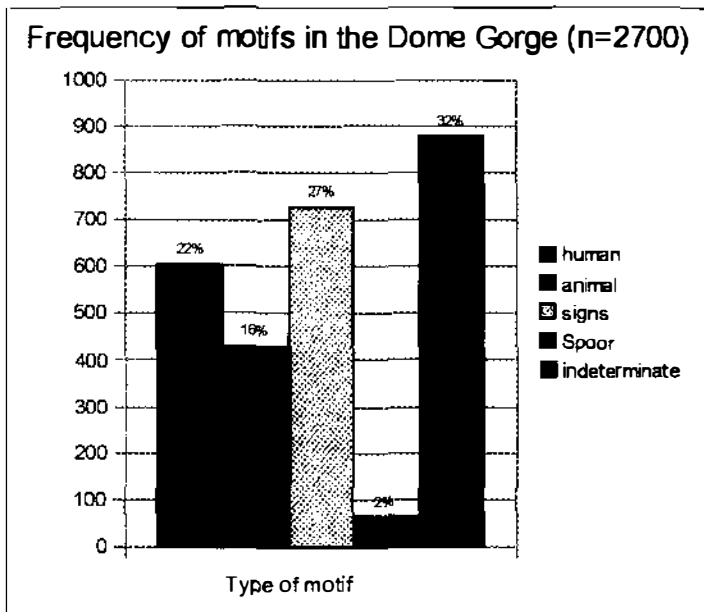
Location	Mixed	Engraved	Painted	Total
Water-shaped	7	-	-	7
Vantage Point	-	4	-	4
Narrow Passage	6	-	-	6
Terrace	-	1	-	1
Exposed Hill	1	1	-	2
Entrance to valley	2	-	-	2
Foot of elevation	9	7	3	19
Indeterminate	-	-	2	2
Total	25	13	5	43

Table 1: Distribution of sites according to location and genre

The number of images per site ranges from a single image to more than 200. All images (paintings and engravings) were identified, counted and recorded at each site in an effort to understand their density and diversity. The highest density of images (196-400 images per site) was recorded at 5% of the sites. Medium density sites (19-59 images) were more common in the Dome Gorge and they represent 33% of the sites. The lowest number of images per site was recorded at 16% of the sites.

Motifs

The rock art of the Dome Gorge comprises eight categories of motifs which altogether represent a total of 2700 individual engraved and painted figures. Images that could not be easily determined were lumped together under the category 'indeterminate' and they have the highest frequency of 32% of the sample. The indeterminate category consists of smears, remains of figures that were once complete but now do not show a definite form, and of erratic and obscure marks. The most commonly depicted motifs after the indeterminate marks are signs or abstract art; they represent 27% of the total number of images. The abstract art is mainly dominated by the geometrics which belong to the southern African herder rock art according to the classification of Smith and Ouzman (2004:505). The engraved remains have a higher prevalence than that of the painted remains. The engraved form of erratic⁶ is dominant, while obscure marks⁷ were observed only among the paintings. Both painted and engraved human figures are relatively well represented in the Dome Gorge rock art with a prevalence of 22% while animals represent 16%. The least frequency of 2% was recorded among the animal spoor (images that depict footprints of different animals). Graph 1 shows the prevalence of motif categories in the Dome Gorge. Individual categories are described in detail below. The graph shows the frequencies of engravings and paintings combined per motif.



Graph 1: Prevalence of motif categories in the Dome Gorge

Site properties

It is generally acknowledged in rock art studies that engravings are usually not found in locations where human habitation would have been possible because they are mostly placed on vertical rocks with no useful open space around. Paintings, on the other hand, are generally found in rock shelters and some of these shelters in the Dâureb such as the *Riesenhöhle*, have revealed cultural sequences that indicate human habitation during the Holocene (Pager 1989, Breunig 2003). This trend has been observed in the Dome Gorge where almost all of the art is found on vertical rocks and open air boulders. A fairly unique occurrence is the small cavern on site D09/08 which only contains paintings. The rest of the engravings and the paintings are found either on vertical rocks or on open air boulders. Open air in this case refers to locations that are on small isolated boulders or flat laying surfaces; such sites account for 13 % of the 43 sites documented in this study.

Another indicator used to investigate if rock art sites were used for dwelling is the presence or absence of the artefacts associated with the art. The observation that the rock art in the lower Dome Gorge occurs at sites that were not used for dwelling (as opposed to the upper Dâureb) is further supported by the fact that of the 43 sites recorded, 56% contained no artefacts at all. At five sites (12%), only a few scatters of stone tools that belong to the Wilton tradition were recorded. Even in these cases the artefacts may not originate from the sites but could have been deposited via water washing down the slope as Ouzman (2002) notes. At site D09/08, the stone artefacts and the potsherds are found inside some stone circle; however, their direct association with the rock art cannot be firmly established. It is not certain whether the stone circles were a later addition that appropriated the already existing rock engravings or whether they are remains from the same cultural authors. The rest of the sites (32%) yielded pre-modern to modern local artefacts which could have been added at a later stage. It is therefore possible that, in cases where evidence of dwelling sites were observed in the Dome Gorge, they were

appropriations of rock art sites that were not originally used for dwelling. Ouzman (2002) suggests that due to the topography of the Dome Gorge and the fact that it floods sometimes after heavy rains, it is possible that traces of use of sites for dwelling could have been washed away.

Another aspect of the site context attributes that were investigated and recorded during this study is the proximity of sites to water or water courses. Rock art sites in the Dome Gorge are located along the banks of the ravine while others are along the contours of the ravine valley; therefore, a high proportion of the sites (38%) are found within a few meters from water courses while 13% of the rock art sites are found adjacent to water courses. There are, however, no natural depressions where water could collect after the rainy season and be preserved for some time as reported from the Upper Dâureb (Lenssen-Erz & Erz, 2000).

This could mainly be because the granite rock formation that is found in the Upper Dâureb differs from the dolerite that is most common in the Dome Gorge. The granite forms depressions and deep crevices as it weathers and thus creates natural water collecting surfaces. However towards the upper end of the gorge ground water may be near the surface because animals such as mountain zebras “dig” in the sand ground to expose water for drinking. A significant number of rock art sites (30%) are found less than 300 metres away from water courses while only 8% of the sites are found 300 metres or more away.

Human figures

There are 606 human images in the Dome Gorge rock art of which only 18 are determinable in terms of gender. The other 588 have been designated as indeterminate, meaning that the biological markers of sex were not included during the making of the images or were not visible. This coincides with the general observation in southern African rock art that the majority of human figures are not identifiable in terms of sex (Lenssen-Erz, 1998; Dowson, 2007). The seemingly genderless human figures in the upper Dâureb account for 74% of the human figures. It is, however, taken into consideration that the lack of biological markers on images does not necessarily mean the images were “genderless”. There has been debate on whether or not such images were genderless, Lenssen-Erz (2007) has argued that, to some extent in such circumstances, gender can be inferred from the cultural objects that the human figures carry or are interacting with. Bows, arrows and quiver bags are associated with the male hunters while round, bulky bags for collecting berries are associated with female gatherers.

The human figures that lack explicit biological sexual markers are indeterminate or “zero marked” (Lenssen-Erz, 2007, p.173). The argument for a third gender being represented in rock art is plausible if one takes into account that there is a clear distinction between the definition of sex and that of gender. Since sex refers to biological differences between male and female which are among others expressed through external organs. In some cases we can therefore identify the sex of the human images in rock art. Gender on the other hand can be identified through the roles that the images express or seem to express. However roles or behaviour that is attributed to sexes is subjective because it depends on the cultural background of the viewer. Thus human images that do not show any distinguishing biological features can at least be categorised into one gender or another depending on the roles they express or seem to express. The debate still hinges, though, on whether or not such binary distinctions are useful for interpreting rock art. Lenssen-Erz (1998) argues that, to some extent, a third gender is portrayed which is not marked by sexual biological features.

The human figures appear in both painted and engraved forms. The generally accepted view that human figures are more frequent in paintings than in engravings is confirmed in this sample; 99% of the human figures are painted. The remaining 1% represents engraved male figures. Combined engraved and painted human figures in the Dome Gorge appear at almost half of the sites (23 out of 43 sites) and the human figures in the Dome Gorge range in concentration from one figure (at site D09/20) to as many as 105 (at site D09/09).

Animals

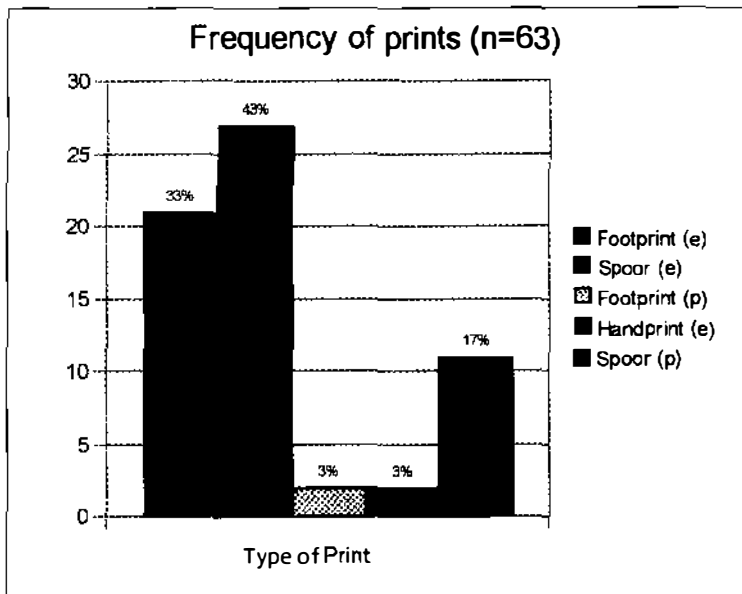
A total number of 430 animal figures were documented in the Dome Gorge of which 69% are engraved figures and the rest painted. A wide variety of animals such as giraffe, antelope, rhinoceros, eland, and ostrich are represented in the sample including the zebra which is found in the area today. The category of animal figures which could not be immediately identified (indeterminate) dominates the sample. The engraved giraffe and antelope are the most commonly depicted in the category of identifiable animals. They have a frequency of 9% each and are closely followed by the engraved ostrich which has an 8% frequency. The animal images were made in both genres and engraved animals occur in 18 sites (42% of the sites). In 33% of the sites, there exists a mixture of painted and engraved animals. At six sites (14%), the animal figures were painted-only while at the remaining five sites there were no animals depicted at all. The paintings are done in various hues of monochrome red. The mainly applied technique of animal engraving is pecking while at a few sites some were made in fine lines and some were polished such as the Kudu on site D09/43. The animal figures also appear in combination with human figures in 13 instances at eight sites.

There is no tendency to group only engraved animals together with only engraved human figures. However, what is clear is that the combination of animal figures and indeterminate human figures appears in more instances than with the other human figures whose sex could be determined (five times out of thirteen). This is closely followed by a combination of painted animal figures and painted human male figures (four times). Engraved human male figures and painted female figures appear twice each in combination with animal figures.

Footprints, handprints and spoor

Three types of prints are present in the Dome Gorge rock art sample: footprints, handprints and spoor. They appear in both paintings and engravings and are distributed over 33% of the 43 sites. Engravings of animal spoor have the highest frequency of 43% of the prints and are followed by engraved human footprints which account for 33%. The least represented are engraved handprints and painted animal spoor which account for 3% of the prints sample each.

There are some instances where different spoor appear together in the same locality. The most common combination is that of engraved animal spoor and engraved human footprints which occur together twice. They then occur again together in addition to engraved human handprints. At site D09/05, engraved spoor and footprint were made on the same panel that has engravings superimposed by paintings. The rock on which the engraved hand print from Site D09/08 was executed was incorporated into the stone circle walling and is also associated with some engravings of animals, human footprints and geometrics. The last combination is that of three engraved handprints that occur in the same vicinity with an engraved footprint on Site D09/21. Graph 2 illustrates the frequency of prints.



Graph 2: Frequency of Prints from the Dome Gorge (e= engraved, p = painted)

Abstract art

Abstract art is the second most commonly depicted motif in the Dome Gorge and occurs both in the form of engravings and paintings. In this study, abstract art was documented using two distinctions: in situations whereby a single geometric that is clearly just a single shape and occurs on its own without being joined to another form or being further divided was recorded as a simple structure; whereas any geometric that was either joined to one or more geometrics, or was divided, for example, into grids was recorded as a complex structure. The geometrics appear either as single images on isolated rocks and at times more than 100 on a single rock face. The most common method of depicting geometrics in the Dome Gorge is through (pecked) engravings. The engraved geometrics dominate the sample with an 85% frequency.

Mixed sites (summary)

The following section presents the data from mixed sites – meaning where paintings and engravings occur together in one site or even on one panel. There are 18 sites where combinations of paintings and engravings were found to coexist in the Dome Gorge. Seven classes of combinations are discernible from the data collected: (i) superimposition: which are cases whereby paintings are layered on top of engravings or engravings on top of paintings, (ii) juxtaposition: which are cases whereby both paintings and engravings occur on the same rock face but do not contact each other, (iii) adjacent: whereby two panels face each other and each carries either paintings or engravings but where the conditions of (i) and (ii) are not present, (iv) co-existence: which are cases where paintings and engravings exist on different boulders in the same site. In this class (iv), both genres of art cannot be viewed simultaneously from one viewing direction, that is, the panels are not adjacent. The other three combinations consist of two or more categories from the above mentioned; (v) Adjacent, Co-existence (vi) Superposition & Adjacent and (vii) Superimposition, juxtaposition, adjacent, Co-existence.

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The most common way combining engravings and paintings in the Dom gorge was by placing them adjacent to each other and that appears in 27% of the 18 sites. Altogether the images that are placed on boulders that are adjacent to each other are 251. The paintings are more predominant than engravings in this category but they tend to be faded. Non representational marks such as remains and erratic signs tend to dominate the engravings in all the sites of this category while the indeterminate human figures dominate the paintings. The panels where the paintings are executed usually face the ones that are engraved. In each instance the panels can be viewed at once from one direction.

In four of the sites (representing 22%) the engravings and the paintings are found in co-existence in the same site but not on the same boulders. There is a tendency to focus more on identifiable animals in both the engravings and paintings in this category. The engravings dominate the rock art in this category by accounting for 72% of the total 324 individual figures that were recorded in the four sites. The most common technique that was used in creating the engravings in these sites was rough pecking. However at one of the sites some engravings were made in fine hairlines and pecked outlines. Generally the engravings in these sites appear to be better preserved than the paintings and in some cases the cortex is still whitish such that the engravings can be viewed from a distance.

The third most common class of combinations is juxtaposition. In this case the engravings and the paintings were made on the same rock face but they do not contact each other. There are three sites where juxtaposition was used as the only way of displaying the rock art. It was used in a further two sites in combination with other categories; Superimposition, adjacent and Co-existence. In all instances the paintings were executed on a lower plane than the engravings which gives an impression that while the engravers made their art while standing the painters were mostly squatting.

Superimposition appears at three sites out of the 18 sites where rock engravings and paintings occur together. In one of the sites it appears on its own as a distinct category and in this case there is an engraving that is superimposed on a painting. In two sites the superpositions occur together with adjacent panels and in a further two sites they occur with juxtaposition, adjacent, Co-existence classes. Paintings were also superimposed on paintings while in the majority of the panels paintings were executed on top of the engravings. Table 2: summarises the different combination classes.

Category	Number of sites	Total
Superimposition	1	1
Juxtaposition	3	3
Adjacent	5	5
Co-existence	4	4
Adjacent, Co-existence	1	1
Superposition & Adjacent	2	2
Superimposition, juxtaposition, adjacent, Co-existence	2	2
Total	18	18

Table 2: summary of combinations classes

Discussion and conclusion

The discussion will focus on four main areas; namely spatial distribution of sites, temporal aspects of the rock art, social context of the rock art and the symbolic meaning that can be drawn from the data.

The spatial distribution of the rock art sites in the Dome Gorge indicates that there was a tendency to locate particular sites in specific geo-zones. The majority of the sites are found along the banks of the river within 5 -20 metres from the river bed. This appears to have been an act of marking the landscape because the rock art sites indicate the end of one particular topographic feature and the beginning of the other. They mark the end of margins of the river and the commencement of slopes. Mixed sites in particular were mainly located along water-shaped narrow passages that are found at the beginning of the rise of a slope. "Engraved only" sites on the other hand were more widely distributed although there was a tendency to favour the foot of elevation instead water-shaped narrow passages. Considering that narrow passages connect two valleys or valley sections (Lenssen-Erz, 2004) it appears from the spatial distribution of the mixed sites that they also functioned to demonstrate the beginning or end of one valley.

In addition to the foot of elevation, the engravers placed their art on vantage points whereas the painters did not (with the exception of the cavern at site Do9/o8). It has been suggested that some of the rock engravings in the Dome Gorge belong to the herder tradition (Ouzman, 2002). It is therefore plausible to postulate that the herders saw the need for using locations that were at vantage points as this would offer them a good view of the surroundings while looking after their herds. Vantage points provide security in the sense that approaching danger is noticed from a distance. The engravings that are found at vantage points are closely associated with stone structures that have been identified as belonging to the Brandberg Culture (Breunig, 2003) and could also be remains of huts of the Damara people who used the mountain in the recent historical times (Jacobson, 1997).

The fact that 91% of the sites are distributed near to the water courses, either being right on the bank of the river or less than 100 metres from the river bed suggests that the rock art sites in the Dome Gorge functioned as places where communal social and economic activities took place, especially considering that the river bed forms a convenient flat area. This assumption is further strengthened by the fact that the majority of the sites are within a short distance from other open fields. The data in this study shows that the sites were not habitable, except for cases where remains of hut circles are present but none of the engraved or painted boulders could have provided ample space for habitation since they are mostly vertical walls and low lying boulders. Therefore, it can be argued that the spatial distribution of sites in the Dome Gorge indicates that the sites did not function as places where the artists lived for a long period of time but rather functioned as important markers within the landscape that indicated the temporal availability of water and as markers of passes for navigation within the landscape as is suggested by the fact that most sites are located in narrow passes.

On the other hand the sites are condensed in the narrowest part of the gorge. They become fewer and isolated as the gorge widens. The narrowest part of the gorge would be ideal for dwelling for a short period of time as it would shelter the artists from the harsh westerly wind from the desert. The rocks in the narrow part of the gorge would store heat during the day which would keep the place warm at night. Therefore the narrow part of the Dome Gorge would have been an ideal place for social interaction as it possesses a range of properties that are conducive for social life; these include the proximity to the river and

other water courses, vantage points and natural “shelter” from wind as well as the acoustics produced by echoes bouncing on the walls of the boulders. The relationship between the stone circles and the rock art still needs to be properly documented and interrogated. However, a pattern that has emerged from the data points to a closer connection between engraved only sites and the stone structures. The frequency of stone structures that are found at painted only sites and mixed sites is lesser than that of engraved only sites. The cultural authors of the stone circles, who came after the painters, tended to avoid painted sites unless they occurred together with engravings (co-existence) in which case the stone circles were associated with engraved panels. This inclination towards older engravings is amplified by the fact that in most cases the engravings that were incorporated in the stone circles were pecked in circular forms. Identifying the engraving techniques that occur at engraved only sites that also have stone structures and comparing them to other techniques that appear in the Dome Gorge engravings would shed more light on the kind of relationship they may have. This study did not address that specific aspect.

The data demonstrates that there are at least three distinct periods of rock art tradition in the Dome Gorge. The earliest rock art is represented by fine-line and polished engravings such as the hairlines presented above. This is followed by part of the pecked engravings which are the most commonly depicted and then some paintings, which are in some cases superimposed on the engravings. A possible fourth period, which may be younger than the paintings, is suggested by an engraving that is superimposed on a painted human figure. The presence of such a case suggests that some engravings belong to the settlement phase of the Brandberg Culture that is postulated by Breunig (2003). However this is only suggestive since it is the only example. An analysis of the techniques used in the production of the engravings would be useful in creating a chronology for engravings which would, in turn, be useful in determining if this particular engraving is indeed younger than the painting or if it was just an exception of the rule that paintings in the Dome Gorge superimpose engravings.

The occurrence of rock paintings and engravings in the same research region or site is known from other rock art regions such as Twyfelfontein in Namibia (Dowson, 1992; Molin, 2006; Scherz, 1970). However, these rock art regions do not present cases of direct contact between paintings and engravings as the Dome Gorge does; rather the two genres are known to co-exist. The data contained in this study shows that sites with a mixture of engravings and paintings are a common feature in the Dome Gorge. Out of the 43 sites documented during the field work 44% (18 sites) had both engravings and paintings. It appears that the act of mixing paintings and engravings in the same site or even superimposing them on one another was not coincidental in the Dome Gorge but rather a common practice. The painters, who clearly came after the engravers, purposefully searched for sites where they could add their paintings to existing engravings; perhaps either as a way of emphasising direct confrontation of the two genres or as a way of appropriating the engravings.

Some patterns have been observed in the data that suggest that the placement of engravings and paintings was not randomly done. One example is the placing of paintings on the same panel with engravings without superimposing them (juxtaposition). At most sites where paintings were placed on the same panel with engravings the paintings are always placed lower than the engravings. This was the case even at sites such as Dog/02 where there is ample space next to an engraved “Osterhase” (Scherz 1975, p.215) and yet the human paintings were placed on a lower plane of the same panel. The exception occurred at sites with superimpositions which have some paintings that are not superimposed which were placed almost on the same level with the engravings. But in juxtaposed situations the

same 'rule' of engravings on a higher plane of the rock than paintings was applied. Site Dog/37 is a good example. The painted two human figures are placed at almost the same height with the engraving of an animal that appears to be an elephant or a distorted giraffe that is superimposed by a third painted human figure. On the other hand the painted snake is placed lower than the engravings. The fact that the paintings were mostly placed on lower planes of the boulders than the engravings indicates some operational gesture of the painters. They mainly painted while squatting while the engravers mostly executed their art while standing.

Superimpositions are relatively frequent as they appear at nine sites out of the 18 mixed sites. All together four different cases of superimpositions were observed in the data: engraving over painting, painting over engraving, painting over painting and engraving over engraving. The most common superimposition is that of engraving on engraving. Such a variety of types of superimpositions presents an opportunity for investigating the chronology of the rock art in the Dome Gorge, at least as far as the engravings are concerned. Distinguishing the techniques used in producing the engravings could be a starting point since particular techniques are associated with particular ages, starting with the *fine line engravings* as the oldest to large geometric picks as the youngest (Otto, 2006). Site number Dog/08 provides an example where some fine line engraving is superimposed by a pecked outline of an ostrich at section (a) while at section (b) some heavily patinated polished antelope is superimposed by a relatively fresh incised outline of a human footprint. A relative general stratigraphy of the rock art can therefore be constructed by analysing the techniques used in the superimposed engravings.

The study also empirically confirmed some known observations about rock art in the Dãureb and other sites in southern Africa, especially concerning the composition of motifs. Signs (both complex and simple structures), for instance, represent the most dominant motif among rock engravings in general both in Namibia and South Africa (Scherz, 1970; Fock and Fock, 1984, 1989 as cited in Otto 2006). From the data presented above, it is demonstrated that the archaeological sequence of the Dome Gorge is composed of material that ranges from the Late Stone Age to the Herder period. The superimposition of different rock art genres and the incorporation of engraved panels into walls of hut circles attest to - mutual use of the landscape (Ouzman, 2002). There are assumptions that some of the stone structures could have resulted from the Damara people and such assumptions stretch the occupation of the Dome Gorge to recent historical times.

The concept of a "mutual use of the landscape" needs further probing since it may be misconstrued to mean that the hunter-gatherers and the herders shared the landscape contemporaneously; the stratification of paintings over engravings suggests that this was not a case of collective use of the landscape but rather a common use of a particular loci at different temporal scales. This argument is further supported by the fact that different genres and themes of rock art were placed at the same sites and at times at the same panels but they maintained the different signatures of the cultural authors. What was common were perceptions and use of specific loci within the Dome Gorge - the narrowest part of the gorge. This could have been influenced by the fact that this part of the gorge provides resources for the social and economic well-being of the engravers, painters and herders alike, such as proximity to water, acoustic properties, vantage points and rocks to paint and engrave (for more resources, use potential and basic needs in landscape archaeology, see Lenssen-Erz, 2004; Lenssen-Erz and Lindstädter, 2009). This led to an intensive mutual use of a particular geo-zone in the gorge in which the different social

groups maintained their idiosyncrasies. The painters for instance maintained their group identity by juxtaposing their paintings below the engravings or by superimposing them on the engravings.

The Dome Gorge is a complex rock art region that cannot be thoroughly understood from a study of this scope. There remain several issues that require further and in-depth study which include research that focuses on determining the chronology of the rock art, a study of the non-visual aspects of rock art such as rock gongs along with examining other archaeological features. The study has demonstrated that the Dome Gorge has a potential for providing a relative chronology of the rock art based on the superimpositions. The relationship between the stone structures and the rock art still needs to be attended to as well as the concept of the mutual landscape needs to be revisited so that the social and symbolic aspects of the rock art can be teased out. This study, however, has contributed to the general knowledge of the rock art corpus of the lower Dome Gorge through an empirical documentation of the rock art and its associated archaeology as a first step.

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Endnotes

- 1 The local Damara name for the mountain "Dâureb" is preferred in this paper. It carries the same meaning with the Brandberg – burning mountain.
- 2 In this thesis the term engravings is preferred to petroglyphs because it emphasises the technique of producing the art since it is a derivation from the verb 'engrave'.
- 3 Scherz in one of his earlier correspondence with Abbe Breuil mentions that Reverend C. G. Büttner published an article on rock art from the Erongo Mountains in the Cape monthly magazine "Standard Mail" on 30 October 1877 (PA 4 Anneliese & Ernst Rudolph Scherz, Karton Zusatz b, Basler Afrika Bibliographien).
- 4 The "White Lady" painting is found in the Tsisab Revine of the Dâureb. It is infamous for being misinterpreted by the French Prehistorian Abbe Breuil as depicting a European woman. It was also regarded by the Abbe Breuil as having been created by non African cultural authors, possibly, Phoenicians or some Mediterranean seafarers. However with Pager's meticulous tracing of the figure it was revealed that it was neither female nor white. It is a male figure created by hunter-gatherers. It remains one of the most visited rock art friezes in Namibia.
- 5 Scherz's letter to Abbe Breuil 25 August 1963 (PA 4 Anneliese & Ernst Rudolph Scherz, Karton Zusatz b, Basler Afrika Bibliographie).
- 6 Markings rock surfaces that do not have a fixed form but were clearly made by humans. Such marks do not depict a recognisable shape but their structure or regular pattern indicates that they were deliberately made by humans.
- 7 Obscure marks are traces of paintings that are hard to perceive because there is no recognisable regular pattern.