Identifying Conventions and Themes in Macassan Contact Art

Thesis submitted for the degree of Master in Maritime Archaeology

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We acknowledge the traditional custodians of these unceded lands where we work and live on.

We pay respect to Elders past, present and emerging.

The oldest Australian rock art recording is of a kangaroo dated 17.3 ka (rockartaustralia.org.au, shorturl.at/etJL4, 2021). Indigenous Australians have occupied this land for more than 65,000 years. That has created an area of interest for many archaeological researchers over time (Mawson 2021:1477) and this has led numerous researchers and scholars on a path of exploration into Indigenous rock art.

Acknowledgements

I would like to thank Daryl Wesley, Ania Kotarba Jarrad Kowlessar, Mick de Ruyter and Wendy Van Duivenvoorde for all their support throughout the master process. I would also like to thank my wife who countlessly corrected my work. Finally, I want to thank all the participants who provided some fantastic drawings for the outcomes of this thesis.

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Abstract

This thesis aims at providing further insight to the analysis of Macassan *prau* motifs from the early Australian contact period. By using methods from historical visual art periods can archaeologists understand more about their interpretations of the past. In seeking new lines of archaeological enquiry, it may be possible to develop art conventions that allows maritime rock to be revised.

This thesis provides two surveys lines that analyses art conventions in Indigenous watercraft rock art and modern visual art. Survey one provides a backdrop in analysis of Macassan *prau* motifs and the limitations that create issues in *prau* rock art interpretation. This survey also highlights the low-level prau rock art research that has be undertaken over the years. A point of difference is survey two which provides a new level of capturing subject knowledge and the ability to identify art conventions, by undertaking a survey with the general public and allowing participants draw a Macassan *prau*. Survey two focuses on persons that have a range of skills, knowledge and life experiences to do with drawing, experience with watercraft and the ocean.

The study reveals the challenges of analysing conventions in Indigenous motifs and visual art. While introducing new themes of connections to

sailing and the sea it could provide a more thorough interpretation for research in Indigenous rock art analysis. The thesis provides a new approach in experimental archaeology of not just analysing Indigenous motifs from the contact era, but a modern interpretation that challenges the past.

Declaration

'I certify that this thesis does not incorporate without acknowledgement any material previously submitted for the degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text'.

Signed  Date 23/06/2023

1 Introduction

Watercraft motifs in Australian Indigenous rock art have long created an interest in archaeological research. This thesis will discuss Indigenous artists' subject knowledge and explore how much they knew about the Macassan *praus* they were painting during the early Australian contact period. This study will explore this by undertaking an experimental archaeological survey to investigate Indigenous rock art.

This paper provides two survey lines of investigation in art convention analysis. The first survey will be an examination of Macassan *prau* images from Australia's Top End, which will provide an analysis of comparison on Indigenous watercraft for the discussion and interpretation of art conventions and a technological discussion. The second survey will be a drawing survey which includes participants from the general public focusing on watercraft and artistic experience.

Aimed at identifying artistic patterns in Macassan *prau* drawings I will direct a drawing survey at five specific groups from the general public. The participants will be asked to draw a picture of a Macassan *prau* (perahu) that will be displayed in the survey. These specific groups will be ranging from 1. General artists, 2. Artists that draw boats, 3. Persons with maritime industry experience, 4. Sailing or boating experience, 5. Living by the coast or 6. Someone who has no connection to any of these areas. The reason for the six different survey groups is to find out if they have distinguishing

elements present in their survey drawings that could display their knowledge of drawing, drawing boats, maritime experience, sailing or boating, or living by the coast.

The surveyed participants' drawings will be evaluated against four art conventions principles of *Composition:* in order to determine the depiction and the clarity of the object(s) drawn (Summers 1981, Rose 2001, Mamassian 2008). *Spatial scale and frequency:* which will assist in identifying the balance of the object and the placements or busyness of the theme (Summers 1981, Rose 2001, Mamassian 2008). *Static or still balance:* which will identify the elements of the drawn vessel and surrounds that create movement of an object, or elements that make it stand still (Summers 1981, Rose 2001, Mamassian 2008). Finally, *Observer's angle (perspective):* which dictates the most suitable observer's position that the drawing is best viewed from (Summers 1981, Rose 2001, Mamassian 2008). These conventions in art are the most contributing factors that can provide an explanation of what the artist is trying to achieve. Moreso, these conventions can be effectively evaluated from multiple artists' artwork from the same theme or genre for a plausible examination process (Summers 1981).

Furthermore, survey participants level of familiarity with subject matter and the affect it has on art conventions will also contribute to the discussion and results of this study. These factors will be achieved by assessing levels of subject knowledge and life experiences that may also contribute to the

overall influence of a person's artwork. This will be assessed by providing a simple but effective formula to interpret and discuss themes of an artist through a deep understanding of their subject area.

The question of enquiry in this thesis is designed to provide an overview of what noticeable differentiating elements are visible to the observer. An evaluation of these elements will then be undertaken to assess the extent of how noticeable they are in the drawings. The next step, is how do these elements correlate with identifying common themes? In order to identify the artist's subject knowledge, I will be interpreting this by developing art concepts (components) specific to the surveyed participant groups. This will be directed towards specific visible elements and influences that become common throughout the collection of drawings for each group. These elements will become overarching themes that will be included as part of the data collection process. There will be four analysing concepts (components) that will consist of artistic style, level of connection to sailing, level of connection to the sea and level of connection to subject knowledge. The four art convention principles along with the four analysing components will be the focus of the discussion and interpretation. This archaeological hypothesis will assist in interpreting artists' drawings and to explore theories of artistic experience.

The second part of examination in this study will be investigating depictions of Macassan *prau's* in Indigenous rock art during the early Australian contact period. It seeks to describe events and processes during

the time when the Indigenous rock artists of Australia's Top End were painting their *prau* rock art motifs. Specific regions of northwest Arnhem Land and the Groote Eylandt regions hold large valuable rock art collections which encourage archaeological lines of inquiry that contribute to knowledge of Australia's history (Taçon et al. 2010:1, May et al. 2021:127). Research to find out who painted Macassan motifs and for what purpose, identifying common elements, traits and traditional cultural themes will fill gaps in our understanding of foreign influences and interactions that occurred separate from colonialization.

This thesis will be undertaken as a pilot study aimed at exploring the artists' awareness of technological aspects on these vessels by examining the detail included in their drawings. This experimental archaeological hypothesis will be initiated by conducting a preliminary study with a focus group which will help configure the main program. The program will serve as the main survey (2) which will provide data for the outcome in this thesis. Subsequent objectives will be directed at the surveyed participants understanding of subject matter and if this dictates the ability to draw a more accurate watercraft. Moreover, investigating what life experiences outside of art could influence visible elements will also be discussed.

Analysing components in the data collection of surveyed participants drawings in artistic style, level of connection to the sea and level of connection to sailing as mentioned above will be used to capture artistic conventions which may influence the overall picture detail.

Furthermore, the re-examination of Indigenous watercraft motifs (survey 1) from Indigenous artists will be interpreted with the same art conventions used on the participants' survey in a parallel interpretation analysis providing further research and discussion (Rose 2001, Mamassian 2008). Analysis will focus on the composition, spatial scale and frequency, static or still balance, and observers' angle (perspective) (Rose 2001, Mamassian 2008).

The discussion and interpretation of the results in this thesis provides an overview of what re-interpreting and re-examining rock art may identify by using different analytical lines of enquiry.

2 Research Design

Australia holds some of the most extensive collections of rock art on earth and maritime archaeologists have long analysed Indigenous shelters from Australia's Top End (see Figure 1.) (May et al. 2021:127). However, maritime archaeologists understand that there is a vast amount of information that they do not know about the watercraft motifs that were painted during the early contact period. Understanding more about the artists who painted the Macassan *prau* motifs can help us understand which groups painted the watercraft, and whether there were people selected in the group to record information in visual form; was it an Indigenous artist or an Indigenous seafarer or both? What experience did they have with those specific vessels depicted? This paper will attempt to explore watercraft rock art areas that can benefit from deeper inquiry.

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Figure 1. A map of Australia showing the Northern Territory top end with the research area in red (source: nrmaps.nt.gov.au, 2022).

This research will seek to understand people's level of familiarity with subject matter and identify the affect it has on art conventions. Focusing on watercraft rock art in northwestern Arnhem land, Australia (see Figure 2.), while also taking examples of Indigenous watercraft rock art from the Groote Eylandt region (see Figure 3.), this study will analyse Macassan trading vessels from the motifs that were painted during the early contact period.

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Figure 2. A map of the Northern Territory highlighting in red the northwest region of Arnhem Land (source: nrmaps.nt.gov.au, 2022).

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Figure 3. A map of the Northern Territory highlighting the of Groote Eylandt region in red (source: nrmaps.nt.gov.au, 2022).

3 Literature Review

This Chapter will review the literature regarding people's level of familiarity with subject matter and what affect it has on art conventions. Additionally, this Chapter will analyse and explore levels of technological awareness amongst rock artists and how much of this influenced watercraft motifs. This literature review will also be investigating art conventions and stylistic elements used in these art conventions that challenge traditional rock art periods of continuity.

Moreover, there will be subsequent discussions on themes of Australian rock art from a national and international perspective, the contact period, Macassan contact, and the *trepang* trade. Finally, we will discuss other approaches of assessing and reassessing Australian rock art.

3.1 THE PSYCHOLOGY OF ART

The gratification derived from expression through rock art goes beyond the artist of its time. For many reasons, the artist provides a connection with others, even long after they themselves have gone, through the art that may result from self-reflection, enjoyment, pride and communication. Even more so depictions of art bring others together with messages of hope, awareness, joy and pleasure, and this is why cultures continue to dream and talk about the stories that link art to the creators of their time (Tacon 2019:5).

In trying to piece together, the psychology of rock art, for Indigenous peoples, Tacon (2019:5) best describes it as a necessity of culture especially in contemporary cultural histories, landscapes, but also many other aspects of life, that link stories from ancestor beings to ancestors connecting real-life communities to the past. Rock art is not just about the people who created the image, but it also involves generations to come, providing spiritual awareness, positive memories of ancestors who have a past and connection to the personal identity of traditional culture (Tacon 2019:6-7).

According to Saito (2021) the evolution of visual art is not an obvious progression of homo evolution, this was unlike the development of stone and hunting tools, shelters and clothing which were seen as evolutionary measures of societal development (Saito 2021:2). Only finding archaeological examples of art from homo sapiens and not homo neanderthalensis for now, it seems that art was a generational step in evolution of the cognitive ability of the genus *homo* (Saito 2021:2). Saito (2021:2) rules out a direct link between visual art and survival in the middle to upper Palaeolithic period. However, in the latter years of Indigenous history, researchers (May et al. 2021) of Indigenous Australian rock art in the early Macassan contact period support the notion that, Indigenous art was possibly seen as a warning about who was trading on the land during the contact periods. Clearly May's research suggests that for the Indigenous peoples the evidence supports the idea that art was a tool to support survival (May et al. 2021)(Also see May et al. 2020 on survival).

Saito (2021:4) surveys and provides a research area that uses children as participants. Further, he suggests that understanding the early art forms of paleolithic peoples should be best viewed from a child's perspective (Saito 2021). A boat for example, would be seen as a shape rather than a vessel that is designed in a specific way. Saito (2021:4) refers to this as, visual realism which is a theory that allows us to understand the progression of cognitive recognition in artistic attributes. These are displayed in perspective, distance, occluding items, and viewpoints, which would be seen in a drawing if the child's cognitive ability developed throughout their life (Saito 2021). This can be best imagined by a side profile drawing of a person which may still have two eyes drawn (Saito 2021).

3.2 ROCK ART

Indigenous rock art developed out of expression and survival and gave light to descriptive images, setting the scene and telling a specific story which has continued to be passed on through different ways to the rest of the community (Domingo Sanz 2011:15-16, May et al. 2021). Aspects of rock art were signified by colour, composition, and the focus of individuals, groups, and or social communities and this is why researchers regard rock art as historic photographs (Domingo Sanz 2011:16). Even though rock art was not always produced by local artists from their own region, it inspired and opened other Indigenous communities' minds about who else was living and communicating nearby (Domingo Sanz 2011:16). Rock art was a visual

conveyance of life, ceremonial and ritual scenes that were reflected to teach culture and traditional values to all generations across the Indigenous communities (Domingo Sanz 2011:16).

Furthermore, ancestors had been incorporating rock art as a tool for enlightening people, teaching them how to hunt for food, follow the laws of the community, and encouraging the importance of culture for generations (Domingo Sanz 2011:16-17). Rock art has provided a platform for exploring time periods in Indigenous mythology and spiritual environments, painting stories of mountains, animals, people, and much more (Domingo Sanz 2011:16). The generations of ancestral rock art represent over 17,000 years of iconographical traditional patterns of continuity in rock artwork represented in Indigenous society (rockartaustralia.org.au, 2021). However, there are rock art tools that date back almost 50,000ka (see more on Bruno David et al. 2017).

One overlooked aspect of Australian rock art has been the connection between Indigenous watercraft motifs and the artists that drew them, which are scattered around the northern regions of Australia. There is still a lot of information that archaeologists in Australian rock art research seek to explore, especially new approaches from different perspectives, which can only contribute to the wider collection of knowledge of rock art in Australia.

Throughout the contact period, Australian rock art changed dramatically. This saw artists' paintings develop ways that were not seen before in

traditional Australian rock art. The concentrated rock art shelters of northwestern Arnhem Land have painted Macassan *praus (perahu)* rock art motifs which were identified as being created during the early Macassan contact period. Furthermore, there are many examples of rock art that represent the centuries of contact the Indigenous culture had with neighbouring east and south-east Asia (Clark and May K. 2013:1).

3.2.1 The Contact Art Period

The contact period was viewed from approximately 1664 to the late 19 century (Wesley et al. 2012:248). Rock art of that time from northern Australia has provided archaeologists with valuable insight into the history of Indigenous culture connecting with many other foreign cultures. This period includes multiple cultural points of contact with other regions of the wider Indonesian Archipelago, resulting in dynamic displays of rock art in the shelters throughout the northern regions of Australia.

The contact period included contact with pre-Macassan groups called *Baijini* (see Berndt 1954 and Ganter 2006), these were people that travelled to northern Australia from the outer regions of Arafura and Timor Seas (Bilous 2011:372). Of more immediate relevance for this thesis was the Macassan *trepang* trade. Macassans from Makassar Sulawesi (Indonesia) travelled seasonally to the Top End of Australia to fish for *trepang* (Bilous 2011:372). *Trepang* (bêche-de-mer) are large sea cucumbers that are a delicacy in the Chinese cuisine, which are also acquired for their so-called

aphrodisiac qualities (Bilous 2011:372; Chaloupka 1996:131; Clark and May K. 2013:1).

The early contact period at times has, collectively been called the Macassan contact period however, as mentioned above, Macassans were from Makassar, and pre-Macassans were from beyond Sulawesi (Bilous 2011:372; Clark and May K. 2013:1). It is likely that many other vessels made their way to the northern coastal regions of Australia and traded before, during and after the Macassan *trepang* trade (Bilous 2011:372; Clark and May K. 2013:1). The other major factor during the contact period was the coming of the first European explorers who endeavoured to colonise Australia. The European contact involved increasing western engagement, ultimately heralding a major shift toward western cultural influence.

The contact period displays a progression of rock art motifs like Macassan *praus*, and Macassan knives through to modern early 19th and 20th century sailing and steam ships, weaponry, European human figures and animals (May et al. 2013:47). Moreover, throughout the contact period there are many watercraft motifs displayed that represent the chronology of contact between Indigenous communities and overseas traders.

3.2.2 Other Contact Art Perspectives

Rock art in other regions of the world can provide different perspectives and allows us to examine similar periods and iconology of contact rock art that may become valuable in archaeological research into rock art. For

instance, the San region of South Africa and the *Bushman* tales of the rock art assemblages provide an insight into the religious and communal spiritual practices of local communities (Wingfield et al. 2020).

Furthermore, the rock art images of colonial occupation have provided similar visual displays of firearms, animals, and people dressed in colonial attire also common in art from Australia's 'contact period' (Wingfield et al. 2020:51-52). The contemporary colonial occupation of South Africa can be viewed in rock art stories that are portrayed on the rock walls of Heidedal, on the western cape of Porterville, South Africa, in which an artist drew a painting of a sailing ship (Yates et al. 1993:62).

Comparing watercraft rock art, researchers believe that the artist of the depiction known as the *Porterville Galleon* was not familiar with the ship and sailing (Leggatt and Rust 2004). This is indicated by the fact that there were two points of wind direction, showing the flag at the top of the mast blowing east and another flag blowing west (Leggatt and Rust 2004). The Heidedal ship motif is an excellent example for this thesis because it displays the point of discussion, which is people's familiarity in relation to the subject and how they paint it. It is likely that the artist of the Heidedal ship was not a sailor nor familiar with the style of vessel or had even seen sailing ships often enough to recognise the effect the wind has on sails or flags (Leggatt and Rust 2004; Yates et al. 1993:62). It can be extrapolated that this artist reflected a general ignorance of these elements with others from his cultural group. This interpretation is supported by the positioning

of the art work and the disregard for Indigenous finger paintings that were painted over by the ship motif (Leggatt and Rust 2004:7-8). However, it is unclear how much drawing experience the artist had. The picture was painted over 100 kilometres from coast showing that the memory recall of that artist was accurate enough to provide a detailed picture of a vessel (Leggatt and Rust 2004; Yates et al. 1993).

3.3 IDENTIFYING CONNECTIONS BETWEEN ROCK ART ARTISTS AND MACASSANS

The Macassan *trepang* trade, in Australia ceased in 1906 (Chaloupka 1996:135, Wesley et al. 2012:265). From 1720 to 1906, the *trepang* maritime industry was responsible for some of the most innovative art periods that Indigenous Australians had encountered (Chaloupka 1996:131, Roberts 2004:42, Wesley et al. 2012:265). Most of what has come to light are rock art paintings that show the contact the Indigenous people once had with the wider region of Indonesia.

The 'contact period' between Macassans and Indigenous people from the northern coast of Australia extended from 1664 to the late 19th century (Wesley et al. 2012:248). In northwestern Arnhem Land, beeswax dating, supports evidence that Macassans were trading by around 1664 and may have been trading even earlier (May et al. 2013a:47). May et al. (2013) place the Australian trepang trade as one of many trading routes that the Macassan *praus* engaged with over the years. These watercrafts carried a multitude of diverse cultures, including sailors from Flores, Java Madura,

Timor Rot, New Guinea, and Borneo (May et al. 2013a:47). The Macassans expanded their trade globally and included many other Asian and European trading routes, their extent and influence only declining in the first quarter of the twentieth century (May et al. 2013a:47).

One area where more research is needed is on art depicting of Macassan *prau* rock art. How much do we understand about the artists and how much did they know about the maritime culture they were painting? Did they have prior knowledge of *trepang* maritime trading? There have been multiple accounts of Macassan sailors taking Indigenous Australians onboard during this period, taking them as far as Makassar, Sulawesi (Indonesia) (Macknight 2011:86; Roberts 2004:41; Sweatman et al. 1977:144). Documents suggest that there were at least 17 Indigenous Australians from Port Essington recorded to be in Macassar in 1870 (Macknight 2011:86; Mulvaney 1989:27; Roberts 2004:41; Sweatman et al. 1977:144). Indigenous people would certainly have gathered knowledge from these Macassan Encounters, but how much the Indigenous population learned from Macassan encounters is open to discussion.

Mitchell (1996:181) describes the encounters as becoming business-like, bartered goods providing a vector for cross-cultural interaction with the Macassans. In addition to providing access to trepang the Indigenous communities traded a range of tangible and desirable items such as tobacco and pipes, wooden dugout canoes, bottle glass, axes, and much more (Mitchell 1996:181).

Furthermore, there were many intangible items that were exchanged, like languages and even cultural ceremonies that were reflective of Macassan culture. Some Indigenous even spoke fluent Macassan (Mitchell 1996:181). Mitchell (1996:181) suggests that Macassan/Indigenous relations led to the adoption of many Macassan maritime concepts that aided the Indigenous population in the marine environment, thus allowing them to capture more marine animals and travel long distances by sea with less effort. This evidence has drawn criticism because other research has shown that many parts of Indigenous society were not entirely forthcoming or freely engaging with the Macassans and the *trepang* trade (Burningham 1994; de Ruyter et al. 2023; May et al. 2013; Mitchell 1996; Roberts 2004; Wesley et al. 2012).

Roberts (2004:41) noted Indigenous deckhands on Macassan vessels, as well as passengers, but there were many that were neither. There were accounts of Indigenous men and women being taken against their consent, while some Indigenous Australians left of their own accord sailing the trade winds back to Macassar, many returning the following season, full of memories of traveling abroad (Chaloupka 1996:132; de Ruyter et al. 2023).

However, this Chapter's focus will be on the Macassan maritime trade which was seen to ignite cultural trends during the contact period and displayed many innovative contact encounters that cascaded into Indigenous sentiments of life. The evidence was of Indigenous persons conducting trade with Macassan *trepang* traders, which showed their skills and experience in ocean-going vessels of sailing, navigation, cultural

exchange, and many more (Bigourdan and McCarthy 2007:3; Burningham 1994:145; Chaloupka 1996:132; Roberts 2004:41). This was evident by the number of rock art maritime motifs that have been identified in the north Pilbara and Arnhem land regions of northern Australia, and suggest that trading and sailing encounters were the elements that connected Indigenous artists to the Macassan traders (Bigourdan and McCarthy 2007:3; Burningham 1994:145; Chaloupka 1996:132; Roberts 2004:41). This in turn provided experiences and details that were only known at the time by skilled mariners (Bigourdan and McCarthy 2007:3; Burningham 1994:145; Chaloupka 1996:132; Roberts 2004:41).

Watercraft experience is evident only with specific maritime rock art paintings that take on a particular appearance, which displays knowledge outside the general viewing position from land (Bigourdan and McCarthy 2007:3; Burningham 1994:145; Chaloupka 1996:132; Roberts 2004:41). These aspects are usually drawn by a sailor or deckhand who has experience on the vessels which shows the knowledge of intimate internal details of an ocean-going vessel (Bigourdan and McCarthy 2007:3; Burningham 1994:145; Chaloupka 1996:132; Roberts 2004:41).

Roberts (2004:27) also indicates that some rock artists were the actual people sailing on the watercraft pictured, emphasising that to draw the main halyard and to include jib sheets (ropes) one must be able to identify what they are, to recognise the importance of them. This places the artist in close proximity to the Macassan sailors but could also make them sailors

themselves, which would explain why many artists drew such precise watercraft rock art paintings (Roberts 2004). The level of detail that some of the Macassan *prau* motifs portray is well discussed and provides a strong argument for Indigenous people having experience in seamanship (Bigourdan and McCarthy 2007:3; Burningham 1994:145; Chaloupka 1996:132; Roberts 2004:41).

This becomes clear when Roberts (2004:40) uses a quote from David Turner (1973) about watercraft contact rock art, who stated that the artists painted the experiences that were most gratifying and memorable. Turner was an anthropologist who undertook an ethnographic examination of three Indigenous sites in the Gulf of Carpentaria in the 1970s. These experiences that Turner was describing were that Indigenous artists were most likely seen as creators of fables and imaginary events but without the display of evidence (Roberts 2004:40-41).

Bradley et al. (2022:15) frame this as the artists of maritime rock art becoming actors in their own stories, included by details in the paintings that specify knowledge of Macassan *praus* but also demonstrates knowledge of the sea. The luffing of sails in the right directions and depicting halyards and stays in different colours resembles observation made by people when sailing watercraft at sea Roberts (2004:27).

Wesley et al. (2012:252) suggest that the Macassan *prau* rock art of northwestern Arnhem Land is viewed as less methodically drawn, because of the different elements depicted in the details of each Macassan *prau*

motif. Therefore, the varied drawing styles in *prau* motifs makes it difficult to determine trend lines or patterns. This can creates issues for researchers because it is important to understand the cultural influences that determine why vessels were painted and by whom, to investigate what they meant for the Indigenous community of that time (Summers 1981:103). This is especially important for an understanding of continuity in progressive periods throughout the contact art period.

The connections the Macassans had with Indigenous Australians are well presented in rock art at Malarrak, with a Macassan *prau*, an x-ray painting of a Macassan knife and sheath, and many other items including firearms, European ships, animals, and buildings (May et al. 2013a:47). May et al. (2013) also connect the themes that Wesley et al. (2012) identify through their analysis that suggest the continuity in contact rock art is not methodical, May et al (2013) acknowledging that there is little known about the Macassan contact period (May et al. 2021:131). Moreover, this discussion of an established series of conventions for analysing Macassan praus seems to be limited by the number, and the styles of *prau* motifs represented across rock art sites throughout Australia (Wesley et al. 2012).

3.3.1 Macassan Contact Art

Kelly et al. (2021) recognise that there is a lack of research and connection between traditional rock art, contact rock art, and cross-cultural contact rock art. Kelly and colleagues (2021) argue that the issues that caused the

separation of traditional secular and western rock art patterns have many different interpretations. Acknowledging the Indigenous position because of the separation of these rock art areas Kelly et al. (2021:175) agree with Frederick (1999:32) who mentions that the foundation behind archaeological rock art research is fundamentally flawed by the separation of traditional rock art and contact rock art, and that traditional rock art was still alive and well when contact art was being produced. Suggesting that we as researchers need to be careful defining boundaries that limit archaeological research.

Exploring data collected by *Earthwatch* between 1988-1991 from the early to the mid-colonial occupation of northern Australia Kelly et al. (2021:175) focuses on detailed recordings of elders from the Yingalarri region in Wardman Country and they describe the contact period as a generational development process that transitioned through conventional rock art iconography.

Kelly et al. (2021:179) writes that researchers did agree that pre-contact conventions were still used during the contact periods, but this seems too broad an argument when Fredrick's (1999) point of view is taken into consideration. This is because there is a vast separation between contact and traditional rock art research, except for the obvious themes of pattern and colour convention styles. Moreso, identified by objects painted representing Indigenous cultural connections to themselves, rather than European connections possibly warning anyone. Further supporting the point, Kelly

et al. (2021:179) agree that contact rock art motifs have been overlooked if they do not easily fit into the institutional graphic convention category of traditional or early contact, 'standalone material culture' for instance firearms and sailing ships.

Kelly and colleagues (2021:187) also suggest that the *Yingalarri* #73 paintings in the rock shelter lack detail which likely reflects the artists' unfamiliarity with the subject matter. Kelly et al. (2021:189) state, there 'may be new, clear artistic continuities between pre-existing and new themes [which] are evident in introduced motifs,' using *Earthwatch* data to support this conclusion. These consist of digitised records of research on rock art research used to revise views on Australian rock art in northern Australia. This suggests that there is still a lot of rock art research that can be undertaken.

May et al. (2021) point out that there are relatively few motifs from the Macassan rock art period compared to the colonial contact period, suggesting that for the latter art was used as a warning of threats during that time. There is still little information about the Macassans and the relationship they had with the Indigenous Australians of northeastern Arnhem Land, compared with the northwestern side of the region. May et al. (2021:131) acknowledge that even though the Indigenous Australians traded with the Macassans for 240 years or more archaeologists are still finding more information about their wider relationships with the different Indigenous communities.

The theory that May et al. (2021) contemplate is that the lack of Macassan rock art compared to the large amount displayed during the European contact period might just hold the key to what rock art meant at that time for the Indigenous communities in the northern regions of Australia. Further to the point, supporting their evidence May and colleagues (2021) highlight the intense conflicts and resistance that the Indigenous population went through with the Europeans during the colonial contact period defining what iconography was conceptualised. Explaining that the rock was a medium for artists displaying specific moments in time (Brady et al. 2022:3). May et al. (2021) suggest that the lack of rock art in the Macassan era is not a lack of archaeology but is more accurately portrayed as a non-threatening seasonal form of cross-cultural coexistence.

3.4 UNDERSTANDING TECHNOLOGICAL AWARENESS AMONGST ROCK ARTISTS

Who drew the Macassan *prau* paintings in the Wellington Ranges of Arnhem land and how much contact experience did they have and what did they learn?' In searching for these answers there is a need to understand the levels of technological awareness amongst the rock artists and what provoked such a change from the inherently cultural rock art that has been expressed over the millennia, versus the new paintings of novel encounters and the introduction of new progressive styles. Could it be that it was just a change in a generation that instead of putting 'I was here, or I am here' in the form of a hand motif, the artist painted a picture of 'look what I did',

proposing that the change in direction was not seen or done by all, but by the mere few with the imagination and skill, to explore Macassan culture for themselves?

Looking at hand motifs in northwestern Arnhem Land, Bradley et al. (2022:3), mention that rock art is a 'visual communication medium' which provides an expression of an artist's style to convey not just stories but experiences. Bradley et al (2022:3) believe that there is more of a focus on artists' experiences which are reflected on the rock by depicting interpretations of cultural, social, and erudition showing the experience of the artist behind the drawing rather than the artist's ethnicity. This is a step away from the major research approach of ethnographic patterns and a move towards a progressive stylistic convention approach as discussed below (Brady et al. 2022:3).

The iconology of Indigenous rock art is identified by the conventional images and motifs such as the emu's foot, kangaroo's paw and so on, and not by motifs of watercraft. An excellent example of this are the cultural motifs, at the Malarrak site that represent the approximate 30,000ka or more journey that signifies archaeological Indigenous rock art (Daryl Wesley's PhD Thesis, ANU; McDonald and Clayton 2016:20). However, even in the more conventional motifs, it is still possible to identify the elements of innovation that Indigenous people developed and used for their specific communicative purposes not just to make interaction easier and quicker to achieve, but also as a record for their own experiences.

There is a clear distinction between iconographic innovation and traditional cultural rock art, and what is conveyed is often conceptualised as a fixed and monumental divide (Frieman and May 2020). In fact, more of a transition of evolution seen by the evidence of expression in culture and practice through time (Frieman and May 2020). The ancestral traditional rock art of the past does not represent the majority of rock art throughout the contact period. Rather, it identifies a significant period of innovative experiences that Indigenous Australians had, and a physical connection with the Macassans' *trepang* trade and their watercraft.

To further this argument, Fredrick (1999:133) believes that there are misconceived discussions that assert that old and new themes of culture between prehistoric rock art and the contact period of Indigenous Australians, could not coexist. He says that since 1999 much of the focus was on pre-historic rock art in Australia and not enough on contact rock art, and this provoked assumptions about the contact period. Misconceptions were drawn and became established. Therefore, developing an analytical discussion beyond pre-historic rock art was a fundamental necessity to benefit the archaeological research accuracy (Frederick 1999:133).

The need for archaeological discussion was evident with regards to a document from Brandl (1973:3), who described the rock art shelter on the upper east Alligator River region as having pictures of aliens. From Brandl (1973) this might have been referencing the foreign relationships that were

painted on the shelter wall, however, this can easily be viewed in an inappropriate context. Fredrick knew of the need for further archaeological discussion to develop research from the contact period and to bring to light an understanding of socio-cultural themes that were evident between Indigenous encounters over the contact years (Frederick 1999:133). Furthermore, Fredrick (1999:133) suggests that these themes were expressed in an Indigenous ethnographic methodology, which was tangibly displayed in eastern Arnhem land by songs containing Macassan words, ceremonies containing intercultural exchanges, rituals and funerals that all contain some evidence of Macassan cultural influence.

Fredrick (1999:134) defines contact art as a pre or post-encounter with the Macassans but also factors in direct or indirect contact as a limitation in assessing contact motifs. She developed a way to categorise contact rock art by determining if motifs were drawn at a distinct time and date depicting a specific contact setting (direct contact) or if there were many encounters that contributed to motifs being drawn in a more substantial engagement period (indirect) (Frederick 1999:134). Combined with Fredrick's table of characteristics of pre-contact and contact rock art we are able to determine a delineation between them.

Table 1. A table from Fredrick (1999) detailing the differentiation between pre-contact art and contact art that can help distinguish cultural interactions (source: Fredrick 1999).

Figure removed due to copyright restriction

Frederick explains further that, 'These assemblages, identified as pre-contact, are distinguished on the basis of superimpositioning, are differential weathering, intra-site spatial patterning and variation in media and technique (Frederick 1999:140).'

Frederick continues, acknowledging that the technical analysis undertaken on contact and pre-contact rock art is not clearly defined as there are many discontinuities across the period, which may be the result of dramatic progression (Frederick 1999:140). Developing a framework to assess data in archaeology provides researchers a framework for statistical analysis, this can produce a dataset that can allow archaeologists to determine or distinguish information. Many obstacles can be presented during these calculations and in this case, the way contact art is produced (unmethodical) makes it harder to evaluate against similar patterns and themes, due to its (discontinuity) incompatible nature of assessing two similar motifs. For example, it is easier

to find multiple similar hand stencil motifs with similar continuity and cross-linking patterns, rather than multiple similar Macassan *praus*.

This is a major focus for rock art analysis in which developing an archaeological framework to critique one artist's watercraft motif against another, could leave the analysis open-ended, especially when art conventions do not apply. On the other hand, it might involve an interpretation of external factors like a sailor's eye, who knows how the watercraft acted when it was sailed and possibly laden with cargo. These are all factors that play a role in the visual representation of the Macassan *prau*, while multiple motifs of maritime rock art have distinguished features that could classify the watercraft as direct encounters although, many are not recognisable enough to make a clear judgement. For example, it may be too complex to distinguish direct or indirect encounters from an x-ray painting of a *prau* with traditional infilled patterns versus an earlier outline painting of the vessel's shape only.

Continuing the discussion of Macassan *praus,* the details seem to express a progression of growing comprehension in stylised motifs depicting the way *praus* were used and sailed. From early painted motifs that carried more of a two-dimensional perspective, that display detailed outlines and structures, with x-ray descriptive features to the more detailed *prau* motifs where wind direction can be identified by the multiple sails showing the same curvature. Creating a three-dimensional piece of artwork takes on a

different perspective of external influence and allows the audience to see the experience behind the artist (Summers 1981, Mamassian 2008).

While determining levels of rock painters' experience, the Indigenous rock art *prau* artists had progressive experiences throughout the contact periods which can assist in identifying when conventions change in rock art motifs. Clarke and Frederick (2008:128) document that more than half of the *prau* paintings in the Groote Eylandt region are painted from wet pigments suggesting that extensive time and effort went into the drawings compared to the majority of European motif dry pigment drawings. Furthermore, Clarke and Frederick (2008:128) describe that while analysing Groote Eylandt Macassan *prau* motifs, the artists carefully picked the moment in time of Macassan arrival or departure to draw their art from, as the sails were up sailing away, or furled ready to beach. This argument was also supported by the number of people that were drawn on the decks in the majority of the prau motifs (Clarke and Frederick 2008:126). This indicates that there could be a difference between the *prau* motifs at Groote Eylandt versus northwestern Arnhem Land, where the artists at Groote Eylandt may have been observers of the Macassan *trepangers* rather than crewing on the vessels. In addition to this argument, the artists may have painted their most memorable experiences of the seasonal arrival or departure of Macassans. Clarke and Frederick (2008:126) provide the argument that Groote Eylandt Macassan *prau* motifs are drawn from a series of conventions with foundations derived from traditional rock art. For example, objects like the

sails, mast, and hull are proportional to the rest of the picture (Clarke and Frederick 2008:126).

Artists' technological awareness represents their subject knowledge. For example, a painting of a ship at sea sailing through the ocean with fenders tied onto the side of the hull (per comms. Zuccolin 2002) illustrates knowledge they had of this maritime technology, at least as it could be observed, if not its function. When in port they would place the fenders between the ship and the pier to protect the ship from scraping alongside, but as soon as the ship left port, the first command to be given, would be to stow away these items. This is an example of an artist remembering a ship docked but positioning it at sea in the painting. The example shows the experience of context away from Australian Indigenous paintings which is essential to understanding some elements of *prau* rock art. Burningham (1994:145) referred to this as 'pier head artist' in which the artist is a bystander of the events around him. This was contrary to the northern Indigenous maritime rock art artists who were possibly sailors as well, that produced specific characteristics identified from working on trading vessels (Burningham 1994:145).

3.5 ART CONVENTIONS

Conventions in art have long been assumed to characterise cultural and traditional themes, traits, and significance, which are all a form of continuity (Brady et al. 2022:1; Summers 1981:103). Art conventions

categorize and format the artistic styles of a period, identified through similarities, displaying significant traditional or cultural patterns. Summers (1981) focuses on identifying historical art conventions by analysing the inherent properties that connect systematic style to a particular genre of art; a clear example of this was the European Renaissance period.

Mamassian (2008) draws examples from the Renaissance period notably the 13th to the early 16th centuries, but also describes ambiguities in convention styles of paintings through the eras from Raphael's *School of Athens* (1510-15) to Salvador Dali's *Slave Market* painting of Voltaire (1940). Mamassian (2008) describes the *Slave Market* painting: from one angle, two nuns are visible, however, when viewing the whole painting it becomes clear that the detail combines to form a bust of Voltaire (Mamassian 2008:2146).

Mamassian (2008) believes that style conventions are of a reciprocal visual nature that is shared commonly throughout the paintings. For example, Raphael's *School of Athens* composition centres on a balance of style for the observer to engage with (Mamassian 2008:2144-2145). However, in this painting there are two spheres that are drawn like round plates rather than three-dimensional globes, which seems to disrupt the visual balance (Mamassian 2008:2144-2145). These should resemble an oblong shape instead (Mamassian 2008:2144-2145).

It is true that Mamassian's (2008:2151) interpretation that conventions are important, and that spatial scale and frequency highlight the space and balance in open settings. Thus, they provide a balanced scale view from an

observer's angle. This can be identified in the painting of Leonardo da Vinci's *Mona Lisa* which is an exceptional example of ambiguity in that by covering the top half of her face, the mouth (smile) can draw a separation between the covered parts of her face, creating the idea that the smile and eyes are not in any way connected or matching. However, this could be the mere frequency of the shadows on her face (Mamassian 2008:2144-2145).

A further example of convention style is the static balance which refers to an object displaying movement, and this can be identified by the level of experience the artist has with their subject matter (Mamassian 2008:2151). Static balance conventions depicting movement are differently derived from natural still settings (Mamassian 2008:2151). Furthermore, it conflicts in nature to paint a setting or object which is standing still and moving at the same time (Mamassian 2008:2151).

Importantly, Summers (1981) describes art conventions as distinguishable features that are spurred on by innovation or a progressive period that connects the artist to the painting and the painting to the period. Summers (1981:121) discusses valid reasons for suggesting that, some conventions could have a negative effect leading to segregating or pigeonholing artwork, thus recognising that many art areas require more extensive analysis. From an archaeologist's point of view, the concepts, symbols, and inherent period characteristics of expression are displayed in delineations of iconography that can be represented in analytical comprehensive frameworks, providing in-depth information towards categorising watercraft rock art assemblages.

Moreover, identifying continuity in Macassan *prau* rock art has been the challenging factor in developing a framework that can support evidence of differing time periods. However, iconographic sequences have been clearly represented in prehistoric Indigenous rock art. In spite of what has been said, Ross and Travers (2013:66) mention that there are thirty-eight out of forty watercraft images from the entire contact period that display a convention of a profile (side) view of the vessel. The problem with relating one rock art profile view to a convention is that art conventions work on multiple profiles of themes or genres, to create determining factors. To have one major profile (perspective factor) does not provide enough systematic continuity to challenge other convention factors, thus leaving the equation open-ended (Wesley et al. 2012:265). Summers (1981:109) also suggests that conventions may be less distinctive in art partly due to it being, a non-traditional pattern of experience. Where early encounters of Macassan *praus* were painted these are less connected to the traditional continuity of tribal, clan, animal, ceremonial, anthropomorphic, and other artwork which are extensively represented throughout Australia.

There is a clear distinction between pictures that display rock art of dugout canoes exhibiting continuity represented in customary Indigenous rock art style, (Bigourdan and McCarthy 2007:2, fig.2) and the Macassan *prau* motifs, and other contact motifs that extend into the European period. This could be comparable to periods of pre-contact rock art as lineal forms of expression, while contact and post-contact periods were often depicted as

an extensive societal progression. Even though progressive periods were happening pre and post-contact, the characteristics of Indigenous culture was still of progression even throughout disruptive sequences of contact. This is also substantiated by Kelly et al. (2021:175) and Frederick (1999:32) both who mentioned previously that customary Indigenous rock art was continuing to be painted during the contact period.

Frieman and May (2020:362) discuss Australian contact art as being a hybridised progression through and beyond the conventional traditions of historical rock art. Frieman and May (2020:362) go on to discuss the concept of blended continuities of rock art that are just as innovative and optical as all the other rock art motifs represented. Blended rock art is the movement of integration by using connected themes, innovative technologies and new ideas away from the traditional practices which dominated the paintings for so long (Frieman and May 2020:362). However, compared to old and new practices, *prau* and European motifs did not become the dominant themes, and Frieman and May (2020) provide a substantial argument that the progression in contact art was the identification of innovation, and the importance of making it known throughout the Indigenous community.

Furthermore, the introduction of new materials that were used ranged from beeswax in the early stages of rock artwork (see Wesley et al.2012; May etal.2013) to the representation of new vibrant colour schemes including Reckitt's Blue (blue whitening powder) in the 1900s, and this also included

new techniques that merged with traditional painting practices (Frieman and May 2020:361; Miller et al. 2021:318). Moreover, Reckitt's Blue was used especially during the late colonial contact period up into the 1960s by Indigenous rock art painters *Djimongurr* and *Nyombolmi* (Frieman and May 2020:361; Miller et al. 2021:320). Frieman and May (2020:361) also argued that the ship rock art was designed to educate, warn and convey to communities, threats from newcomers, informing them about what to expect in new encounters.

3.5.1 Assessing Rock Art

Conventions in pre-contact rock art are easily identified, but conventions in maritime rock art are not; some scholars go even further to suggest that there are no conventions in maritime rock art in Australia. Wesley et al. (2012), in collaborative watercraft rock art research provided a dataset that contributes to the body of information available about Macassan *praus* and European ships during the contact period. Wesley and colleagues (2012) developed an analytical framework that categorised the visual aspects of watercraft rock art from three shelters in the Anuru region and Wellington Range in north western Arnhem Land (Wesley et al. 2012). Developing a systematic framework, the paper discusses the aspects of known items identified on each motif. These items were then categorised and presented in a table to calculate the number of paintings that carry the same traits and contain similar or identical elements. Wesley et al. (2012) used standardised

techniques from archaeologists and maritime archaeologists who were specialists in areas of rock art and watercraft construction.

Recognition of the need for further research in watercraft rock art has been slow (Wesley et al. 2012). Wesley and colleagues (2012:248-49) suggest that it is long overdue because people are still referring to Turner (1973). He (Turner 1973) collated Indigenous watercraft motifs from Bickerton Island in the Gulf of Carpentaria as part of the bigger picture of maritime rock art by Indigenous and non-Indigenous artists. Therefore, Turner's (1973) assessment of rock art was seen to be blending watercraft with other elements of the contact period making each element on its own less significant. Even though Wesley et al.'s (2012) study focuses on Indigenous maritime rock art from the early contact period to the late colonial contact period, the assessment of data from previous studies can be implemented to expand research areas that could benefit the study overall.

The research they undertook was the first step in identifying a systematic framework that was applying a standardised process, that did not exist previously in maritime rock art investigations (Wesley et al. 2012). Wesley and colleagues (2012) saw the importance of creating a methodological format that was going to support ongoing research in Indigenous archaeology. Viewing the represented data confirmed that the research was much needed to lay the foundations of maritime rock art research, but also to create a framework that scholars could refer to. Wesley and colleagues (2012:253) did not just formulate a framework that corresponded with

aspects of watercraft motifs but also defined the 'stylistic attributes' that can contribute to this discussion.

The paper concludes that specific vessel aspects displayed on the watercraft motifs categorised the artists into different levels of maritime experience. These categories defined the artists as exhibiting a range of levels of maritime knowledge. Low levels of maritime knowledge were reflected in fewer watercraft characteristics being painted, while medium and high levels of maritime experience would show an even higher level of characteristics, for example showing sails relative to wind directions and so on (Wesley et al. 2012:265).

Wesley and colleagues borrowed Gibbs's (2006:6-7) methodical framework developed some six years before to analyse shipwrecks, including aspects of ship structures and design. Gibbs's (2006:4) site formation process was an expansion of Muckelroy's (1976) systematic framework process that sought to use direct and indirect forms of analysis to comprehend the construction of a ship. These systematic processes were cultural elements, the contents, and the human relationship of the wrecking of the vessel. Muckelroy (1976), Gibbs (2006) and Wesley et al. (2012) all characterised effective frameworks for the systematic processes of elimination that can contribute to the understanding of what has been displayed in Australian maritime contact rock art.

By using systematic tools, the frameworks can assess the structure of what elements are present, but also identify what cultural elements have been

introduced by Macassans (individually, culturally, or regionally) that may support further research. Furthermore, introducing systematic frameworks for data collection can develop multiple sequences of conventions that can then be applied in support of archaeological inquiry.

3.5.2 Reassessing Rock Art

Brady and Bradley (2014) analyse rock art in the Gulf of Carpentaria and suggest there is a need to re-consider rock art styles, which may have contributed to some important aspects being overlooked. Analysing social and cultural considerations in art in the Gulf of Carpentaria region Brady and Bradley (2014:362) believe that the art contributes to an understanding of individual local symbolism. Agreeing with Brady and Bradley (2014) that looking at all the similar traditional motifs, in the same way, can be like having two categories of watercraft motifs: Macassan and European.

In discussing rock art regions Brady and Bradley (2014:362) defined ethnographical styles by using sub-assemblage profiles. The most notable example was stencilled hands which were understood to be in some regions linked with death rituals (Brady and Bradley 2014:363-364). Supporting Brady and Bradley's (2014:362) argument that continuity grouping and quantifying rock art in the Gulf is a reassessment of rock art research, and that the ethnography of rock art and the local region should be the first in a series of processes in cultural convention-style research. Furthermore, this

would provide the locality of the motif and then connect the motif to the cultural meaning in that region.

Recognising that there is sufficient evidence to undertake ethnographic research on Australian rock art, whilst valuing the importance of regional Indigenous actors and their knowledge, there is a need to examine rock art from new approaches (Brady and Bradley 2014:269). In recognising the significance of developing a wider regional approach in Australian rock art, the need for researching conventions and subject matter from multiple areas, not just northwestern Arnhem land can provide a wider scope of the examination. Understanding where different ethnographic trends can take watercraft rock art research in the local regions, can only benefit the realm of archaeological rock art research.

4 Flow Chart of Aims and Objectives of Survey 1 and Survey 2

Below is a flow chart displaying the parallel survey directions that this thesis will take. Survey *one* will provide an examination of Indigenous Macassan *prau* motifs from northwest Arnhem Land and Groote Eylandt regions listed in the research design from map figures 1, 2 and 3. This will provide the archaeological research component on art conventions that will join the discussion and interpretation of the results of survey *two*.

Survey *two* will be a directed at the general public focusing on key knowledge areas of artistic background, maritime, sailing or boating experience and persons living by the coast. Survey *two* will try and replicate experiences of early rock art artists which may have seen or encountered coastal sightings of Macassan watercraft before creating their art.

Figure 4. A flow chart displaying the direction of Survey 1 and Survey 2 will be taking in this thesis (author, 2023).

5 Focus Group Survey 2

A focus group will be held in May 2022 for a preliminary trial survey to find the best way to manage a drawing survey with the general public. This would consist of colleagues with technical backgrounds and artistic experience that can participate in a number of practice surveys and to provide valuable feed back on a direction that will give the best possible outcome. The reason for this focus group is, a) to workout a specific timeframe that provides the most suitable outcome to analyse, b) if the hypothesis is going to work, and c) would art conventions in the participants's drawings be valid enough for further research. This is why I will choose candidates with differing educational and life experiences.

5.1.1 Focus Group Trial Survey 2

The preliminary study with the focus group was held on the 7th of May 2022 (Author 7th of May 2022). The focus group was informed of my intentions of gathering art conventions, themes, patterns and connections. The study involved four adults ranging from 36 to 49 years of age. The four participants (P) for this focus group were selected because of their analytical educational experience and artistic experience. They are: (P1) an art schoolteacher, and (P2) a medical physicist. Two material engineers one at (P3) at professorship level and the other (P4) at a post-doctoral level. The art schoolteacher had little experience with the ocean, sailing, boating, or drawing boats. The medical physicist had novice experience with fishing and motor boating and had no experience with drawing boats. The material

engineer researcher had little to no experience with the ocean, sailing, boating, or drawing boats. The professor had little experience with the ocean and sailing and had no experience with drawing (per comms. focus group, 2023).

Trial exercise *one* was suggested that research participants be provided with a photograph of a vessel and then asking the participant to draw the boat in the picture. Trial exercise *one* would be repeated for two, four, six, and 10 minutes (four practice surveys). This failed to get the participants drawing because most of the focus group participants did not have any experience with drawing boats and therefore the time limit seemed too short. As a result, this approach was abandoned.

Survey 2 study design was assessed and modified to alter the drawing time limits. The focus group and I also discussed questions that arose of what style of pictures should be shown, Macassan *praus* for an archaeological connection or modern sailing yachts which is relevant to the era we are in now with the participants (per comms. participant 4:2022).

In trial exercise 2 and 3 the two photographs shown were clear pictures of yachts sailing from two different directions and the yachts were different (a sloop and a ketch). The results were very surprising in that the drawings from the four participants were all different and these results will be discussed later below.

5.1.2 Trial Exercise 2

The first exercise of the survey showed the participants a photograph of one sailing vessel and at the same time, asked them to draw the vessel within a 10-minute timeframe.

5.1.3 Trial Exercise 3

The second exercise of the survey displayed the second photograph of a sailing vessel, but this time it was removed after 10 minutes of viewing and the participants were asked to draw what they had seen for 10 minutes from memory.

5.1.4 Survey 2 revised.

Survey 2 was revised to show one photograph for five minutes and remove it and let the participants draw for five minutes. This trial survey gave the best drawing results with 10 minutes showing, 10 minutes drawing and kept the participants more engaged which was an important aspect of undertaking the main survey with the general public. Most of the participants did not need the full 10 minutes of drawing time and found that eight minutes was sufficient.

5.1.5 New Survey 2 Plan

There were two pictures shown throughout exercise 2 and 3 in the study. The first consisted of a modern sloop (one mast) sailing underway on the ocean (see Figure 5). The second sailing vessel photograph was of a ketch

(two masts), but this time the photograph was of a stern aft angle with a much less of a side profile view (see Figure 6). The photographs were viewed on a 55-centimetre (cm) television in ultra-high-definition (Hisense UHD).

Figure removed due to copyright restriction

Figure 5. Photograph of a modern sailing sloop used in pilot study exercise 2 (source: Jeremy Bishop Photography 2022).

Figure removed due to copyright restriction

Figure 6. Photograph of a modern sailing ketch used in *the* pilot study, exercise 3 (source: Kristel Hayes unsplash.com, 2022).

5.1.6 Why these photographs

The sailing vessel photographs that were shown were of two modern watercraft, both being pictures of sailing vessels underway which were

shown for the duration of 10 minutes for each one (Figure 5 & 6). By displaying a picture that represents a vessel underway sailing, the study tried to capture a moving vessel similar to some of the watercraft rock art motifs in northwestern Arnhem land (see examination of prau motifs from Groote Eylandt region later in this thesis). These were of modern pictures of sailing vessels, as this could be a similar hypothesis to a person viewing a modern sailing vessel during the contact period.

Both photographs were quite different, and the first photograph (Figure 5) had a side (profile) view of the sailing sloop. The second photograph (figure 6) was of a sailing ketch viewed from the stern port side showing less of a profile than the first picture (figure 5) and much more of a curve from the wind in the sails. Suspecting the angle of the yacht would be harder to draw the concept was to provide a challenging example for participants for the second exercise. This was formulated to exercise memory recall rather than drawing any image that is displayed in front of the person.

The focus group trials of trial survey one was effective in that the study received eight drawings in total all very different from each other. The application of a person drawing a boat from a variety of skillsets provided drawings with vast differences. This ranged from basic outline sketches to very artistic drawings from creative occupations. Choosing three different occupations with very limited amounts of experience with the sea and four different levels of experience drawing boats, sailing and artistic ability presented an assortment of results.

5.1.7 Focus Group Trial Practical Analysis

The data collected from the focus group trials provided a real-time effective application and once the initial issues of the drawing strategies and times were re-evaluated, the trial ran smoothly. The data that was received has visually shown that there are significant differences in the results which have translated to paper through limitations of artistic experience, drawing boats, sailing, and ocean experience for the drawing of exercise 2 (Figure 5). Interestingly, the most striking similarities were with P2 and P4 who drew smaller sailing yachts on the paper but had drawn more detail including a rear backstay and the shadow of the starboard mast spreader running across the mainsail. P1 and P3 had similar size drawings and were more focused on the shadow of the sail than the mast spreader shadow, managing to create more shade and detail in the hull of the vessel assimilating the photograph colours where the previous P2 and P4 did not.

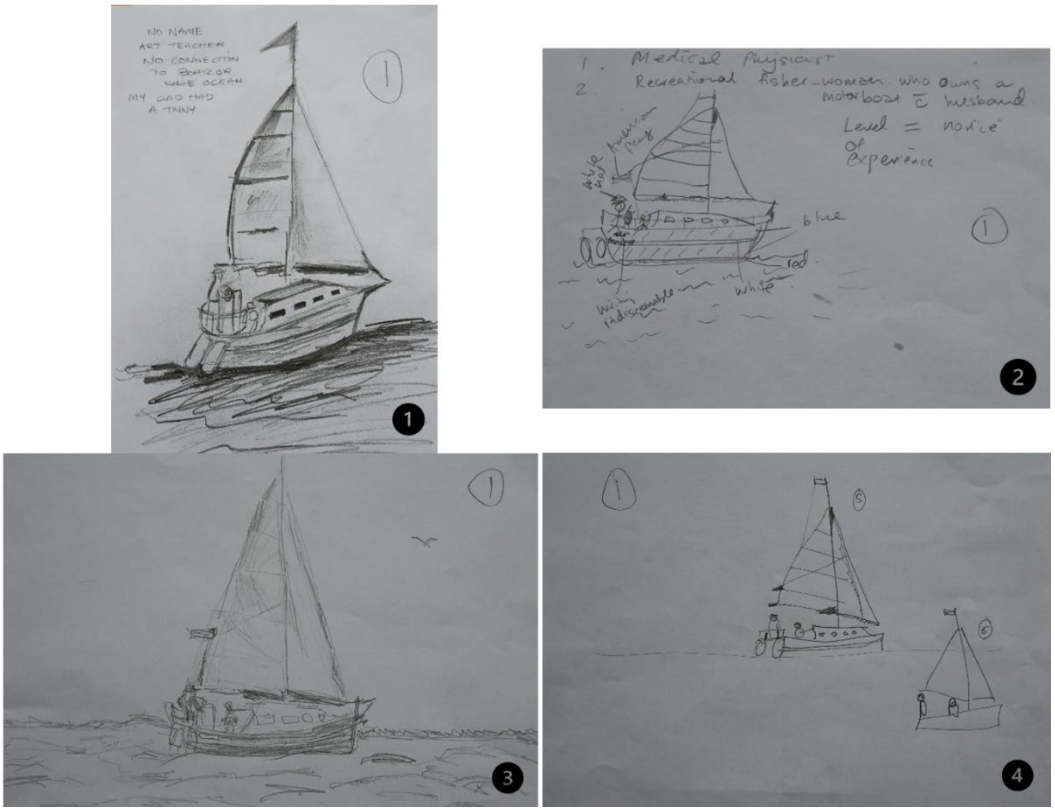

Figure 7. Exercise 2 results showing four drawings from the participants 1,2,3 & 4 respectively. Drawing a sailing yacht Figure 6 while being displayed for ten minutes (source: author pilot study 2022).

The third exercise that showed Figure 6 for 10 minutes and directed the participants to draw it without viewing it for 10 minutes provided interesting results. P1 and P2 drew the sailing yacht on a similar angle whereas P3 and P4 were more toward a side profile view. There were added concepts of windows, flags, and two, three, and four people had been drawn on the sailing yacht. All the second drawings had three sets of upright structures, like masts or sails which resembled the photograph of exercise 3 (Figure 8).

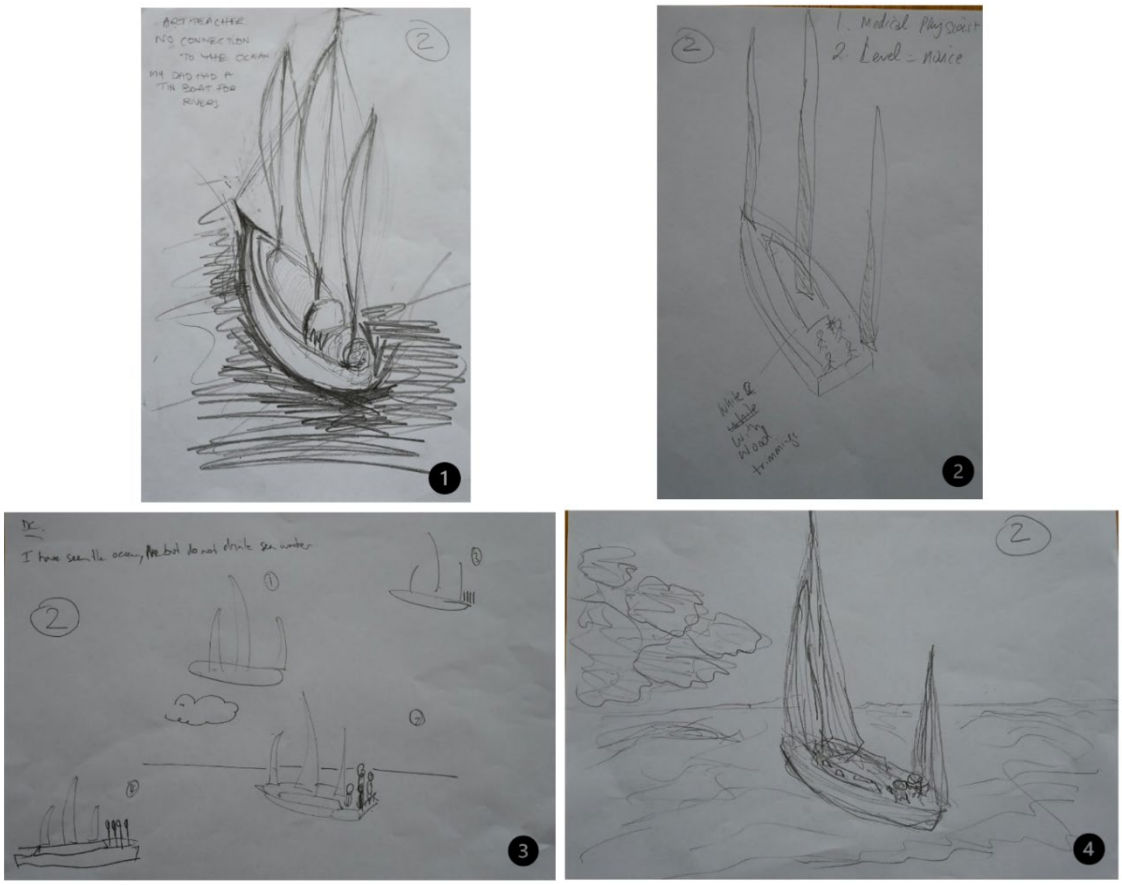

Figure 8. Exercise 3 results showing four drawings from the participants 1,2,3 & 4, respectively. Displaying a photograph of figure 7 for 10 minutes, removing it, and then asking the participants to draw what they had seen for 10 minutes (source: author, pilot study 2022).

5.1.8 Focus Group Survey 2 Trial Analysis

Overall, the trials of this research were to create an effective platform for collecting sufficient data and it accomplished that well. The candidates' feedback was that maybe they should have drawn a shape of some sort to provide a basis of what drawing style they preferred and to determine what category the picture could be placed in (per comms. P3 2022). This was an interesting concept and looking at incorporating a perspective prism or oblong object was thought of. Participant 3 introduced this concept to

strengthen the participant's *perspective* artistic outcomes (per comms P3 2022)[1]. However, the likelihood of the perspective drawing altering the continuity of the participants drawing abilities was considered, and this study is investigating the participant's drawing skills not developing their skills to draw exercise 2 or 3.

Finally, that it is worth considering whether, Macassan *prau* photographs or drawings should have been used instead of modern yachts? This is the main consideration that will be discussed before the study is initiated, due to the limited photographs and drawings showing enough details of Macassan *praus* this might be not plausible for this study. However, I agree that the best scenario would be to use Macassan *prau* pictures. After close consultation with Dr. J. Kowlessar of Flinders University the survey was reassessed and the ability to use a Macassan *prau* picture was confirmed (per comms. J. Kowlessar 2022).

[1] Refer to Mamassian 2008 on perspective and observers angle in the Literature Review Chapter of this thesis.

6 Thesis Data Collection Methods

The methods in obtaining data in this thesis is to undertake an in-depth artistic analysis of Macassan *prau* rock art images by examining Indigenous rock art motifs of Macassan *praus* and analysing new data taken from a modern experimental study of drawing Macassan *praus*.

The first part of the analysation process will be the examining of three Macassan *prau* motifs one from the northwest Arnhem land region and two from the Groote Eylandt region. In collecting information from Indigenous motifs, the data will be interpreted by general art conventions, while the modern analogue pilot drawing survey will be analysed by an art convention formula. This will allow a theoretical parallel discussion on the understanding of subject matter and if it supports greater determining factors in art. In surveying 50 participants I will be comparing drawings that they have been drawn from a five-minute video of an animated Macassan *prau* vessel moving throughout the nearby Australian coastline (Kowlessar 2022). Created by Dr. Jarrad Kowlessar of Flinders University for the purpose of this survey the video was designed from Macassan *prau* pictures sourced throughout the internet (see Figure 9 on the next page).

Figure 9.The animated Macassan prau video used in the modern analogue survey, The video can be viewed here: https://drive.google.com/file/d/1b6ij1hjoPZM7s4F8FSXNDbJ2-NVFe0Fu/view?usp=sharing (source: Jarrad Kowlessar, Flinders University 2022).

7 Art Analysis

Mitchell (1994:13) stated in *Picture Theory* that he did not fully understand what pictures were and again, in Visual Methodologies, Rose (2001:1) also mentions that understanding *Visual Literacy* is still an exploratory process of a complex relationship between language and image in the literature and visual art discipline (Rose 2001). This gives the impression that art and images do not just have its own language and visual display but also must need an element of meaning to resonate, suggesting that the concept of what a picture means, is to what relationship it has with an observer. Moreso, it is seen as a connection by way of meaningful interpretation to an observer's subconscious (Rose 2001). This aspect explains that examining an image can be understood and engaged in different ways by different observers, supported by Hall (1997:9) who explains that these are all subject to forms of interpretation and, therefore, there is no right or wrong answer. Plausible justifications are still the subject of research, and our conceptions of their meaning are to the subject of change in the future.

Therefore, in analysing Macassan *prau* motifs I will be taking methodological elements from Rose (2001) *Visual Methodologies* which corresponds with Mamassian's (2008) paper. Firstly, looking at *auteur theory*, which derives from the concept of an artist portraying an image and the observer understanding it exactly as the artist intended it to be understood (Rose 2001:23). Combined with themes of *composition* to determine the purpose of the image and what is being depicted, to the

breakdown of components that when collated develop the image and theme explicitly (Rose 2001:33-39).

Rose (2001) discusses the importance of understanding art regarding *spatial organisation and volumes*, which Mamassian's (2008:2151) refers to as spatial scale and frequency; that is an understanding of object arrangement and image balance (see Art Conventions Chapter) (Rose 2001:40). Balance and spatial scale provide a difference in a picture which can give items closer a greater significance. Frequency refers to items linked to an object that should be also moving or moving together, for example the *Porterville Galleon* (see Other Contact Perspectives Chapter). Further, Rose (2001:40) states that, *static and dynamic* rhythm is used to convey either stillness or a sense of movement in the image. Greater use of fluid curves and directional forms for example, when depicting waves and wind create a sense of movement.

Following the natural placement of our eyes (from lower left upward to the right as we view the image) and focusing on the vanishing point of the horizon, also provides another clear indicator that the item is of a three-dimensional perspective or as Rose (2001:40) states, it is the *geometric perspective* of an image which provides a *dynamic rhythm* of an object moving (Rose 2001:40). When adding perspective and vanishing points from a square shape or curves at eye level supporting the convention of movement, is if the item is drawn with a form of three-dimensional prism

towards a point and even more so on a horizon will provide a disappearing effect (Rose 2001).

Figure removed due to copyright restriction

Figure 10. Three diagrams from Rose 2001 displaying art geometric perspective (vanishing point/ horizon) at eye level. A) Looking from an elevated level, b) One perspective point, and c) An example of two different perspective points (source: Visual Methodologies, 2001).

Geometric perspective used with *spatial scale* can be seen in the painting of Masaccio (holy trinity) Santa Maria Novella in Firenze 1427 [2] which is a known two-dimensional painting produced as a three-dimensional concept placed above the congregation suggesting that the observer's view was meant to be from below (Rose 2001:42).

Analysing the concept of logic configuration in *Visual Methodologies,* Rose (2001:44) discusses the elements that again provides the crosslinking of Mamassian's *spatial scale and frequency* which contributes to a large portion of a successful observer's angle of *visual idealism*. Rose (2001) explains the

2

The link to the Masaccio (holy trinity) Santa Maria Novella in Firenze 1427 (source: Wikipedia, https://en.wikipedia.org/wiki/Holy_Trinity_%28Masaccio%29, 2023).

theory of connecting the observer with the image at specific height dictated by the artist can interpret a more meaningful connection to the image. Furthermore, it allows the observer to comprehend the complete experience of the whole story of what the artist is trying to tell. Aligning these theories with *focalizers* allows the artist to place the observer where they would be most absorbed by the image by adding in objects, items, colour and tone that would not only connect the observer with the captured experience but, direct them to the best viewing angle position (Rose 2001:45). This is why Rembrandt paintings are considered to be close up portraits in which observers claim to connect with (Rose 2001:44).

7.1 WHY THESE ANALYSING TECHNIQUES?

Why am I using these techniques from the Renaissance on archaeological Indigenous rock art? I am using these analysing techniques because it uses overarching research that provides a systematic approach to an area that can be widely interpreted in many ways. This will allow archaeologists to apply analytical techniques to explore composition, static or still balance, spatial scale and frequency to deepen our understanding of the many forms of artwork from many different eras. These art conventions link to art analysing concepts of Rose (2012) *Visual Methodologies* as previously stated and provide a common systematic approach by looking through a different lens into art from an archaeological approach. This is the case even though this research is using techniques from Rose (2012), who discusses in depth theories about Renaissance artists and their work, just like the research

discussed in Art Conventions Chapter in this thesis, this study is providing a clear structured approach to analysing all types of painted, drawn, and petroglyphic rock art (Summers 1981, Rose 2001, Mamassian 2008).

There are, of course, considerations regarding the analysis of Indigenous rock art against non-rock art paintings, which provides limitations to the expectations of seeking explicit direction, or answers in this examination. More to the point, the difference in societal and human development over the last 359 years from the first identified Macassan prau motif of 1664 to the year 2023 (refer to early Macassan contact in this thesis) is disproportionately far beyond any explicit connection to a modern analogue study.

8 Analysing Formula

In developing a formula to interpret data from Macassan *prau* rock art motifs and surveyed participants I will provide a parallel comparative examination to assess if specific analysing features are prominent in multiple areas. These analysing concepts are:

1. Composition
2. Spatial Scale and Frequency
3. Static (SC) and Still Balance (SB)
4. Observer's Angle Perspective
5. Artistic Experience
6. Level of Connection to Sailing
7. Level of Connection to the Sea
8. Level of connection to subject knowledge

(Source: Summers 1981, Rose 2012 Visual Methodologies, Mamassian 2008 and author 2022).

These eight analysing components will create the formula for assessing survey *one* the prau drawing survey with the general public and survey *two* the re-examination assessment of the Macassan prau rock art motifs. This will allow the *prau* motif analysis to determine if trends are identified in multiple areas of the motif, creating a connection or theme. Using this systematic approach will allow data to be clearly and effectively interpreted to support the analysis results and to guide the parallel examination process,

whilst constructing a systematic formula for identifying watercraft art conventions.

Using a simple method of a 10-point scale of identifying the eight analysing concepts in each of the participants' drawings in the analogue drawing study, will provide data that can be displayed in graph form. These will be assigned a number with *one* being just recognisable and *10* highly recognisable and specifically determined. For instance, the concept of composition, where a drawing portrays clearly an identifiable *prau* but does not have clear *prau* concept lines, maybe placed as a four, while a complete motif with partitions of higher composition may be placed as an eight. In grading the participant's drawing with the analysing convention formula, they will also be assessed on the number of points that can be taken from the drawing conventions. For example, what elements make the vessel move? One point for the sail direction and luff, one point for wave action and one point for the angle or perspective of the vessel direction, totalling three points for *static or still balance* (Mamassian 2008).

In this process the examination of the *prau* rock art motifs will be discussed in conjunction with a photograph from Wonggo (1986), East Arnhem Land, *The Macassar Story*, Hercus and Sutton, which are photographic examples of Macassan *praus* (possibly the Hati Marege, per comms. Wesley 2023) (see Figure 1). This image will guide the interpretation of visually supporting the connection of sailing experience or boating experience from looking at the sail, mast, sheets (ropes) and additional items on the boat which are used

and are in action in the photograph. This will help support the understanding of the vessel's components and how this is represented in the *prau* motifs.

Figure 11. A photograph of Macassan prau under sail (Similar to the Haiti Marege) (date unknown (source: Wonggo, East Arnhem Land, The Macassar Story, Hercus and Sutton, www.multiculturalaustralia.edu.au, 2021).

9 Data Collection of Rock Art Images

This Chapter will focus on the interpretation, composition, static or still balance and, spatial scale and frequency from three Macassan *prau* rock art motifs (Mamassian 2008:2151). This will be undertaken as part of a parallel-study analysis, to understand the levels of art conventions which will provide a theoretical discussion in the interpretation of survey *two*.

9.1 COMPOSITION ANALYSIS OF PRAU MOTIF 1, FIGURE 12

I will be examining a photograph (Figure 12) taken by S. May (2013) from Malarrak in the Wellington range, northwest Arnhem Land, depicting a Macassan *prau* on the left painted in white and possibly a hybrid attempt of a lugger or schooner at a later time on the right with an x-ray style outlined in ochre (yellow) (Chaloupka 1996:137, Wesley et al. 2012:261, Taçon and May 2013:261). Chaloupka (1996) noted that the vessel painted in white resembles a *prau* featuring a southeast Asian style deck and a mast with a rolled-up sail with no crew visible on onboard. The other lugger vessel faces the opposite way in an ochre *x-ray* outline showing a bow sprit two shrouds or masts. In line with the picture painted by *Birritji Gumana* in 1966 (Figure 13), the white prau motif carries a similar frontal ornament probe of an arrow style shape anchor on the bow.

Figure removed due to copyright restriction

Figure 12. Macassan prau motif no.1. A rock art motif of an early Macassan Prau located at Malarrak, Wellington Range in northwest Arnhem land (source: S. May 2013).

Figure removed due to copyright restriction

Figure 13. The Birrikitji Gumana, 1966, Dhalwanju Clan (source: 1200h Museum of Australia 2013).

However, if you look closely at the prau motif Figure 12 it suggests that the sails are pictures of whales and were possibly painted before the boats, and

the boats were painted later incorporating them as a rolled up sail on a *prau* (Rose 2001, Mamassian 2008). Exploring closely, you can see an eye on the whale (sail) on the *prau*, and on the right end of the whale it is also suggesting that the curved lip holding the shroud (ochre outline) at the right end is a mouth. Furthermore, to support this argument the other sail on the far right with the mustard coloured x-ray lugger outline, resembles a humpback whale with its fins open wide with stripes through its body (Rose 2001, Mamassian 2008). Supporting interpretation is the point of the ochre shroud being added on the right lugger vessel at a later date, suggesting that the (white *prau*) artist came across two items that resembled *prau* sails but did not attempt to draw another *prau* beside it to incorporate the other sail (whale) (Mamassian 2008:2151).

This argument is also supported by the fact that humpback whales have known to visit annually and beach themselves around northeastern Arnhem Land and the rest of the western Northern Territory coastline (Northern Territory Government 2021:1). A further suggestion is that the ochre outline motif runs out of space on the wall and is depicted as being an afterthought or an add-on to another drawing (Mamassian 2008:2151).

Interestingly, when you look at the sails (whale), the first vessel on the right in white, corresponds very well to having the whale as a sail. However, ochre lugger style motif to the left has a different shape, suggesting that the whales (sails) were there before the second vessel which May (2013) confirms, as the ochre lining on the rock area is added later. This suggests

that there could have been two whales painted initially and then at a later stage one white *prau* was drawn with masts, then the mast and rigging were redone at the time of the second ochre lugger style vessel (May 2013:130).

9.2 SPATIAL SCALE AND FREQUENCY ANALYSIS OF PRAU MOTIF 1, FIGURE 12

The white Macassan *prau* motif measures 99cm in height and 102cm in width (Tacon and May 2013:130). In analysing the white Macassan prau the position of the motif on the wall provides an understanding that the artist had thought through the concept of the vessel, this can be determined by the size of the vessel and the space it takes up on the wall (spatial scale) without coming too close to the edge of the wall itself (Summers 1981, Mamassian 2008). This is also compared to the ochre lugger vessel that hangs over the corner edge of the wall. The artist may not have determined if the vessel would fit prior to starting the drawing of the vessel. Another consideration is that the artist of the ochre vessel and ochre overlines of the white *prau* motif may have visualised the vessel as an easy way of contributing to a larger overall collage and was not too concerned about placement of the ochre vessel in proximity to the corner edge, and more about the aesthetics of adding their own take on the collage. The spatial scale and frequency of the Macassan *prau* provides a balanced view to observer's angle from a profile position, however the bow of the *prau* is representing that there is some bowing with the vessel like it is damage or

turning, but more on this in static or still balance (Summers 1981, Rose 2001, Mamassian 2008).

9.3 STATIC OR STILL BALANCE ANALYSIS OF PRAU MOTIF 1, FIGURE 12

The concept of static (dynamic) and still balance comes from the theory from Mamassian (2008) and Rose (2012) who describes that creating a picture that is standing still and moving at the same time is a contradiction in the art drawing process. For instance, if the Macassan *prau* rock art image one Figure 12 (Taçon and May 2013) was moving during the time it was drawn the vessel had no motor, so there would have been a sail out or oarsmen out to make the vessel move. The likelihood of the vessel being underway is unlikely because there is no picture or drawing process that visualises movement. The picture insinuates that there is wash or water below the hull like it is floating on the water. The bow of the vessel, which portrays the bow ornament (Figure 12) as being damaged or hanging lower much lower than pictured in the drawing by Birritji Gumana in 1966 in Figure 13. Therefore, the interpretation of the Macassan *prau* is suggesting that, the artist had the concept of a vessel that was at rest in the water possibly with a damaged bow with a sail rolled up with no crew onboard (referencing Figure 11 Wonggo 2021).

Determining if this artist had experience with drawing or sailing or both is leading towards the vessel being a picture from an artist that could have taken information from a side profile of a seaside setting to remember and

recall, however this is not clear with this motif. The Macassan *prau* artist does show some skill in regarding spatial scale and frequency as there was no attempt by the artist to draw a second *prau* knowing they had another item that could be used for a sail, but would not fit in that part of the wall (if this was the case) (Mamassian 2008:2151). Furthermore, the creation of the Macassan *prau* in the mode that it was described as the drawing suggests, shows the whales from a creative aspect of an artist's imagination that incorporated design elements of what was already there with their recollection of the vessel (Summers 1981, Rose 2001, Mamassian 2008). This is also suggested by the ochre vessel artist that they also had some creative aspect of visualisation to incorporate not just overtones of ochre on the shrouds and lines (ropes for sails) but also include new ochre lines (ropes) to add more complete arrangement of controlling the *prau* sail (Tacon and May 2013). We also must consider further that the artist of the white prau motif may have not designed the drawing to incorporate the whales as sails or any other form of connection and it could have been the mere inspiration of recalling what the artist saw at the time sailing on the *praus,* remembering the whales at sea.

9.4 COMPOSITION ANALYSIS OF PRAU MOTIF 2, FIGURE 14

The next Macassan *prau* rock art image analysis will be taken from Groote Eylandt (see Figure 14) which is the largest island in the Gulf of Carpentaria (Anindilyakwa.com.au 2022). Linked by the same underwater connecting landscape as Arnhem land the area is also known for it's significant

Indigenous cultural heritage (see more on McCarthy et al. 2022). The Macassan *prau* analysis of Figure 14 will include the same format as the previous *prau* image examination.

Figure removed due to copyright restriction

Figure 14. Macassan prau Motif no.2. An Indigenous rock art motif of a Macassan prau motif. Groote Eylandt (source: https://anindilyakwa.com.au/preserving-culture/anthropology/ 2022).

The Macassan *prau* rock art composition details an x-ray style painting of a large Macassan trading vessel. The painting is in good to reasonable condition; however, this could be because the different artists that may have attempted painting parts at one time or another (Table. 1, on retouching, Frederick 1999). Depicting a similar bow to stern the painting shows 10

crew on board the vessel, nine on the deck and one on top of the sail towards the bow. The concept behind the *prau* painting is quite clear and the composition of the picture is identifiable as a watercraft vessel with the bow facing right and the stern left (Rose 2001, Mamassian 2008). Identifying features are displayed by a mast, sail, crew, two rudders, a bow sprit and six connecting lines (Figure 14). It has defined vertical hull lines identifying the stern with three and the bow with two, this is also substantiated by two external rudders at the stern. The bow is clearly identified by the bow sprit and is proportionally smaller to that of the stern portion of the hull (Summers 1981, Rose 2001, Mamassian 2008). Two circles are visible at the bow and stern; these could be ports or eyes to scare of unwelcome people, however this is not known. There are also lines drawn across the deck of the vessel which seem to be connected and are possibly additional to the vessel, however the representation could be that of furled up sails and booms laying fore and aft diagonally across the top of the boat, these items are in front of the aft sail lines and are behind the mast towards the bow (Wonggo 2021). This *prau* image is a clear connection of items that the items were temporarily placed on the deck. This is seen above in Figure 11 Wonggo 2021. These items may have been extra sails scrolled up, tents and other items need to live and fish abroad. In the *prau* image Figure 14 the crew are drawn in alternate colours seven white figures and three brown figures which are located on top of the cargo (striped) who apparently seem to be possibly waving. Overall, the

composition of the painting is recognisable as a large Macassan prau sailing vessel with 10 crew and possibly with sails furled on the deck (Rose 2001, Mamassian 2008).

9.5 SPATIAL SCALE AND FREQUENCY ANALYSIS OF PRAU MOTIF 2, FIGURE 14

The spatial scale and frequency to the observers' angle is very good (Rose 2001, Mamassian 2008). The area where the painting has been placed has been carefully assessed due to the nature of the rock face and the sloping surrounding rock features. The artist planned the size of the vessel quite accurately due to the sail just nudging the top of the arete above (Mamassian 2008). Even though the rudders are painted on sloping rock the concept of the scale of the painting has been executed as a premeditated understanding of what they were trying to conduct.

9.6 STATIC OR STILL BALANCE ANALYSIS OF PRAU MOTIF 2, FIGURE 14

While visually examining this painting, initially the painting looks a little off balance (Mamassian 2008). However, looking deeper into the composition of the painting it is because the painting is of a vessel sailing away and the bow is moving away (Rose 2001, Mamassian 2008). Confirmed by the angle of the hull drawn, the size and angle of the bow, the angle of the furled booms, the angle of the mast spreaders, the size of the sail at the bow to the aft, the angle of the people, and the fact that the rudders also conform to

the same angle makes it clear that there is meeting point of perspective (Summers 1981, Rose 2001, Mamassian 2008). This *vanishing point* of perspective was also detailed on many renaissance paintings that provided perspective of depth and balance providing dynamic balance, allowing the angle of observation to assimilate movement of an object (Mamassian 2008). There are a few areas that may dispute that the painting is displaying a moving vessel and, that is the size of the person on top of the sail, and the curling of the sail at the aft end of the boat. However, this is minimal when the hull size is descaling, and the rudders paths are also steering in the same direction creating a vanishing point (Rose 2001, Mamassian 2008).

The interpretation of this Macassan *prau* from Groote Eylandt is that the person had artistic experience and had painted many pictures before this one. The scale and the descaling into a perspective point is commendable in many ways. The drawing of the main connecting lines (ropes) shows that the artist may have some experience with boats. Most likely living on the Groote Eylandt and the nearby region the artist may have visually seen Macassan *praus* multiple seasons for many years (May et al. 2013). This isa very good example of an artist knowing their subject matter and recalling it well enough to paint it with a vanishing point (Summers 1981, Rose 2001, Mamassian 2008). The way the photograph has been taken of the *prau* rock art image in Figure 14, it has provided a relatively balance frontal profile view.

9.7 COMPOSITION ANALYSIS OF PRAU MOTIF 3, FIGURE 15

The next Macassan *prau* rock art paintings are also from the Groote Eylandt region as well and have similar resemblances to the previous Macassan prau painting discussed previously in figure 14. Identifying at least four Macassan *prau* paintings in figure 15 and as mentioned previously, the interpretation of this specific photograph is an observation rather than a concept with no critical interpretation due to the angle of the photograph and how it was taken.

Figure removed due to copyright restriction

Figure 15. Macassan prau Motif no.3. A wall of Multiple Macassan prau motifs-possibly five vessels from the Groote Eylandt region (source: https://www.pastmasters.net/groote-rock-art-2.html, 2022).

The top centre *prau* in Figure 15 with the white and red sail, and white hull will be analysed next, as there is one diagonally lower to the left and another two *praus* lower to the right. The Macassan prau motif consists of mostly red and white pigment outlines on the vessel and carries white and red sails, however, there distinguished outlines of ochre over parts of the

motif that do not correspond with the overall colourisation concept of the motif (Rose 2001, Mamassian 2008). These areas of the mast display a three-spar style construction all stemming up to the front of the sail from the bow area, the middle of the sail furled boom (Wonggo 2021), and connecting ropes above the people all display characteristics of re-touching in ochre (Frederick 1999). The concept behind that interpretation is understood by one, looking at a *D'Stretch* version of the same photograph of the *prau* motif that shows the mast at the bow is drawn over from white to ochre pigment (Refer to https://www.pastmasters.net/groote-rock-art-2.html). This is apparent in the half painted sailed furled boom also of ochre, which does not align with rest of coloured elements of this picture. There are more elements, like an ochre coloured anchor drawn at the bow of the vessel which looks like an add-on possibly at the same time of adding the other ochre elements (Frederick 1999). The last descriptive comment is against the painted red streak between two connecting ropes to the rear of the sail, which looks like a hoisting of a sail if anything, otherwise it looks out of place (Figure 15). This is substantiated by aft silhouette of a person with two hands actioning on the connecting ropes at the rear of the sail.

The composition shows that this *prau* is also well defined by colorising of the vessel's areas, sails, people (crew) and hull features (Rose 2001, Mamassian 2008). This *prau* has good composition and displays a strong composition of identification of a sailing vessel with nine persons on deck and possibly one other on the aft which is not recognisable as a figure and a

further figure with an elongated scarf or hat standing on top of the sail (Rose 2001, Mamassian 2008). There is also possibly one figure on the curvature of the transom aft area where the rope connecting the sail comes aft, while there is one other identifiable figure on the lower deck under the furled sail boom and lastly there is a frame style structure at that same deck level. There are two external rudders on the motif and there are four white lines representing a sail furled boom both highly similar to Figure 14 *prau* motif.

The composition shows an understanding of the vessels design elements including connecting lines (ropes) sail curvature and wind direction (Rose 2001, Mamassian 2008). The composition allows for good representation of the concept of a sailing vessel that carries the same protruding style of cargo (possibly a sail furled boom) on the deck (Wonggo 2021). The hull has very similar features from the *prau* in figure 14 painting in which it portrays eyes or portholes on each end of the bow and stern, however this prau motif also has lines detailing and defining the hull area, possibly outlining cargo and internal arrangements of the vessel (Figure 15) (Bigourdan and McCarthy 2007:3; Burningham 1994:145; Chaloupka 1996:132; Roberts 2004:41).

9.8 SPATIAL FREQUENCY AND SCALE ANALYSIS OF PRAU MOTIF 3, FIGURE 15

The spatial frequency and scale of *prau* rock art image Figure 15 is reasonably balanced due to the nature of the sail, the hull and the sailed

furled boom (Rose 2001, Mamassian 2008). The ambiguities of the angle of Figure 15 motif creates the concept of rough seas in which the vessel may have been specifically designed to enact wave action presenting static balance (Rose 2001, Mamassian 2008). The spatial scale does tend to wander through a crease in the rock suggesting placement may have been after the Macassan *prau* motif below Figure 14 *prau* was painted (Rose 2001, Mamassian 2008). Which if this concept is correct it is well painted to include the rudders in the motif without interfering with the motif below (Rose 2001, Mamassian 2008). The scaled balance is relative to the picture and presents as well balanced, however there is one figure in the middle top of the sail which disrupts the frequency of the spatial scale creating an allusion of enhancement by the size and the length of the figure (Rose 2001, Mamassian 2008). It is hard to make a suitable conclusion on whether the frequency of the vessel is balanced due to the photograph, but the overall scale is represented well (Rose 2001, Mamassian 2008).

9.9 STATIC OR STILL BALANCE ANALYSIS OF PRAU MOTIF 3, FIGURE 15

This detail and organisation of bulkhead arrangement and internal fit-out gives the observer the concept that the artist may have known the design of the inside of this vessel (Roberts 2004:27). The top of the hull below the deck divides into six boxes outlined by a ladder style grid and this also corresponds with Figure 14 prau motif that also shows a dividing

compartmental design of elements, but of only five rather than six in this image.

10 Survey 2 Data Collection

In undertaking survey two the *prau* drawing the study I received 50 complete surveys of one drawing drawn from the Macassan *prau* animated video (J. Kowlessar 2021). This provided the study with six focus areas all having different types of occupational and life experience. The cohort of the 50 survey 2 participants were managed selectively from the general public with a focus on persons who were artists and had connections to boats and the sea. I also factored in persons who were reputable people that could be trusted to take the survey seriously. In total received approximately 50 volunteer participants colleagues, friends, family and associates. The majority of the surveys were undertaken in person and to get the 50 in total I also emailed surveys out to participants. Approximately 80 surveys were given out in total.

In surveying the participants, they were allocated levels of experience and expertise including occupation which provided a basis towards analysing elements that may allude to distinguished artistic traits, creativity and or life experience. The area of occupation was used in conjunction with the focus areas listed on the questionnaire to obtain clarity over specific drawing differences, area of expertise and other attributes that may add to the effective or ineffective ability of drawing the Macassan *prau* animated vessel. The areas that they will be assessed against in the Macassan *prau* drawings from the five-minute animated video are listed below with the total of participants found for each group.

10.1 SURVEY 2 RANKING TECHNIQUE

Survey two will be using the same eight analysing components from the motif examination, to recap these are:

1. Composition
2. Spatial Scale and Frequency
3. Static (SC) and Still Balance (SB)
4. Observer's Angle Perspective
5. Artistic Experience
6. Level of Connection to Sailing
7. Level of Connection to the Sea
8. Level of connection to subject knowledge

(Summers 1981, Rose 2001, Mamassian 2008)

Using a simple method of a 10-point scale of identifying the eight analysing concepts in each of the participants' drawings in the *prau* drawing survey will provide data that can be displayed in graph form. These will be assigned a number with *one* being just recognisable and *10* highly recognisable and specifically determined. For instance, the concept of composition, where a drawing portrays clearly an identifiable *prau* but does not have clear *prau* concept lines, will be placed as a four, while a complete motif with partitions of higher composition will be an eight. In grading the participant's drawing with the analysing convention formula, they will also be assessed on the number of points that can be taken from the drawing conventions. For example, what elements make the vessel move? One point for the sail direction and luff, one point for wave action and one point for

the angle or perspective of the vessel direction, totalling three points for *static or still balance* (Mamassian 2008).

11 Results

In this Chapter the quantitative results of survey one is presented in the tables and graphs below showing key differences in specific areas. The first table displays the total number of participants in each category (Table 2). Following by a spread sheet (Table 3) and a bar graph (Figure 16) which are tallied and displayed as raw data. The second bar graph (Figure 17) displays data normalised data in mean and median for 13 participants which was the highest number of participants the study received in *living by the coast* category, group 5.

In determining each of the characteristics set by the six categorised groups the study is interpreting the drawing conventions formula on each drawing element, and then by averaging the total drawing attributes of each group. The combined results of the dataset from the participants surveyed are provided in Table 2 below. This shows the raw data collected from the varying levels of participants for each focus group, and this is displayed by the total number of points scored out of 10 for each analysing component, which has a combined total of 80. This is represented in a normalised graph in Figure 18.

Table 1. A table of 50 surveyed participants aligned in 6 categorised group areas of occupation and experience with drawing and watercraft (source: Author 2023).

1. Art	9	3 Boating or Sailing	5	5. Living by the Coast	13
2. Drawing Boats	10	4. Maritime Industry	4	6. None of the Above	9

Table 2. An Excel Spread Sheet showing the raw data of the analogue drawing Survey 2 and the eight analysing component levels of the analysis. (Source: author, excel, 2023).

Modern Macassan Prau Analogue Survey Analysing Formula						
Analysing Component			*Drawings from animated prau video*			
Focus Grou	1. Artist	2. Drawing Boats	3. Sailing or Boatin	4. Maritime Experie	5. Living By The Co	6. None of the above
Composition	52	23	40	20	66	23
Spatial Scale and Frequency	56	28	47	25	69	25
Static (SC) or Still Balance (SB)	45	21	29	13	56	20
Observers Angle (Perspective)	42	29	38	20	53	25
Identifiable Themes						
Artistic Style	53	30	42	17	65	25
Level Connection to Sailing	38	24	35	21	60	18
Level of Connection to the Sea	41	24	37	18	59	12
Level of Connection to Subject K	32	26	41	17	37	26
Total	359	205	309	151	465	174
Number of Participants per Focu	9	5	10	4	13	9
Average	44.88	25.63	38.63	18.88	58.13	21.75
Median	43.50	25.00	39.00	19.00	59.50	24.00
Average as Percentage per 13 pax	64.82	66.63	50.21	61.34	58.13	31.42
Median as Percentage per 13 pax	62.83	65.00	50.70	61.75	59.50	34.67

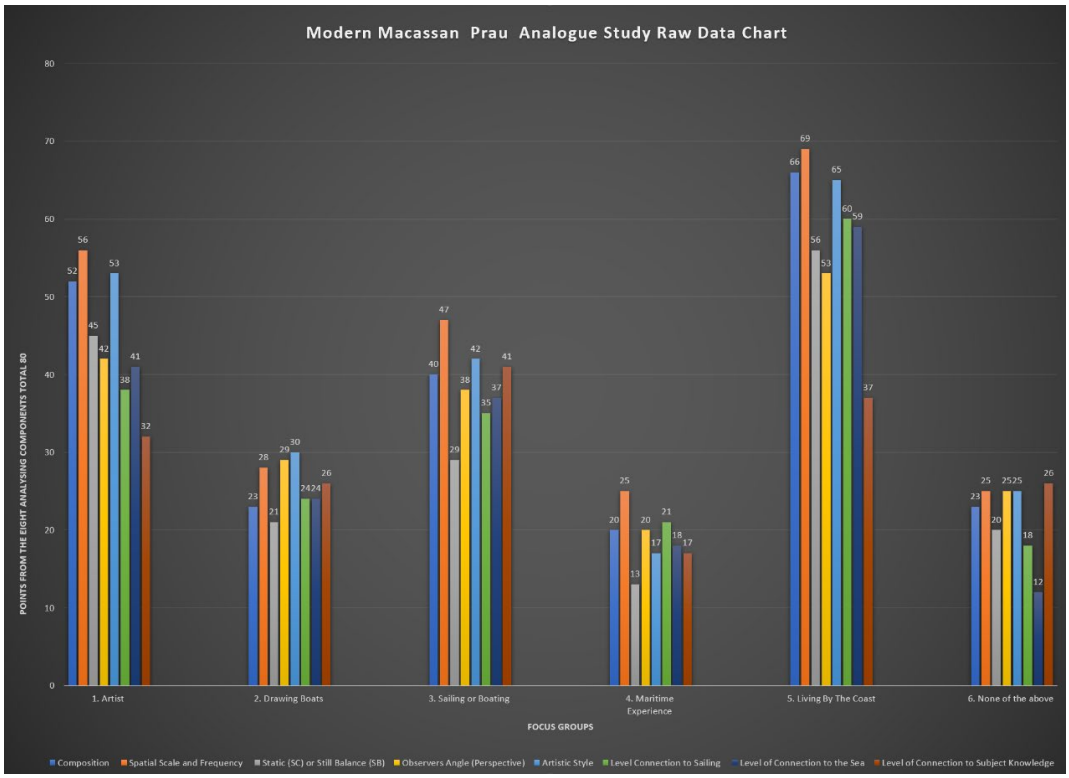

Figure 16. A bar graph above showing the raw dataset of Survey 2 prau drawings, and the connection they have in visual similarities from 50 participant results in total (Source: author, excel, 2023).

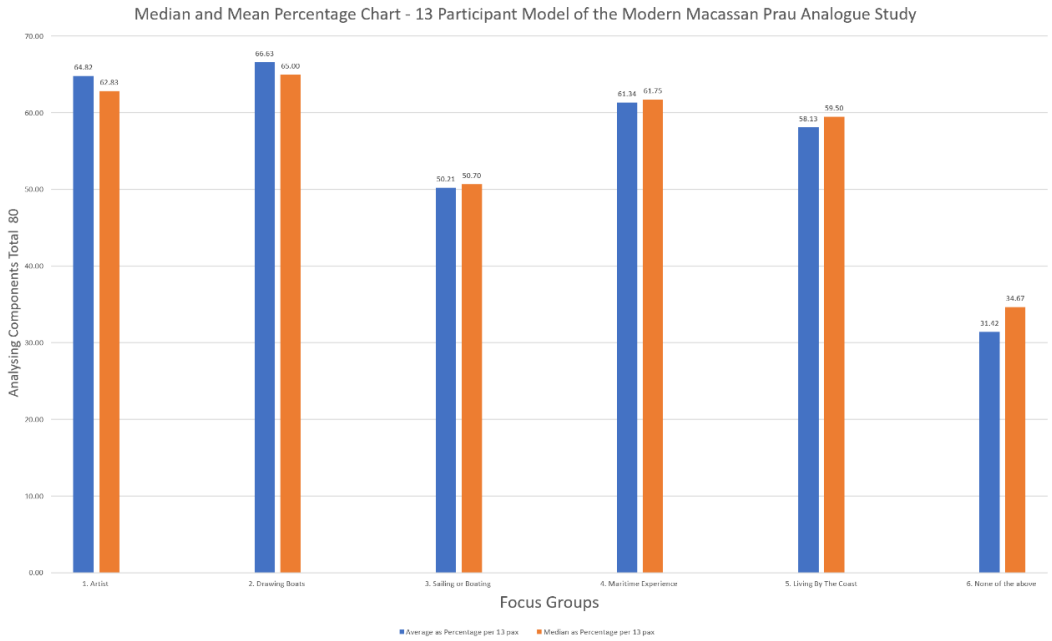

Figure 17. A bar graph above showing mean and median of the prau drawing Survey 2 study presented with 13 participants in each focus group. This bar graph highlights the dramatic difference in sailing and boating experience focus group when compared to the artist and drawing boats focus groups (Source: author, excel, 2023).

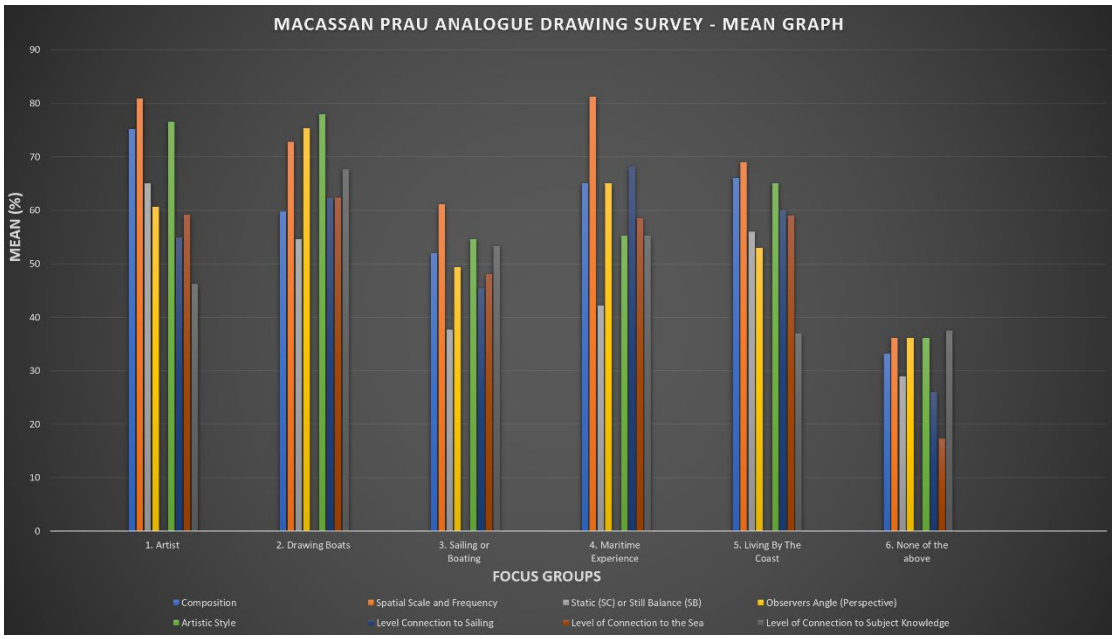

Figure 18. A graph showing the mean of the prau drawing Survey 2 as a normalised percentage based calculated at 13 participants across each group. (Source: Author Excel, 2023).

11.1 RESULTS OVERVIEW

Figure 17 above shows a bar graph of raw data that provides a visual representation of each component and its relativity to its categorised group. For instance, the relationship between composition and spatial scale and frequency is in all groups relative. Compared to the large visual differences of subject knowledge displayed in group *none of the above* compared to *living by the coast*. The results go even further when analysing Figure 18, which is a bar graph displaying the totals of the animated analogue survey normalised to an equal number of 13 participants in each group showing a mean and median. The difference in results is that the group *artist* and *drawing boats* has a higher mean than median than all the other groups.

The results of the dataset for the prau survey one study were interpreted as *artist* and *drawing boats* influence in all major areas of the analysis. The total average percentage figures for the *drawing boats* focus group were 66.63%. The second being the *artists* with 64.82%, third *maritime industry* with 61.34%, fourth *living by the coast* with 58.13%, *sailing and boating* fifth with 50.21%, and sixth *none of the above* with 31.42%.

Due to the *mean* being influence by the number of participants undertaking the survey, there was a need to normalise the data and calculate an average percentage score for the participants in each of the six categorised groups. Therefore, the number of participants were evenly evaluated by the maximum number of participants that undertook the survey in one group

(13 in group 5 *living by the coast*), thus providing an equal process in analysing and interpreting the dataset.

Understanding the concept of subject knowledge was limited to *maritime industry*, *drawing boats* and, *sailing and boating* groups. However, this concept was overshadowed by the focus group of *artists'* creativity and spatial frequency (Mamassian 2008), in that the artists drew what they viewed in a very short five minute timeframe. Looking at the focus group *artists'* drawings against focus group *none of the above* the element of the spatial scale is visibly different. furthermore, the unexpected major element that was present in most of the focus group *living by the coast* was the added elements of birds, palm trees, beach settings and landscapes which will be discussed in interpretation and discussion in the next Chapter.

12 Interpretation and Discussion

12.1 COMPOSITION

Out of 50 drawing surveys undertaken the composition (Rose 2001, Mamassian 2008) *mean* was considered moderate to high in quality with strong composition features. This was impressive considering the time period of five minutes to draw the animated Macassan *prau* vessel. The focus group of *maritime industry* was surprisingly high due the nature of professionals in a marine or maritime industry that neither saw themselves as artists or sailors. Focus group *artist* and *drawing boats* was next, then follow closely by *living by the coast* focus group which unexpectedly came in with a higher overall composition due to the extra surrounding features.

12.2 SPATIAL SCALE AND FREQUENCY

Highest ranking of spatial scale and frequency (Rose 2001, Mamassian 2008) went to the focus group *maritime experience,* closely second by *artist*, *drawing boats* and then *living by the coast*. The busyness of the picture was more directed to *artists* and *living by the coast*, however when balancing these conventions off with spatial arrangement, *drawing boats* had a more balanced viewing angle of the vessel without the coastal surroundings.

12.3 STATIC OR STILL BALANCE

In analysing static or still balance (Mamassian 2008) the *artist* focus group was the highest ranked in using the dynamic convention to make the

picture move by introducing multiple elements to assist the artists' ability to make the vessel move (Mamassian 2008). The second most prominent of the focus groups to achieve this was surprisingly *living by the coast*. These items included curved sails, water movement, sky scape and birds, and motioned landscape (Rose:40 2001).

12.4 OBSERVERS ANGLE (PERSPECTIVE)

The observer's perspective was highest ranked by the *drawing boats* focus group who provided the most accurate view of perspective and observers angle which corresponds to the angle(s) taken from the animated video. This was followed by the *maritime experience, artists* and then the *living by the coast* focus group. In this calculation the prominent protruding score was noticeably different with drawing boats at 75.40% and maritime experience second with 65%. There were many drawings that showed multiple angles of perspective due to the fact that the task was to draw a moving vessel and many of the participants were not classed as drawers.

12.5 IDENTIFIABLE THEMES OF ARTISTIC STYLE

Most of the focus groups were identified by their drawings retrospectively. The *artists* were dramatized with an emphasis of extra items surrounding the vessel that made their drawings visually appealing with the majority containing multiple elements of dynamic balance (movement) (Rose:40 2001). The group *drawing boats* mostly focused on the boat itself with less surroundings and less composition and dramatization. The *living by the*

coast group was much more dramatized than *drawing boats* group but less than *artists*. The next groups were *maritime industry* and, *sailing and boating* in which the participants drawing elements gradually declined linking some of them into the group *none of the above.* Having less connection in artistic experience, sailing and or living by the coast visible aspects in some of the participants drawing arrangements they were still intriguing. However, *maritime industry* had specific notable areas that increased the data dramatically.

12.6 LEVEL OF CONNECTION TO SAILING AND THE SEA

Identifying the level of connection to sailing was limited. In making a decision on any of the 50 participants the study would be hard pressed to identify the ones with a connection to sailing, however, identifying drawings that present a connection to the sea would possibly lead to the drawer who included extended aspects of seascape, surrounding skyscapes and birds. Moreover, this is only after the fact that the survey has a guided notion of showing how the group *living by the coast* observes the outlook of the picture from there observation.

12.7 LEVEL OF CONNECTION TO SUBJECT KNOWLEDGE

The level of connection to subject knowledge was directed towards *drawing boats, maritime industry* and *boating or sailing* experience, but these focus groups were not the clear indicators of displaying the subject matter in their

drawings. The group *drawing boats* was expected to precede the other focus groups, but this was not the case, because the *artist's* group had the same amount of data points as the *drawing boat's* group, and this may have been influenced by the artists's more prominent drawing ability and speed. Furthermore, artists also included much more added features like palm trees, seascapes in their drawings.

12.8 SIGNIFICANT OBSERVATIONS

The results of the data from the *prau* drawing survey two was surprisingly interesting. Even though the concepts of art conventions and styles are widely interpreted, the results provided a spectrum of archaeological analysis. The concept of analysing participants drawings from six categorised groups along with six basic categorized influential concepts created a formula for different drawing styles that assimilated not just the vessel they were asked to draw, but also other features that form the context for the vessel including palm trees, birds, wave action and landscapes and seascapes. Therefore, the consideration of specific boundaries of what the participants are asked to draw is critical to the result being analysed. In this study more than half of participants wanted guiding of what to include in the drawing (per comms participant to author, 2022). In the introduction of the survey I mentioned the boat is the focus but you can include whatever you want, knowing that inclusions would support the convention

of static or dynamic movement, perspective to the observers angle (Summers 1981, Rose 2001, Mamassian 2008).

The statistical analysis showed that the most recognisable of the *prau* drawings came from the *drawing boats* then *artists* drawings which means that the knowledge in artistic experience is key. However, the most significant difference came from the focus group *living by the coast*. Many participants from this group drew very artistic and detailed drawings following the concept of motion (static or still balance; Mamassian 2008), which included elements of the vessel that would indicate movement. The *living by the coast* focus group also produced the most wave or sea action around the boat which also included horizons, birds, and other coastal features.

Under close examination, some of the trends of the group *living by the coast* participants provided subjective themes, as there were many participants in this survey that may have chosen to move to the coast for visual gratification, and this may explain the additional features that they drew in their survey drawings. However, this hypothesis is not tested in this study.

The most significant result came from participant number 24 who provided a drawing with the same bow angle as the motif in Figure 12 (S. May 2011). This motif shows the bow sprit of the Macassan vessel pointing down as if it was damaged. Moreso, the survey participant drew a very good representation to the vessel used in the *prau* animation for survey one. This

participant (no.24) had no connection to any of the five categorized focus groups which puts the participant in category six 'none of the above' having no connection to the sea, boats and sailing, maritime or drawing. Out of approximately 80 surveys given out, 50 surveys were undertaken, and this was the only participant who drew the bow sprit on a down turned angle. After asking the participant why they draw it that way, the participant replied, 'because I could not remember which way it went (per coms. participant no.24 2022).' Not placing too much emphasis on the similarities of the Indigenous drawn *prau* motif of Figure 11 and the participant no.24 drawing; it is more likely a coincidence rather than a theory. However, the rock art motifs of northwest Arnhem Land were produced in land and the artists may have come across discrepancies in their recollection of early vessel sightings in a similar manner to participant no.24, who was viewing the pictures for the first time. Furthermore, participant no.37 an artist who has experience in drawing boats mentioned that viewing vessels and drawing them exactly is only developed by experience, especially when having to draw them from memory (per comms. participant no.37 2023).

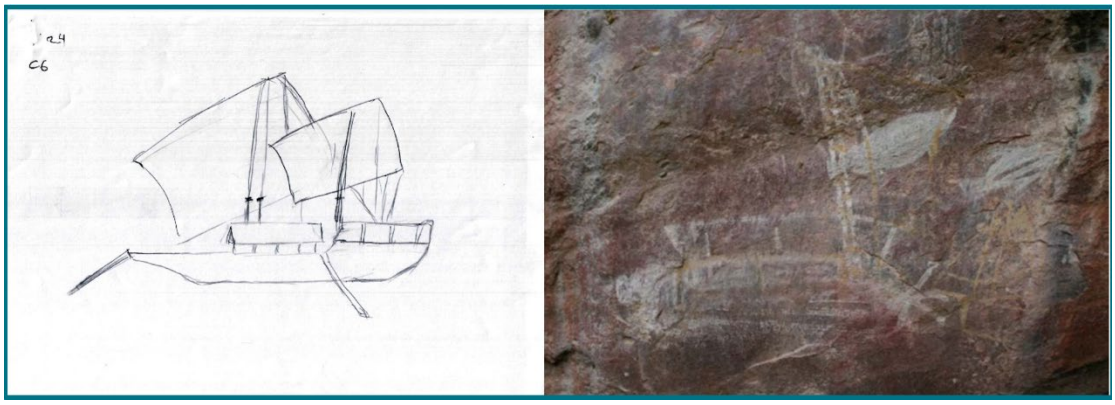

Figure 19. Participant number 24 drawing of a Macassan prau from the survey 2, 2023 (source: photo author 2023). On the right the Macassan prau motif as seen in Figure 12. A rock art motif of an early Macassan Prau located at Malarrak, Wellington Range in northwest Arnhem land, with the pulpit or anchor drawn down at the bow (source: Right: Author 2023, Left: S. May 2013).

Another significant observation of participant no.24's drawing was that it indicated the participant was quite observant and drew similar details when compared to the focus group *boating and sailing* and *living by the coast*. This is reinforced when you consider, the collars on each mast present on the Macassan *prau* animation was only drawn by a small number of participants, four; of those were from the focus group *living by the coast,* one from *boating or sailing, one from maritime industry* and another two including participant from *none of the above*. Participant no.24 also mentioned that they classed themselves as not a drawer or someone who has anything to do with boats or the sea. Taking data from no.24, no.9 and no.3 occupations details showing that they were from occupational areas that require a good memory, led to the conclusion that they have a very active well-trained memory.

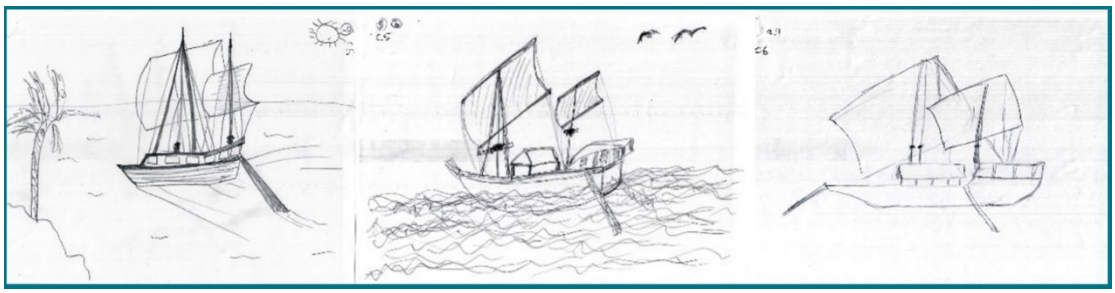

Figure 20. From left to right. Three participant's drawings from 50 surveys undertaken, number no.9, and no.3 who were in focus group 'living by the coast' and no.24 in focus group 'none of the above' with the connection of collars on the masts like on the analogue Macassan prau survey animation. Connected by the participants occupation from the same industry (source: author 2023).

Another striking observation from the results of the *prau* animated survey was that the group *drawing boats* were highly similar to the group *artist*, which made distinguishing differing elements extremely difficult. The study indicates it was because of the timeframe and style of the survey that encouraged the participants to draw from memory at a pace that would allow them to finish within five-minutes, and this may have placed more of an emphasis on not necessarily knowing what items were, but just drawing what they could remember seeing. This provoked theories, of participants not drawing shrouds or stays effectively creating issues in determining which focus group was the more accurate group of drawers.

This also introduces the question of what makes the participant a boat drawer rather than an artist. This was a key question to the study of participants and if they had drawn more than two to three boats, in this survey they were likely to be placed into the *drawing boats* group, rather than an artist who has no boat drawing experience at all. There were many

participants that tick multiple boxes and that's why this study was directed at people that could be categorised according to their occupation as well. On the other hand, many participants who tick the category *living by the coast* may have other external influences I was unaware of that may have dictated the style of drawing that they delivered in the *prau* survey (See Appendix for survey 1 participant information sheet). For instance, this was noticeable with participants who were categorised as artists but also had sailing experience but had not drawn a boat before. I created the category *maritime industry* for maritime archaeologists, professional mariners and seafarers, and port workers were placed in knowing that after the initial conversation with participants that there was a need for this category (per coms. participant no.1 2023).

12.9 PARTICIPANT'S LEVEL OF KNOWLEDGE OF THE SUBJECT MATTER

The participant's level of knowledge of the subject matter of the *prau* drawing survey 2 was primarily limited to maritime industry, sailing and boating experience, and drawing boats, under close examination, was not distinctive enough to make a plausible argument either way. This would be a valid area for further research. The exception, however, was that the *artists* were too similar to the *drawing boats*, *maritime industry* or *boating and sailing experience* focus groups who did not provide enough data points to pin down a clear definitive difference for this area.

The level of subject matter was noticeable in many other areas which signified sail direction rudder configuration; for example, two rudders seen under the water on profile angles which only one would be visible above the waterline in the animation. The exception was that the majority of the *none of the above* focus group had lesser artistic conventions applied and this provided less details in the analysing components which is displayed on the normalised data graph in Figure 17 and 18.

13 Conclusion

In conclusion, this thesis provides a pilot study to test a new method for archaeological analysis that focusses on the measurement of a person's artistic drawing ability and how this can be used in the analysis of rock art. By undertaking a modern drawing study this paper explored art conventions and styles from multiple eras that could influence an archaeological analysis on the re-examination of Indigenous Macassan *prau* rock art motifs in northwest Arnhem Land and Groote Eylandt regions from Australia's Top End. Providing an overview of the elements that influenced rock art and why it was created has provided an in-depth discussion that explores who may have been the primary painters of the Macassan *praus* and what subject knowledge they had. Furthermore, did they have experience and/or talent as an artist, sailing, or boating experience or none of the above. Finally, to what extent could these different skill sets influence depictions of these vessels in rock art during the Macassan trading period.

Examining the Indigenous Macassan *prau* motifs provided an effective perspective in analysing Indigenous motifs. By breaking apart components of art conventions, it was easier to see what would be analysed on the *prau* drawing survey. Furthermore, the archaeological context must be taken into account because the Indigenous motifs examined in this thesis were painted approximately 350 years ago (Taçon et al. 2010:1, May et al. 2021:127) and provide archaeological insight into the avenues of communication

throughout the Indigenous community during the Macassan trepang trading era.

The interpretation of the Macassan *prau* motifs in figures 12, 14 and 15 concluded that the rock art artists carefully planned the methods and materials to create the rock art painted motifs. This supports the interpretation that the artists knew what they were going to paint and thought through the process to achieve quality in the pictures. This was even more so evident with the artwork from the Groote Eylandt region, which portrays a style of artwork that is constantly exhibited throughout the region and maintained exceptionally well. Furthermore, the study suggests that the artist may often have been a bystander throughout the Macassan trepang trading era viewing the *praus* coming and going throughout the seasons from the Groote Eylandt region. The level of technological awareness behind the Indigenous paintings of the Macassan *praus* in this study is unclear, however there are multiple interpretations of art convention that suggest the motifs were thoroughly planned. Research suggests that the Indigenous community had a lot more integration with trepang fishers as highlighted in the Literature Review Chapter in this thesis.

The results of the animated survey showed that artistic ability in drawing boats was the number one key to developing a concise picture, beyond that the experience which a person gains from drawing and painting is particularly evident when identifying key components of subject matter.

Visible aspects of dramatization in *prau* drawings completed by the *artist* group provided elements of confusion suggesting that greater knowledge of the subject matter in their paintings, which could be mis-interpreted. Art convention theories taken from Rose 2001 and Mamassian 2008 in the conventions of visual art, provide aspects of deciphering elements that show the picture as a complete story which the observer can connect with.

The creativity of sailors and artists can be somewhat pigeonholed by theories because as shown in this study, people with a good memory and a creative side could provide a drawing that would confuse some of the most experienced researchers in evaluating an artist's subject knowledge. Some of the *prau* survey participants were creative even if they did not class themselves as artists. This shone through in some aspects of their visual art, which made the interpretation all the more difficult. Who knows if the Indigenous artists painted their rock art throughout the early contact period within a five-minute time period, which was a challenging way for the participants. However, it may have been one of the few times that Indigenous painters had seen a Macassan *prau* before just like the 50 people that participated in the *prau* drawing survey *two* study.

The hypothesis in this thesis provided considerable connecting analytical data which allowed the subjects to be interpreted in a way that they could be assessed against each other for an effective outcome. The most recognizable connection was participant no.24 drawing with the turned down bow sprit. This surprise highlighted an element in this study that

shows that experimental archaeology can sometimes produce results beyond the expectations of the study.

This thesis provides a theory for discussion and interpretation of Indigenous rock art not just in Australia but in the rest of the world and highlights significant characteristics that can be challenged with experimental archaeology and provides analytical data of art conventions towards the possibility of assessing rock art motifs in a modern study.

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15 Appendix

a) Survey 2 Information and Questionnaire Sheet

Macassan Prau (Perahu) Modern Analogue Drawing Study

David Zuccolin, Masters of Maritime Archaeology, Flinders University

To undertake this study, we need your consent.

The data that you provide will be used anonymously in a Flinders University Masters in Maritime Archaeology thesis and any publications spanning out of it for analysis of art conventions and styles.

Consent is required for the use of your data to categorise drawing similarities of contemporary people's artistic representations of Macassan Prau in comparison with Rock Art that are not be apparent to the human eye. This involves analysing elements of composition, perspective, movement, technological detail and artistic style. The data will also be categorised by Machine Learning software; however this is not the main focus of interpretation and will only be an explorative discussion only.

Your anonymous drawing and your 'connection with sea and boats' (i.e. through your occupation) short survey, as part of this data collection, will be used as part of the analysis, discussion and interpretation phase of this Masters thesis project.

WHAT IS YOUR BROAD AREA OF OCCUPATION:

DO YOU HAVE ANY EXPERIENCE WITH – (tick all applicable)

ART ☐ **DRAWING BOATS** ☐ **LIVING BY THE COAST** ☐

BOATING OR SAILING ☐ **MARITIME INDUSTRY** ☐ **NONE OF THE ABOVE** ☐

The aim of this study is to focus on the participants experience with the subject matter and how this determines their drawings' characteristics. The results of the machine learning process will lead the discussion on similarities of drawing boats depending on your 'connection with sea and boats'.

In drawing conclusions, we hope to identify art conventions and style characteristics to develop a wider understanding of maritime archaeology watercraft images.

Exercise: Please turn over this sheet and draw a Macassan prau for five minutes from the video provided.

If you would like more information about this study contact David Zuccolin via email zucc000@flinders.edu.au, Flinders University, SA.

This thesis is supervised by Dr Ania Kotarba-Morley (Maritime Archaeology) at Flinders University and co-supervised by Daryl Wesley (Indigenous Rock Art). Dr Jarrad Kowlessar thesis advisor.

This research has been approved by Flinders University's Human Research Ethics Committee (Project ID 5619).

15.1.1.1

b) Human ethics information and consent forms – HREC (Human Research Ethics Committee) Certified

PARTICIPANT INFORMATION SHEET AND CONSENT FORM

Macassan Prau Analogue Masters Thesis Study

Chief Investigator
Supervisor: Dr. A Kortaba-Morley
College of Humanities, Arts and Social Sciences
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Tel: 08 8201 7900

Co-Investigator
Dr. Daryl Wesley
College of Humanities, Arts and Social Sciences
Flinders University
Tel: 08 8201 7900

Supervisor Advisor
Dr. Jarrad Kowlessar
College of Humanities, Arts and Social Sciences
Flinders University
Tel: 08 8201 7900

My name is David Zuccolin, and I am a Flinders University Masters student. I am undertaking this research as part of my degree. For further information, you are more than welcome to contact my supervisor. Her details are listed above.

Description of the study
This project will investigate art conventions in rock art. This project is supported by Flinders University, College of Humanities, Arts and Social Sciences.

Purpose of the study
This project aims to find out more knowledge about rock artist and why they painted particular styles of paintings.

Benefits of the study
The sharing of your experiences will help to collate information to discuss experiences behind an artist's interpretation of a captured image they have drawn.

Participant involvement and potential risks
If you agree to participate in the research study, you will be asked to:

- Draw a boat for 5 Minutes, that you will have previewed for 5 Minutes

The exercise will take approximately 10 minutes and participation is entirely voluntary. The information provided will be used in a masters thesis for discussion and interpretation of art conventions and drawing styles.

The researchers do not expect the questions to cause any harm or discomfort to you. However, if you experience feelings of distress as a result of participation in this study, please let the research team know immediately. You can also contact the following services for support:

- Lifeline – 13 11 14, www.lifeline.org.au
- Beyond Blue – 1300 22 4636, www.beyondblue.org.au

Withdrawal Rights
You may decline to take part in this research study. If you decide to take part and later change your mind, you may, withdraw at any time without providing an explanation. Any data collected up to the point of your withdrawal will be securely destroyed.

Confidentiality and Privacy
Only researchers listed on this form have access to the individual information provided by you. Privacy and confidentiality will be assured at all times.

Data Storage
The information collected may be stored securely on a password protected computer and/or Flinders University server throughout the study. Any identifiable data will be de-identified for data storage purposes unless indicated otherwise. All data will be securely transferred to and stored at Flinders University for 12 months after publication of the results. Following the required data storage period, all data will be securely destroyed according to university protocols.

How will I receive feedback?
On project completion, a copy of this thesis is available to all participants via email from the supervisor listed above.

Ethics Committee Approval
The project has been approved by Flinders University's Human Research Ethics Committee (Project ID 5691).

Queries and Concerns
Queries or concerns regarding the research can be directed to the research team. If you have any complaints or reservations about the ethical conduct of this study, you may contact the Flinders University's Research Ethics & Compliance Office team via telephone 08 8201 2543 or email human.researchethics@flinders.edu.au.

Thank you for taking the time to read this information sheet which is yours to keep. If you accept our invitation to be involved, please sign the enclosed Consent Form.

CONSENT FORM

Consent Statement

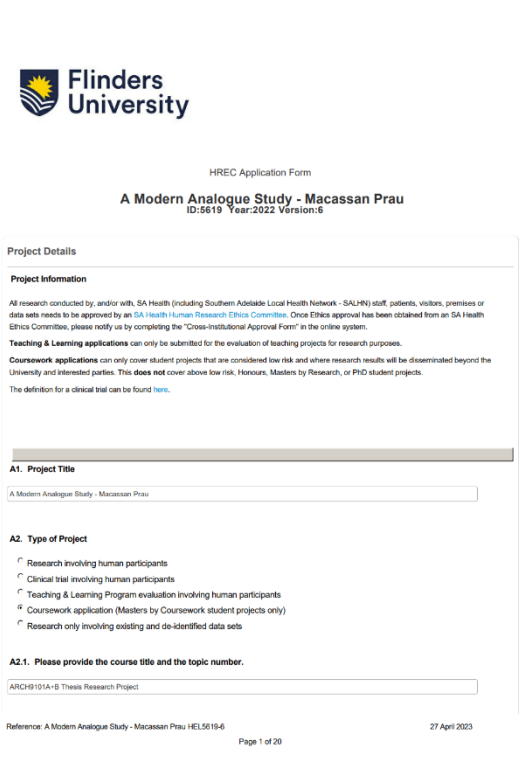
- ☐ I have read and understood the information about the research, and I understand I am being asked to provide informed consent to participate in this research study. I understand that I can contact the research team if I have further questions about this research study.
- ☐ I am not aware of any condition that would prevent my participation, and I agree to participate in this project.
- ☐ I understand that I am free to withdraw at any time during the study.
- ☐ I understand that I can contact Flinders University's Research Ethics & Compliance Office if I have any complaints or reservations about the ethical conduct of this study.
- ☐ I understand that my involvement is confidential, and that the information collected may be published. I understand that I will not be identified in any research products.

Signed:

Name:

Date:

c) HREC (Human Research Ethics Committee) Application



Flinders University

HREC Application Form

A Modern Analogue Study - Macassan Prau
ID:5619 Year:2022 Version:6

Project Details

Project Information

All research conducted by, and/or with, SA Health (including Southern Adelaide Local Health Network - SALHN) staff, patients, visitors, premises or data sets needs to be approved by an SA Health Human Research Ethics Committee. Once Ethics approval has been obtained from an SA Health Ethics Committee, please notify us by completing the "Cross-Institutional Approval Form" in the online system.

Teaching & Learning applications can only be submitted for the evaluation of teaching projects for research purposes.

Coursework applications can only cover student projects that are considered low risk and where research results will be disseminated beyond the University and interested parties. This **does not** cover above low risk, Honours, Masters by Research, or PhD student projects.

The definition for a clinical trial can be found here.

A1. Project Title

A Modern Analogue Study - Macassan Prau

A2. Type of Project

- ○ Research involving human participants
- ○ Clinical trial involving human participants
- ○ Teaching & Learning Program evaluation involving human participants
- ◉ Coursework application (Masters by Coursework student projects only)
- ○ Research only involving existing and de-identified data sets

A2.1. Please provide the course title and the topic number.

ARCH9101A+B Thesis Research Project

Reference: A Modern Analogue Study - Macassan Prau HEL5619-6 27 April 2023
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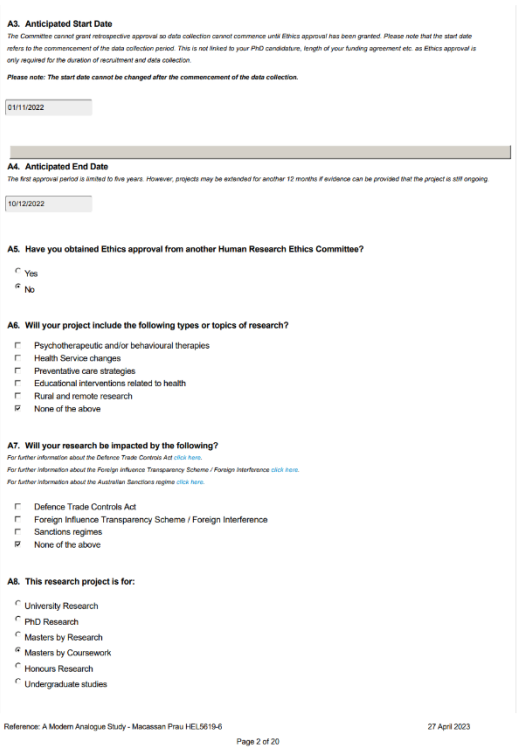

A3. Anticipated Start Date

The Committee cannot grant retrospective approval so data collection cannot commence until Ethics approval has been granted. Please note that the start date refers to the commencement of the data collection period. This is not linked to your PhD candidature, length of your funding agreement etc. as Ethics approval is only required for the duration of recruitment and data collection.

Please note: The start date cannot be changed after the commencement of the data collection.

01/11/2022

A4. Anticipated End Date

The first approval period is limited to five years. However, projects may be extended for another 12 months if evidence can be provided that the project is still ongoing.

10/12/2022

A5. Have you obtained Ethics approval from another Human Research Ethics Committee?

- ○ Yes
- ◉ No

A6. Will your project include the following types or topics of research?

- ☐ Psychotherapeutic and/or behavioural therapies
- ☐ Health Service changes
- ☐ Preventative care strategies
- ☐ Educational interventions related to health
- ☐ Rural and remote research
- ☑ None of the above

A7. Will your research be impacted by the following?

For further information about the Defence Trade Controls Act click here.
For further information about the Foreign influence Transparency Scheme / Foreign Interference click here.
For further information about the Australian Sanctions regime click here.

- ☐ Defence Trade Controls Act
- ☐ Foreign Influence Transparency Scheme / Foreign Interference
- ☐ Sanctions regimes
- ☑ None of the above

A8. This research project is for:

- ○ University Research
- ○ PhD Research
- ○ Masters by Research
- ◉ Masters by Coursework
- ○ Honours Research
- ○ Undergraduate studies

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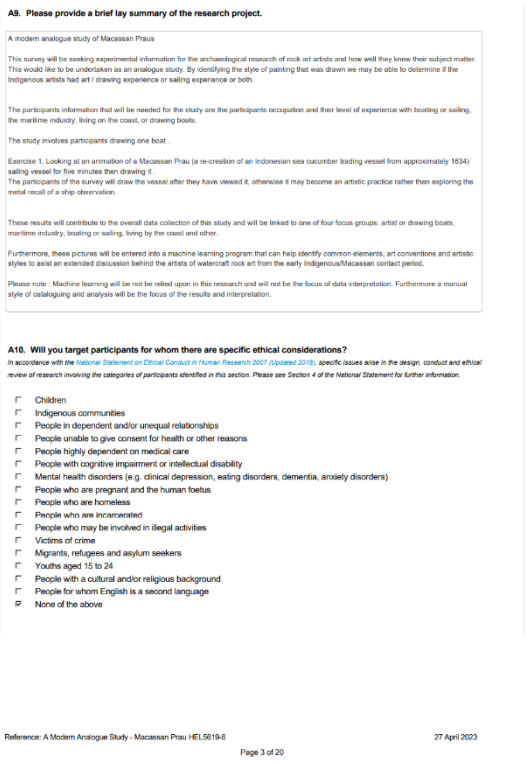

A9. Please provide a brief lay summary of the research project.

A modern analogue study of Macassan Praus

This survey will be seeking experimental information for the archaeological research of rock art artists and how well they knew their subject matter. This would like to be undertaken as an analogue study. By identifying the style of painting that was drawn we may be able to determine if the Indigenous artists had art / drawing experience or sailing experience or both.

The participants information that will be needed for the study are the participants occupation and their level of experience with boating or sailing, the maritime industry, living on the coast, or drawing boats.

The study involves participants drawing one boat .

Exercise 1. Looking at an animation of a Macassan Prau (a re-creation of an Indonesian sea cucumber trading vessel from approximately 1834) sailing vessel for five minutes then drawing it .
The participants of the survey will draw the vessel after they have viewed it, otherwise it may become an artistic practice rather than exploring the metal recall of a ship observation.

These results will contribute to the overall data collection of this study and will be linked to one of four focus groups: artist or drawing boats, maritime industry, boating or sailing, living by the coast and other.

Furthermore, these pictures will be entered into a machine learning program that can help identify common elements, art conventions and artistic styles to assist an extended discussion behind the artists of watercraft rock art from the early Indigenous/Macassan contact period.

Please note : Machine learning will be not be relied upon in this research and will not be the focus of data interpretation. Furthermore a manual style of cataloguing and analysis will be the focus of the results and interpretation.

A10. Will you target participants for whom there are specific ethical considerations?

In accordance with the National Statement on Ethical Conduct in Human Research 2007 (Updated 2018), specific issues arise in the design, conduct and ethical review of research involving the categories of participants identified in this section. Please see Section 4 of the National Statement for further information.

- ☐ Children
- ☐ Indigenous communities
- ☐ People in dependent and/or unequal relationships
- ☐ People unable to give consent for health or other reasons
- ☐ People highly dependent on medical care
- ☐ People with cognitive impairment or intellectual disability
- ☐ Mental health disorders (e.g. clinical depression, eating disorders, dementia, anxiety disorders)
- ☐ People who are pregnant and the human foetus
- ☐ People who are homeless
- ☐ People who are incarcerated
- ☐ People who may be involved in illegal activities
- ☐ Victims of crime
- ☐ Migrants, refugees and asylum seekers
- ☐ Youths aged 15 to 24
- ☐ People with a cultural and/or religious background
- ☐ People for whom English is a second language
- ☑ None of the above

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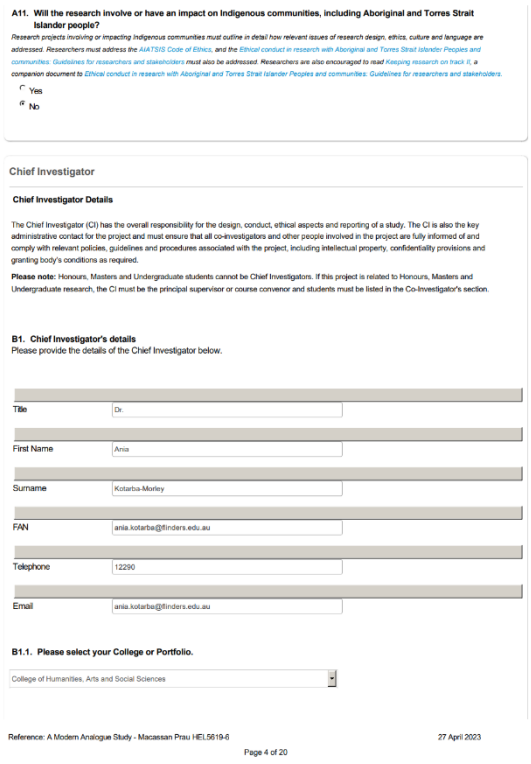

A11. Will the research involve or have an impact on Indigenous communities, including Aboriginal and Torres Strait Islander people?

Research projects involving or impacting Indigenous communities must outline in detail how relevant issues of research design, ethics, culture and language are addressed. Researchers must address the AIATSIS Code of Ethics, and the Ethical conduct in research with Aboriginal and Torres Strait Islander Peoples and communities: Guidelines for researchers and stakeholders must also be addressed. Researchers are also encouraged to read Keeping research on track II, a companion document to Ethical conduct in research with Aboriginal and Torres Strait Islander Peoples and communities: Guidelines for researchers and stakeholders.

- ○ Yes
- ◉ No

Chief Investigator

Chief Investigator Details

The Chief Investigator (CI) has the overall responsibility for the design, conduct, ethical aspects and reporting of a study. The CI is also the key administrative contact for the project and must ensure that all co-investigators and other people involved in the project are fully informed of and comply with relevant policies, guidelines and procedures associated with the project, including intellectual property, confidentiality provisions and granting body's conditions as required.

Please note: Honours, Masters and Undergraduate students cannot be Chief Investigators. If this project is related to Honours, Masters and Undergraduate research, the CI must be the principal supervisor or course convenor and students must be listed in the Co-Investigator's section.

B1. Chief Investigator's details
Please provide the details of the Chief Investigator below.

Title	Dr.
First Name	Ania
Surname	Kotarba-Morley
FAN	ania.kotarba@flinders.edu.au
Telephone	12290
Email	ania.kotarba@flinders.edu.au

B1.1. Please select your College or Portfolio.

College of Humanities, Arts and Social Sciences

Reference: A Modern Analogue Study - Macassan Prau HEL5619-6 27 April 2023
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B2. Please provide the Chief Investigator's qualifications.

Supervisor of the Masters Project

B3. Please provide detailed information about the Chief Investigator's research experience, including any specific skills or expertise relevant to this project.

Senior Lecturer in Humanities and Social Sciences at Flinders University.

Co-Investigator

Co-Investigator Details

Co-Investigators make a significant contribution to the planning, design, conduct, ethical aspects and reporting of a study. While the Chief Investigator has the overall responsibility for the project, co-investigators must ensure that the project is undertaken in accordance with relevant policies, guidelines and procedures associated with the project, including intellectual property, confidentiality provisions and granting body's conditions as required.

B5. Are there any Co-Investigators?

- (•) Yes
- ( ) No

B5.1. Co-Investigators' details
Please provide the details of your Co-Investigators below.

Title	Dr.
First Name	Daryl
Surname	Wesely
FAN	daryl.wesley@flinders.edu.au
Telephone	+61882015290
Email	daryl.wesley@flinders.edu.au
College or Portfolio	College of Humanities, Arts and Social Sciences

Is this Co-Investigator a Flinders University student?

- ( ) Yes
- (•) No

Title	Mr
First Name	David
Surname	Zuccolin
FAN	zucc0008
Telephone	0409321864
Email	zucc0008@flinders.edu.au
College or Portfolio	College of Humanities, Arts and Social Sciences

Is this Co-Investigator a Flinders University student?

- (•) Yes
- ( ) No

Other People

Other People involved in the Project

Other people involved could include mentors, research assistants, statisticians etc. who are not deemed to be co-investigators.

B6. Are there any other persons involved in the project?

- (•) Yes
- ( ) No

B6.1. Other persons involved in this project
Please provide the details of other persons involved in this project below.

Title	Dr.
First Name	Jarrad
Surname	Kowlessar
Email	Jarrad.Kowlessar@flinders.edu.au
Role	Thesis Advisor

Will this person have access to data from vulnerable participant groups?

- ( ) Yes
- (•) No

Locations

C1. Please provide all locations where the research will be conducted.

The survey will be conducted in person

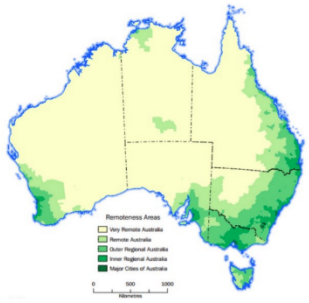
C2. Will the research be undertaken in rural and/or remote areas?

- ( ) Yes
- (•) No

Please note:

There is a website that allows a researcher to identify the Modified Monash classification of any site by entering the postcode. For further information please see map below or go to the Health Workforce Locator site.

Australian Statistical Geography Standard - Remoteness Areas (ASGS-RA):



C3. Will the project involve access to Aboriginal and/or Torres Strait Islander lands?

- ( ) Yes
- (•) No

C4. Will any research be undertaken overseas?

- ( ) Yes
- (•) No

Funding

D1. How will your research project be funded?

- [ ] Internal Funding
- [ ] External Funding
- [x] Other Funding (e.g. in-kind support, private funding etc.)

If "Other Funding", please provide more information.

Privately funded by David Zuccolin

D2. Are there any special conditions placed on funding (for example IP rights, data access and storage)?

- ( ) Yes
- (•) No

Conflicts of Interest

Conflicts of Interest

Conflicts of interest must be disclosed at the start of a project. Types of activities that can lead to conflicts of interest include, but are not limited to, consultancies, membership of committees, participation in boards or advisory groups and affiliation with or financial involvement in any entity with a direct interest in the subject matter of the research.

Please note that all conflicts of interest must also be disclosed in the Participant Information Sheet.

D3. Will the funding, administrative and/or commercial IP arrangements place any person involved in this project in a conflict of interest?

- ( ) Yes
- (•) No

D4. Do any of the researchers have any pre-existing relationships with potential participants or other parties involved in the project?

- ( ) Yes
- (•) No

D5. Will there be any constraints on publication?

- ○ Yes
- ◉ No

Aims and Justification

E1. What are the aims of the research project?

• To identify art conventions and drawing styles amongst different focus groups.
• Understand levels of technological awareness amongst rock artists.
• To test assumed models of levels of technological awareness in rock art.
• Identify artists and what connections if any they had with Macassan maritime traders.
• Understand the influences on rock art conventions.
• Find basic common elements in machine learning of maritime vessels in rock art.

* A Detailed Methodology:
In developing a formula to collate data against Macassan rock art motifs I will provide a comparison chart to assess if any of these analytical features are prominent in any of the rock art paintings. These analysing concepts are:

• Composition - depth of details making collective aspects creating a complete picture
• Monochromatic or Multi-coloured - coloured or outlined
• Spatial scale and frequency - scaling of items and scaled on the wall area
• Static or still balance - still or moving and the way its moving
• Observers angle - vanishing points and perspective
• Artistic style - developing a whole element process
• Level of sailing connection - the way specific items displayed eg.sails shrouds.
• Level of subject knowledge - the way items are drawn to be used in the painting
• Level of connection to the sea - ocean and sea movement

This will allow the prau motif analysis to determine if trends are identified in multiple areas of the motif creating a connection or theme. Using this systematic approach will allow data to be displayed clearly and effectively to support the output of analysis and to guide the process of constructing a systematic formula in interpreting a watercraft motif artistic convention cataloguing system.

Using a simple method of 1-10 point system of identifying the eight analysing concepts in each Macassan prau motif. These will be rated as one - being just recognisable to 10 - being highly recognisable .

In previous research, rock art conventions (genre) have influenced and have pigion holed rockart creating ridged areas of categorisation. Thus, providing dramatic segregation between terrestrial traditional rock art and contact rock art and a further divide between maritime rock art (watercraft and maritime trade) .

E2. Please provide detailed information about the course and how the project relates to the components of the course.

The Masters thesis requires project objectives, aims, data collection, results and discussion.
This survey is only to gather data towards a distant interpretations about Macassan Prau Indigenous rock art of North west Arnhem land and Groote Eylandt were artists, sailors or maritime seafarers and which element of their painting might show this feature. This discussion is not in any way intended to discredit or harm Indigenous culture history or heritage and only to discuss the amount of seafaring or artistic ability that may be identifiable through the theoretical concept.

E2.1. Please advise how you will ensure that the individual student projects will remain within the scope of the course approval.

The study will remain a pilot program for analysis and discussion of this project topic

E2.2. Please advise what training, including training in research ethics and integrity, the students will receive in the appropriate, safe and successful conduct of the research.

Co-ordinators support of professional conduct and integral manner when undertaking the survey with participants (inconjunction with Flinders University Guidelines)

Methodology

E3. Please describe the research approach and methods in more detail.

Please include the following information:

- *Describe the research methodology, i.e. qualitative, quantitative or mixed methods.*
- *Describe who your participants are and the estimated sample size of the potential participants pool.*
- *List any inclusion or exclusion criteria.*
- *Describe the data collection process including length of interviews, focus groups, other outcome measures or validated scales.*
- *Describe how you will analyse the data to answer the research aims.*
- *Describe how you will store the data.*

To understand the level of familiarity that Indigenous rock artists had when painting art in the northern areas of Australia, I am using the concept of using other peoples drawings to analyse and discuss what perspective the artists viewed their subjects in, and how they conceptualized the idea. Furthermore, what dictated the artists to use that specific spatial frequency to produce the drawing of the macassan prau on that angle.
The methods of the thesis is a conceptual study that may help us visually see if the differences in the drawings are from artistic interpretation, maritime experience, sailing knowledge or other areas that are identifiable characteristics of the drawings.

We are seeking experiences to identify artistic characteristics or maritime - sea - sailor characteristics.

E4. Do you intend to withhold or disguise the purpose of the research in any way?

- ○ Yes
- ◉ No

Research Instruments

E5. Which of the following instruments will be used in your research project?

- ☐ Hard copy questionnaire
- ☐ Electronic questionnaire
- ☐ Semi-Structured Interviews
- ☐ Workshop
- ☐ Overt Observations
- ☐ Video recordings
- ☐ Movement tracking
- ☐ Performance tests
- ☐ Already existing and de-identified data set
- ☐ Collection of physical samples from participants (e.g. blood, tissues, cells etc.)
- ☐ Telephone/verbal survey
- ☐ Focus Groups
- ☐ Structured Interviews
- ☐ Covert Observations
- ☐ Photographs
- ☐ Audio recordings
- ☑ Creative, artistic or design process
- ☐ Ethnography
- ☐ Cellular Therapy
- ☐ Ionising and non-ionising radiation
- ☐ Other

Potential Benefits

E6. What are the benefits of the research project?

The benefits of this project is to try a different avenue of discussion regarding the artists artistic understanding and or connection with the sea and boats. This would help exploring a persons knowledge behind archaeological paintings.

E7. What research product will be created by this research project?

- ☐ Books
- ☐ Book Chapters
- ☐ Commercial Products
- ☐ Conference Papers
- ☐ Journal Articles
- ☐ Non-traditional research outputs (eg. exhibitions, performances etc.)
- ☐ Reports
- ☐ Therapeutic Products
- ☑ Thesis
- ☐ Other

Recruitment Methods and Participant Groups

F1. Will you, or a third party, recruit participants for this project?

- ◉ Yes
- ○ No

F1.1. Will you, or a third party, recruit any Flinders University undergraduate students?

- ○ Yes
- ◉ No

F1.2. Participant Categories and Recruitment Methods
Please provide information about your participants and recruitment methods below.

Participant Category
For multiple participant categories, please use the "Add Another" button.

Sailors of the Local Yacht club will be approached to participate. I will talk to the group asking for volunteers. *This will be conducted between December 2022 to March 2023

Recruitment Method

In Person (Group situation)

Estimated Sample Size

10

Participant Category
For multiple participant categories, please use the "Add Another" button.

General Public -

Recruitment Method

Other

If "Other", please provide more details.

People that I know will be approached and asked for their participation one on one.

Estimated Sample Size

10

Participant Category
For multiple participant categories, please use the "Add Another" button.

Artists/ Art teachers

Recruitment Method

In Person (one-on-one)

Estimated Sample Size

10

Participant Category

For multiple participant categories, please use the "Add Another" button.

Boat builders / Maritime Industry professionals

Recruitment Method

In Person (one-on-one)

Estimated Sample Size

10

Participant Category

For multiple participant categories, please use the "Add Another" button.

Maritime achaeologists

Recruitment Method

In Person (Group situation)

Estimated Sample Size

10

F1.3. Please expand on the recruitment process and outline in more detail how participants will be recruited.

Maritime archaeologists will be asked for their participation through connections of Universisity and work.
Yacht club will be asked for their participation through persons I know, deal with and have connected with in some way or another.
Art teachers and artists will be contacted to participate in the survey, through ex work collegues and private contacts.
Maritime industry professionals will be asked to contribute through ex work collegues and private contacts.
And others, including boatbuilding connections and classic yacht lovers that are known to the thesis student.

Example of connecting with groups from the yacht club: I am a thesis student from Flinders University and I am after some volunteers to help me guide a study on drawing styles of a boat that I can use in the discussion of art conventions and Australian Rock Art, and I would like your help. This is anonamous study and your personal details will not be needed for the results, just a drawing from an exercise that will take approximately 10 minutes.

The masters student will be carefully distributing and running the survey with the participants directly.

* The principal investigator (masters student) was a member of the yacht club over 10 years ago and knows knows sailors in the yacht club.

F1.4. Please upload all recruitment materials, including flyers, introductory emails, verbal scripts, etc.

Documents

Type	Document Name	File Name	Version Date	Version	Size
Default	Analogue Macassan Prau Drawing Survey Paper V3	Analogue Macassan Prau Drawing Survey Paper V3.docx	18/10/2022	V3	20.2 KB

F1.5. Will you need to obtain external permission to access participants?

- ○ Yes
- ◉ No

F1.6. Will any of the recruitment information/documents need to be translated into another language?

- ○ Yes
- ◉ No

Participant Consent and Withdrawal

F2. How will participants be able to provide informed consent?

- ☐ Verbal Consent
- ☑ Written Consent
- ☐ Online consent
- ☐ Opt-Out consent
- ☐ Waiver of consent
- ☐ Autobiographical research
- ☐ Existing de-identified dataset (no consent required)

F2.1. Please upload a copy of the Participant Information Sheet and the Consent Form.

Documents

Type	Document Name	File Name	Version Date	Version	Size
Default	information-sheet-consent-form V3	information-sheet-consent-form V3.docx	19/10/2022	V3	296.8 KB

F2.2. Please outline in more detail how participants will be able to provide informed consent and how you will ensure that participation is voluntary.

Participants will have the option to consent in person and will be guided through the process. They can choose not to consent or with draw at any stage.

F2.3. Please outline in detail how participants will be able to withdraw from the research project without penalty and without feeling discomfort.

Participants have options not to proceed with the survey and also have the contact address of the survey conductor if they wish to withdraw at anytime during or after the survey.

Remuneration and Post Participation

F3. Will any payment, recognition of contribution or compensation be provided to participants?

- ○ Yes
- ◉ No

F4. Will you provide any feedback to participants?

- ◉ Yes
- ○ No

F4.1. Please advise how feedback will be provided.

On the consent form it states that participants will be able to gain a copy of the thesis via email.

F5. Will feedback be provided to any organisations, schools and/or people who commissioned or have an interest in this project?

- ○ Yes
- ◉ No

F6. Will the data be transcribed?

- ○ Yes
- ◉ No

Potential Burdens and Risks

G1. Please indicate the possible risk categories to the research team.

- ☐ Physical harms
- ☐ Psychological harms
- ☐ Legal harms
- ☑ Other

G1.1. Please explain the risks in more detail and provide strategies for minimising these risks.

negligible

G2. Please indicate the possible risk categories to participants.

- ☐ Physical harms
- ☐ Psychological harms
- ☐ Social harms
- ☐ Economic harms
- ☐ Legal harms
- ☐ Invasion of Privacy
- ☐ Devaluation of personal worth
- ☐ Risks specific to Indigenous communities, including Aboriginal and Torres Strait Islander people
- ☑ Other

G2.1. Please explain the risks in more detail and provide strategies for minimising these risks.

negligible

G3. Please indicate the possible risk categories to others not participating in the research project.

- ☐ Physical harms
- ☐ Psychological harms
- ☐ Social harms
- ☐ Economic harms
- ☐ Legal harms
- ☐ Invasion of Privacy
- ☐ Devaluation of personal worth
- ☑ Risks specific to Indigenous communities, including Aboriginal and Torres Strait Islander people
- ☑ Other

G3.1. Please explain the risks in more detail and provide strategies for minimising these risks.

negligible

G3.2. Please indicate the risks that are specific to Indigenous communities, including Aboriginal and Torres Strait Islander people.

- ☐ Photographs containing images of people that have passed
- ☐ Photographs of sacred sites
- ☐ Photographs of artefacts
- ☑ Other

G3.2.1. If "Other", please provide more details.

This thesis is not in anyway intended to change, dispute or harm any archaeological cultural heritage from the rock art images of the North west Arnhem land and Groote Eylandt regions but only to discuss theoretically elements that may provide a visual interpretation of what experiences and knowledge the artists had when creating them.

H12. Will you contact the participants of this study about other research projects?

- ○ Yes
- ◉ No

Additional Information

I1. Do you have any additional attachments to upload?

Please note: *Participant information and consent forms, questionnaires, flyers etc. should be uploaded in the appropriate sections of the form. This section is for additional information such as flowcharts, approval letters or response to Committee feedback.*

- ○ Yes
- ◉ No

I2. Have you shared the application using the share function button and/or via PDF with all applicants listed in this application?

- ○ Yes
- ◉ No

Please note:

Access to this form should be granted to all people listed in the application by clicking on the '**Share**' button in the Action menu on the left hand side of the screen (see screenshot below). Type in their email and select the level of access permission you are granting. If the person does not exist in the system, that is because they have never logged into ResearchNow Ethics & Biosafety. If this is the case, please ask them to log into ResearchNow Ethics & Biosafety so that you can then share the form with them.

Please also note that external applicants will not be able to access the system unless they have a FAN ID. If they do not have a FAN ID, please share the application via a PDF copy (click on '**View as PDF**').

Please note that the application cannot be submitted to the Human Research Ethics Committee or Low Risk Panel for review until it has been shared with all applicants listed on the application in Section B.

Signature

Declaration

I, as the Chief Investigator or authorised delegate, certify that:

- All information contained in this application is true and accurate.
- I have had access to and read the National Statement on Ethical Conduct in Human Research 2007 (Updated 2018), and that the research will be conducted in accordance with the National Statement and in accordance with the ethical arrangements of the organisations involved.
- I have consulted any relevant legislation and regulations, and the research will be conducted in accordance with these.
- I have, if applicable, provided all collaborators and other persons involved in this research project with access to this application (online or PDF) and will provide them with all future amendments and reports.
- All collaborators and other persons involved in this project are aware of the requirements and conditions and will conduct the research in accordance with these.
- I will immediately report to Research Ethics & Compliance anything which might warrant review of the ethical approval of the proposal.
- I will inform Research Ethics & Compliance, giving reasons, if the research project is discontinued before the expected date of completion.
- I will adhere to the conditions of approval stipulated by the Committee and will cooperate with the Committee's monitoring requirements, including the provision of annual progress reports and final reports as required.

Please ensure you understand each statement and your responsibilities and then select "Certified" below.

- ☑ Certified

Please note:
Undergraduate, Honours and Masters students must request the signature of their Principal Supervisor/Course Convenor.

Signature

Signed: This form was signed by Daryl Wesley (daryl.wesley@flinders.edu.au) on 30/11/2022 5:53 PM

d) HREC Approval Letter

8 December 2022

HUMAN ETHICS LOW RISK PANEL

APPROVAL NOTICE

Dear Dr. Ania Kotarba-Morley,

The below proposed project has been **approved** on the basis of the information contained in the application and its attachments.

Project No:	5619
Project Title:	A Modern Analogue Study - Macassan Prau
Chief Investigator:	Dr. Ania Kotarba-Morley
Approval Date:	08/12/2022
Expiry Date:	10/12/2022
Approved Co-Investigator/s:	Dr. Daryl Wesely , Mr David Zuccolin
Approved Personnel:	Dr. Jarrad Kowlessar
Conditions of Approval:	Please ensure you share the application with your supervisor(s) using the instructions listed at Section I2.

Please note: *Due to COVID-19, researchers should try to avoid face-to-face testing where possible and consider undertaking alternative distance/online data or interview collection means. For further information, please go to https://staff.flinders.edu.au/coronavirus-information.*

Please note: *For all research projects wishing to recruit Flinders University students as participants, approval needs to be sought from the Office to the Deputy Vice-Chancellor (Students). To seek approval, please provide a copy of the Ethics approval for the project and a copy of the project application (including Participant Information and Consent Forms, advertising materials and questionnaires etc.) to the Office of the Deputy Vice-Chancellor (Students) via dvcsoffice@dl.flinders.edu.au.*

RESPONSIBILITIES OF RESEARCHERS AND SUPERVISORS

1. **Participant Documentation**

   Please note that it is the responsibility of researchers and supervisors, in the case of student projects, to ensure that:

   - all participant documents are checked for spelling, grammatical, numbering and formatting errors. The Committee does not accept any responsibility for the above mentioned errors.
   - the Flinders University logo is included on all participant documentation (e.g., letters of Introduction, information Sheets, consent forms, debriefing information and questionnaires – with the exception of purchased research tools) and the current Flinders University letterhead is included in the header of all letters of introduction. The Flinders University international logo/letterhead should be used and documentation should contain international dialing codes for all telephone and fax numbers listed for all research to be conducted overseas.

2. **Annual Progress / Final Reports**

   In order to comply with the monitoring requirements of the *National Statement on Ethical Conduct in Human Research 2007 (updated 2018)* an annual progress report must be submitted each year on the approval anniversary date for the duration of the ethics approval

using the HREC Annual/Final Report Form available online via the ResearchNow Ethics & Biosafety system.

Please note that no data collection can be undertaken after the ethics approval expiry date listed at the top of this notice. If data is collected after expiry, it will not be covered in terms of ethics. It is the responsibility of the researcher to ensure that annual progress reports are submitted on time; and that no data is collected after ethics has expired.

If the project is completed *before* ethics approval has expired please ensure a final report is submitted immediately. If ethics approval for your project expires please either submit (1) a final report; or (2) an extension of time request (using the HREC Modification Form).

For student projects, the Low Risk Panel recommends that current ethics approval is maintained until a student's thesis has been submitted, assessed and finalised. This is to protect the student in the event that reviewers recommend that additional data be collected from participants.

3. Modifications to Project

Modifications to the project must not proceed until approval has been obtained from the Ethics Committee. Such proposed changes / modifications include:

- change of project title;
- change to research team (e.g., additions, removals, researchers and supervisors)
- changes to research objectives;
- changes to research protocol;
- changes to participant recruitment methods;
- changes / additions to source(s) of participants;
- changes of procedures used to seek informed consent;
- changes to reimbursements provided to participants;
- changes to information / documents to be given to potential participants;
- changes to research tools (e.g., survey, interview questions, focus group questions etc);
- extensions of time (i.e. to extend the period of ethics approval past current expiry date).

To notify the Committee of any proposed modifications to the project please submit a Modification Request Form available online via the ResearchNow Ethics & Biosafety system. Please note that extension of time requests should be submitted prior to the Ethics Approval Expiry Date listed on this notice.

4. Adverse Events and/or Complaints

Researchers should advise the Executive Officer of the Human Research Ethics Committee on at human.researchethics@flinders.edu.au immediately if:

- any complaints regarding the research are received;
- a serious or unexpected adverse event occurs that effects participants;
- an unforeseen event occurs that may affect the ethical acceptability of the project.

Yours sincerely,

Camilla Dorian

on behalf of

Human Ethics Low Risk Panel
Research Development and Support
human.researchethics@flinders.edu.au

Flinders University
Sturt Road, Bedford Park, South Australia, 5042
GPO Box 2100, Adelaide, South Australia, 5001

http://www.flinders.edu.au/research/researcher-support/ebi/human-ethics/human-ethics_home.cfm

ResearchNow
Ethics & Biosafety

e) Survey 2 Fifty prau Drawings. Category (C).