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Hand stencils and communal history: A case study from Auwim, East Sepik, Papua New Guinea

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ABSTRACT

Hand stencils directly represent modern humans in landscape settings around the world. Yet their social and cultural contexts are often overlooked due to the lack of ethnography associated with the artwork. This paper explores the hand stencils from Kundumbue and Pundimbung rock art sites, situated in the traditional boundaries of the Auwim people in the East Sepik Province of Papua New Guinea. Combining archaeological rock art analysis with ethnographic knowledge, we demonstrate that the hand stencils are a priority in each clan's place-making practices, around which they construct the community's social narratives. Rock shelters and their rock art also show a form of communal history that is evoked through their production in contemporary settings, in addition to having been a form of esoteric magic in the past. We conclude that hand stencils can have multiple meanings over time and across space as a widespread cultural marker. However, aspects of the identities of individuals, groups and communities who created the now static hand imagery, remain in place.

Keywords: rock art, ethnography, place, stencils, Papua New Guinea

RÉSUMÉ

Les mains negatives représentent directement les hommes modernes dans leur environnement, et ceci à travers le monde. Cependant le contexte social et culturel leur étant associé est souvent négligé de par l'absence de données ethnographiques liées à ces oeuvres picturales. Cet article étudie les mains negatives des sites d'art rupestre de Kundumbue et Pundimbung, situés sur le territoire traditionel des habitants du village d'Auwim dans la région de l'Est Sepik en Papouasie Nouvelle Guinée. En combinant des analyses archéologiques en art rupestre avec la savoir éthnographie, nous démontrons que les mains negatives sont une priorité dans l'espace de création de chaque clan, autour de laquelle sont construit les récits actuels de la vie sociale de la communauté. Les abris rocheux et leurs peintures rupestres témoignent aussi d'une forme d'histoire de la communauté qui est évoquée à travers leur production dans le context actuel, en plus d'avoir été dans le passé une forme de magie ésotérique. Nous concluons que les mains negatives peuvent avoir de multiples significations à travers le temps et l'espace comme marqueur culturel trés répandue. Cependant, les caractéristiques de l'identité des individus, groupes et communautés qui ont créé l'imagerie des mains, maintenant figée, à travers leurs activités rituelles ou ordinaires, est toujours présentes.

Mots clès: art rupestre, ethnographie, lieu, pochoirs, Papouasie-Nouvelle-Guinée

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INTRODUCTION

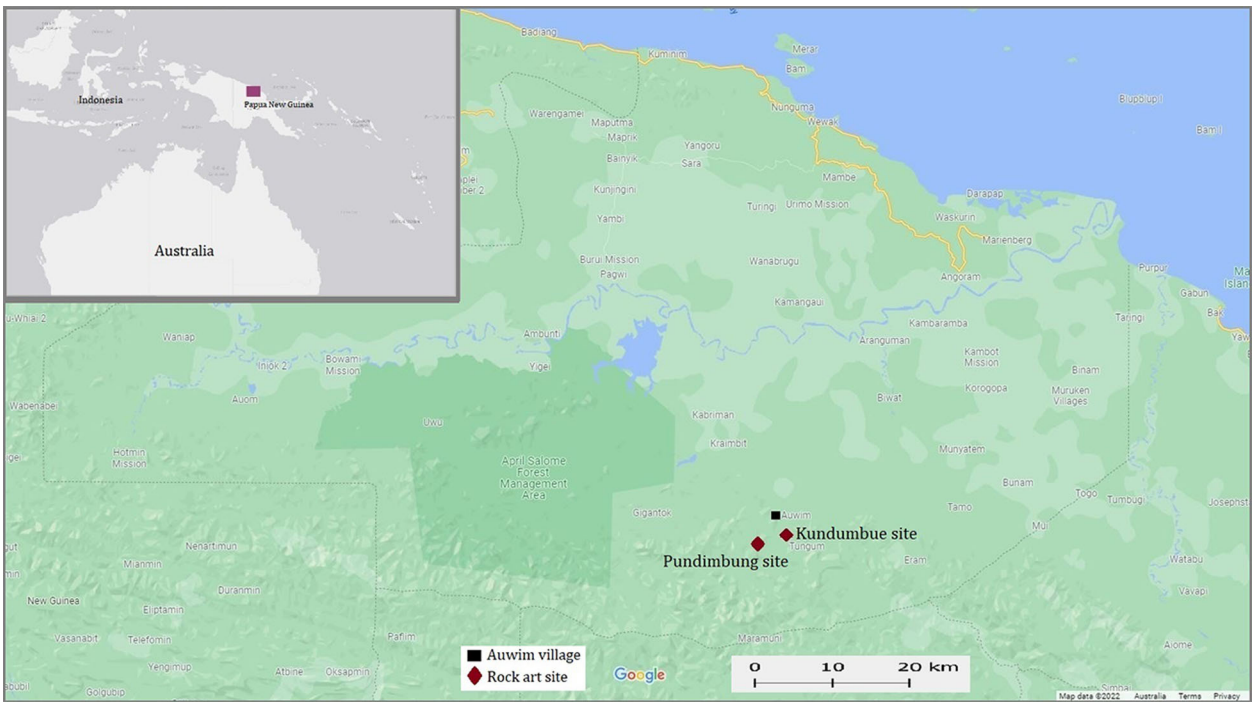
Human hand stencils are found throughout the world. Their representation in the global rock art assemblage provides a unique opportunity to explore or better understand the social and cultural context of image production, as they represent the physical reality of the individual artists and/or community that produced them. Hand stencils are created through a method of spraying paint made with ochre or other pigments onto a hand placed on a cave or rock shelter walls and/or ceilings leaving behind an outline of the original human hand (see Dobrez, 2013, 2014 for a discussion on different hand stencil production techniques). They are found primarily in parts of northern Africa (e.g., Le Quellec, 2016), Europe (e.g., Bahn, 1998; Clottes & Courtin, 1996, p. 66; Faurie & Raymond, 2004; Morley, 2007, p. 74, see fig. 6.4; Nelson et al., 2006, 2017; Nowell, 2021, pp. 74–76, see table 3.3; Pettitt et al., 2014, 2015; Rabazo-Rodríguez et al., 2017; Snow, 2006, 2013), the Americas (e.g., Bahn, 1998; Guichón & Re, 2021; Onetto & Podestá, 2011), Southeast Asia (especially Indonesia, Thailand and parts of China (e.g., see Aubert et al., 2014, 2018; Chazine, 2005; Chazine & Noury, 2006; Oktaviana et al., 2016; Solheim & Gorman, 1964; Standish et al., 2020; Taçon et al., 2016)), Australia (e.g., Gunn. 2006; Hayward et al., 2018; Moore, 1977; Quinnell, 1976; Taçon et al., 2010; Walsh, 1979), New Guinea (e.g., Arifin & Delanghe, 2004; Edwards & Sullivan, 2008; Gabriel & Gorecki, 2014; Röder, 1938; Tsang et al., 2020, 2021, 2022) and the greater western Pacific islands (e.g., Ballard, 1992; Rosenfeld, 1988; Sand et al., 2006; Specht, 1979; Wilson, 2002; Wilson & Ballard, 2018).

Over the past century, hand stencils have been growing in interest because they are not only a ubiquitous representation of human artistic behaviour in rock art assemblages but also an undebatable illustration of the presence of humans on the landscape (e.g., Walker et al., 2018). Various studies have focused on the technical aspects of the imagery, such as the hand size and whether the stencil is of a female or male hand (Faurie & Raymond, 2004; Nelson et al., 2006, 2017; Pettitt et al., 2015; Rabazo-Rodríguez et al., 2017; Snow, 2006, 2013). Some researchers have also attempted to identify the hands of children (e.g., Gunn 2006) and non-humans (e.g., Honoré et al., 2016). Furthermore, there is a growing interest in the dating of hand stencils and other rock art in Island Southeast Asia (e.g., Aubert et al., 2014, 2018) and Europe (e.g., García-Diezl et al., 2015; Pike et al., 2012) as well as using digital techniques to assist with questions of time and/or chronological phases through evidence of superimpositions (e.g., Carden & Miotti, 2020). But while these studies are crucial in our attempt to situate the presence of human cognitive and artistic behaviours in time and across landscapes, the social and cultural context of hand stencil production is still not fully understood. This is because one of the great challenges of studying not only hand stencils but also rock art in general is the complex nature of understanding its function and interpreting its meaning/s given its subjective nature (e.g., see Dowson, 2007, 2009; Monney & Baracchini, 2018, p. 530). Ethnography in contemporary settings through local people's knowledge with evidence of associated hand stencil production remains a significant and almost entirely unexplored means to interrogate past-present rock art practices. Communities in the western Pacific region continue to create rock art and have knowledge of its creation and significance (e.g., see Ballard, 1992; Lamb et al., 2021; Rosenfeld, 1988; Sand et al., 2006, 2021; Specht, 1979; Wilson, 2002; Wilson & Ballard, 2018). In particular, hand stencils in Papua New Guinea (PNG), are still relevant to contemporary societies (Edwards & Sullivan, 2008; Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b; Tsang et al., 2020, 2021, 2022) and an opportunity is presented to explore social and cultural contexts through ethnographic methodologies.

We present new insights on the hand stencil production from Auwim, East Sepik Province, PNG (Figure 1), through the use of both formal and informed methods (Taçon & Chippindale, 1998) conducted and assessed through fieldwork in 2018. Our objective here is to understand the use and role of hand stencils in this PNG case study and discuss very briefly how they are similar or differ internationally. To achieve this, we utilise informed ethnographic perspectives (e.g. Taçon & Chippindale, 1998) manifest in observable ethnographic information from current local knowledge (Monney & Baracchini, 2018) in Auwim and in secondary sources that detail ethnographic information into a "formal" archaeological analysis. Together, these sources provide more contextual meaning to the creation of hand stencils. Drawing on notions of place in geography and architecture (e.g., Malpas, 1999, 2018; Seamon, 2018) and a model of place as a substance in anthropology (Kearney et al., 2018), we examine the role of hand stencils in Auwim place-making.

Rock shelter, oral narratives and hand stencils are all elements of or within place, that taken together in our analysis could help us understand how people connect to place. To help us comprehend how Auwim people connect to place through hand stencil production, we draw on anthropological and archaeological data regarding hand stencils in relation to three substantive themes that explore place, as described by Kearney et al. (2018, p. 382). The landscape features include rock shelters, and their hand stencils, described below, which are a representation of identities in place and at a certain time. Oral narratives linked with hand stencils and individuals who owned these rock shelters are explored. Hand stencils as a place-making theme have both a *presence* as now-static artwork and an *absence* as representing those whose hand stencils remain, but who themselves have passed on. We conclude that although the universally occurring hand stencil motif can have multiple meanings through time and across space, they remain a form of identity for individuals, clans and communities who created them through various rituals and/or mundane activities.

FIGURE 1. The location of Auwim village in East Sepik Province, Papua New Guinea and rock art sites mentioned in the text (Adapted from Google® by Roxanne Tsang with inclusions by Andrea Jalandoni).



FORMAL RECORDING AND CLASSIFICATION OF AUWIM ROCK ART

Fieldwork focused on five Auwim rock art sites, including Kundumbue and Pundimbung (for other sites see Tsang et al. 2021, p. 186, table 1). Kundumbue and Pundimbung rock shelters were systematically photographed at individual motif and panel levels allowing for off-site preliminary identification and counting of hand stencils and other motifs. The motifs were digitally enhanced using DStretch (Version 8.3). Following Brady (2005, 2010), recorded motifs were classified into a 4-level hierarchical scheme to explore the stylistic variation of hand stencils and general themes in the assemblage before linking the assemblage to associated ethnography (see below). Evidence of superimposition was also identified at both rock shelters.

Kundumbue rock art site

Kundumbue is situated at ground-level and is located within the Mambanakae sub-clan territorial boundaries of Auwim (Figure 1). The rock shelter is an open sloping limestone conglomerate, approximately 65 m in length and more than 10 m in height (Figure 2). The entrance of the rock shelter is the only outstanding feature of a dormant creek that once flowed out of the rock shelter and the feature is associated with a male ritual narrative. Local informants refrained from sharing the narrative with one author [R.T.] given that she is female, indicating that this is a men's sacred site (e.g., for male/boys' initiation). There is the potential for excavations given the site has a floor deposit, but this was not attempted because of time constraints in 2018. It is, however, the subject of future research plans.

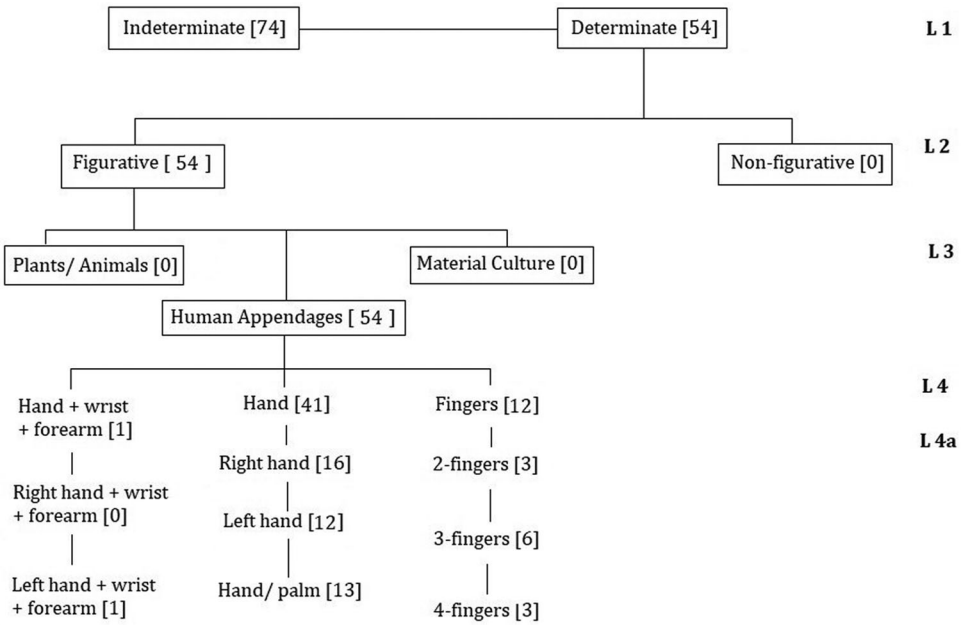
Kundumbue is dominated by hand stencils. A total of 128 motifs were identified (Figure 3). Of these, 74 (58%) are indeterminate while 54 (42%) are determinate. Of the 54 determinate motifs, all are human appendages. Of these, hand stencils (both right and left-hand) account for 76% (n = 41/54), followed by finger stencils with 22% (n = 12/54), and hand + wrist +forearm stencils with 2% (n = 1/54) of the assemblage (see Figure 3). The 58% indeterminate motifs indicate that most of the stencils have faded and/or deteriorated. Evidence of superimposition was identified (e.g., Figure 4a,b showing a right-hand stencil over a hand stencil). Most of the hand stencils are located more than 1 m from the ground/surface floor, with some having required scaffolding for their production. The rock art is concentrated in the middle of the rock shelter. The majority of the motifs are stencilled on the flat spaces within the gravel mixture, indicating that artists purposely chose this type of rock wall area to create their hand marks (e.g., Figure 5). Kundumbue is exposed and most of the hand stencils have faded.

Pundimbung rock art site

Pundimbung is situated on a steep limestone cliff-face overlooking the tropical forest of the traditional sub-clan boundaries of Kaemkae people of Auwim village. The rock shelter is approximately 300 m above sea level, 70 m long and 16 m high (Figure 6). The art is concentrated at the entrance, through to the middle and towards the end of the

FIGURE 2. Kundumbue rock art site in 2018 (Photo: William Pleiber, Papuan Past Project).

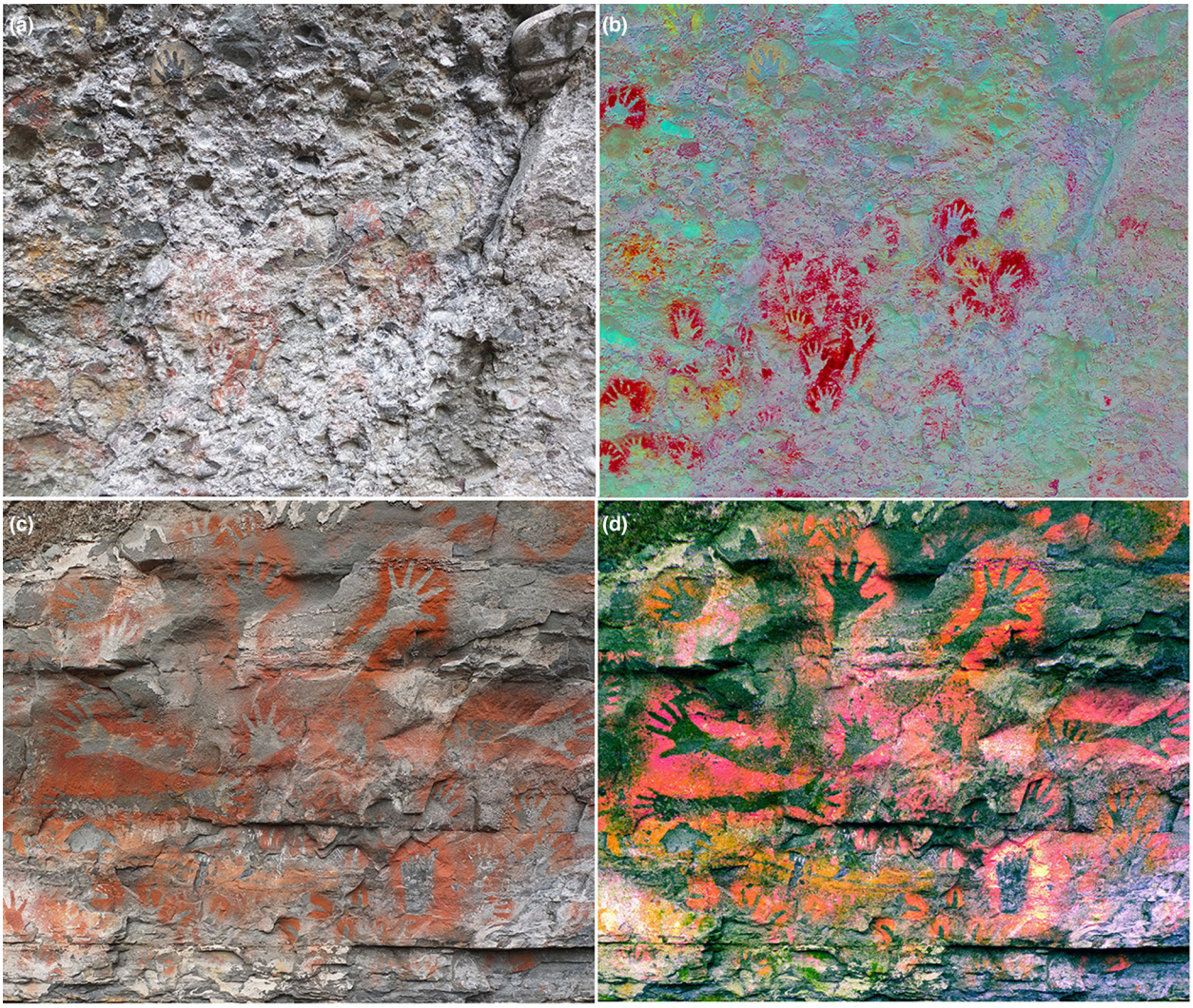
FIGURE 3. Classification of rock art motifs at Kundumbue (following Brady, 2005, 2010).



rock face of the shelter but not through to the far end of the shelter wall.

Pundimbung art consists of both stencils and paintings. A total of 803 motifs were identified, 200 more than previously identified in 1987. Of these, 645 (80%) are determinate and 158 (20%) are indeterminate (Figure 7). Of the 645 determinate motifs (both Figurative and Non-figurative), stencils constitute 97% (n = 628) of the rock art assemblage with only 3% (n = 17) paintings. For the figurative human appendage stencils (n = 577), hand stencils dominated the assemblage with 54% (n = 309/577), followed by finger stencils with 18% (n = 102/577), hand + wrist + forearm stencils with 16% (n = 92/577), hand + wrist stencils with 11% (n = 61/577) and

FIGURE 4. Examples of evidence of superimposition at both Kundumbue (a-b) and Pundimbung (c-d) rock art sites in 2018 (a & c: actual photos, b & d: after DStretch picture enhancement, colour filters, ire.tif and lbl.tif, respectively) (Original photos: William Pleiber, Papuan Past Project, enhancement).



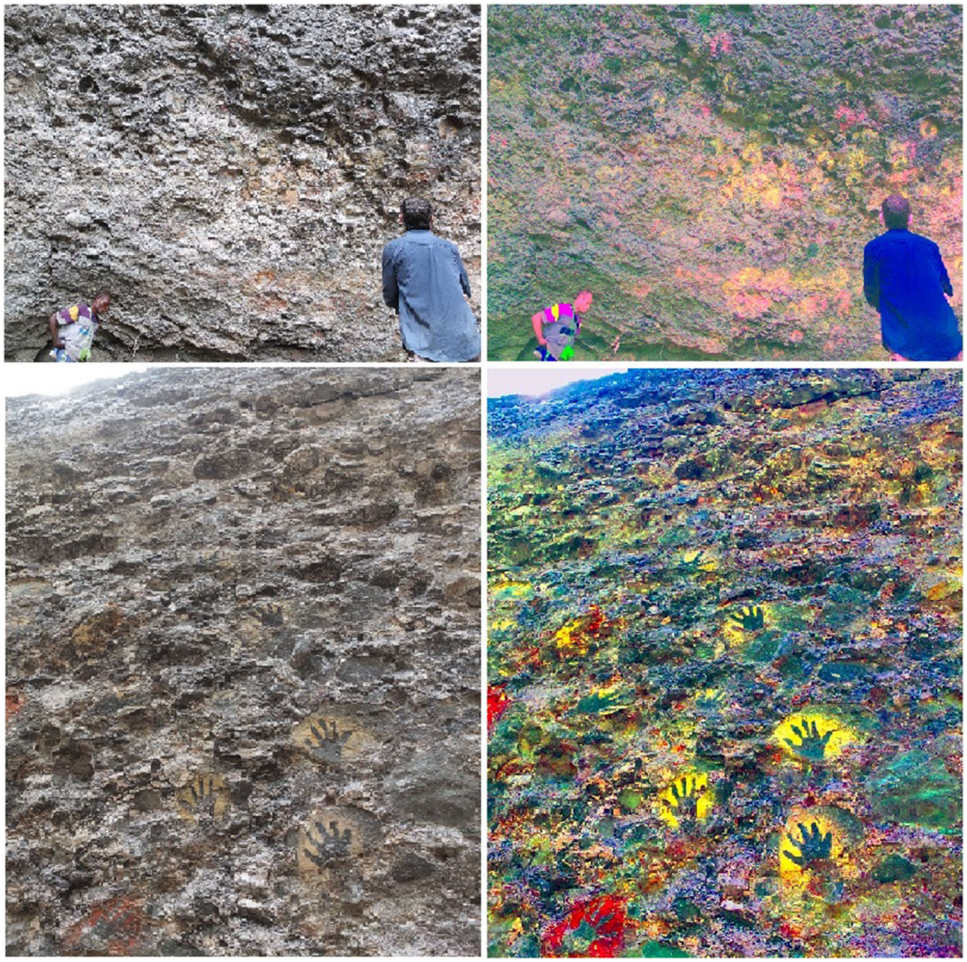
only 1% for foot stencils (n = 13/577) (see Figure 7). Evidence of superimposition was identified (e.g., Figure 4c,d showing a right-hand stencil over a left-hand + wrist + forearm stencil).

ROCK ART AND INFORMED ETHNOGRAPHY IN AUWIM, EAST SEPIK, PNG

Ethnographic records from various times can be utilised in archaeology and rock art research to understand people's connection to place as well as place-making. These records are often stories that "explicitly mention people's actual perceptions and/or interactions with rock art" which can involve categories of information about rock art (Monney & Baracchini, 2018, p. 533). In the field, an informed ethnographic approach (e.g., Taçon & Chippindale, 1998) was utilised in producing the ethnographic results. Ethnographic information relating to rock art sites, and distinctive hand stencil motifs from the respective site clan members was collected in 2018 (Figure 8). Auwim local guides and assistants chose rock art sites that were visited by the research team.

Unstructured, conversational interviews (both at individual and group level meetings), participation in site visits and field observation were all employed. Papua New Guinean research assistant, archaeologist and author (R.T.), interviewed clan members and traditional owners of the two primary rock art sites. Interviews were conducted individually with Auwim village elder and co-author, SK and other members, Mark, Peter and Timothy Kamuk who own the sites. These meetings were conducted in Tok Pisin at the respective rock art sites, the Angarik campsite (usually after each site visit), and at a central location in Auwim village after the systematic recording of each rock art site.

FIGURE 5. Hand stencils at Kundumbue in 2018 represent individuals, clans, and community identities. Note that artists purposely chose the flat-surface gravels to produce their hand stencils (Original photos: William Pleiber, Papuan Past Project, enhancement by Roxanne Tsang).



As the interviews were conversational and handwritten in the field, participants were explicitly asked if they were happy with what was written down or transcribed in the field in 2018 before the finalised version was considered complete. Also, at each respective time and space where ethnographic information was gathered, R.T. read out the written script to the interviewees which was then verbally approved and documented in an unpublished report (Tsang, 2018) for the Papua New Guinea National Museum and Art Gallery as part of the Papuan Past Project field reports. A thematic analysis based on the unstructured questionnaires and/or associated stories and descriptions of rock art sites/motifs was then undertaken to categorise the data. For instance, stories were matched with rock art sites or motifs, and in this context, hand stencil motifs.

PNG offers a unique opportunity to use ethnography because, in some places, rock art practices continue in the present. These ongoing practices of rock art provide an exceptional opportunity to investigate cultural and social contexts of rock art using ethnography. Particularly in Auwim, the rock art production is still ongoing, for example, the place-making practices undertaken through stencilling (see Tsang et al., 2021). In this context, the focus is on the use and role of rock art production through an emic perspective or informed methods. Following Monney and Baracchini (2018, pp. 533–536) we describe four emic categories of information about rock art from people that are directly linked to past or initial rock art creators in a contemporary setting.

The first emic category of ethnographic record we address involves the making or retouching of rock art (Monney & Baracchini, 2018, p. 533). As early as 1987, some rock shelters were found to contain rock art described as having been recently made. For example, at a secular site used for overnight camp stops which are also painted, "there were not only hand stencils on the rock wall, but also some on the white bark of a tree growing within it" (Gorecki & Jones, 1987a, p. 7).

Below are notes on some of the oral statements about hand stencils and finger stencils (Figure 9) collected in 2018. The distinctive hand/finger message are those described by Gorecki and Jones (1987a, p. 3) such as fingers bent at one of the digits; thumbs folded under the palm; or hands with the first and second fingers and the third and

FIGURE 6. Pundimbung rock shelter in 2018 (Photo: Hubert Forestier, Papuan Past Project).

fourth fingers held together leaving a gap between them (Tsang, 2018, p. 4, see table 1, pp. 14–15, see figs. 9 & 10):

> Hand stencils represent individual members of the clan who owns a rock shelter. The process of hand painting or stencilling begins at an early age. Hand stencils on rock-shelters are essentially clan members' hand marks of representation of ownership to a specific land area/boundary, and also to remember their generation of clan members and stories of their time on earth. Of these hand stencils, one may belong to the person whose skull is placed in the rock shelter including other deceased members of their clan.
>
> Specific finger message represents individuals from another clan. This usually occurs when clan members invite someone (who is not their clan member) to their stone house (rock-shelter). To remember the time he/she visited their place, he/she is asked to put a distinctive hand mark on their rock-shelter. For this reason, there are distinctive hand/finger messages such as those identified at Pukan and Pundimbung rock- shelters (Figures 9 & 10). For example, from living memory the informants gave an example of a little boy who is a cousin to Fidelis (one of our local research assistants). His parents had died and her aunt (Fidelis's mother) is from another clan whom she took and raised. His aunt then took him to Pundimbung cave and made a hand stencil (a small boy's hand with thumb folded in) using his left hand. This is in order for him to be identified separately from the rest of the clan. The small boy was from Indumbukae clan. In addition, other members of the clan who want to be identified individually or distinctively for some unknown reasons also paint these types of hand messages.

The statements above indicate individual and community identity through the production of hand stencils. It is also worth noting that in 2018, Samantha Katuk, inspired by a conversation with RT about what types of ochre is used, made a hand stencil on a flat riverbed rock (Figure 10a–d). This demonstrates that knowledge about how, where, and what type of ochre is used for producing hand stencils is often taught to succeeding generations, even if it is not ritual-related but further research is needed for clarification. For instance, people may be reluctant or unwilling to discuss sacred practices associated with some stencils.

In another instance in 2018, a spontaneous rock art site called Apuranga was created surreptitiously (see Tsang et al., 2021). In this case study, Tsang et al. (2021) interviewed community leaders and participants of the rock art production and recorded a narrative about the intention behind rock art creation in this specific rock shelter. The authors concluded that "the presence of an archaeological team with interests in rock art has shown that researchers can be embedded in people's cultural traditions and practices…in their network of relationships involving oral traditions, place-making strategies, and overcoming fear" (Tsang et al., 2021, p. 192).

The second emic category observed, is the social interactions with rock art and/or rock art sites (or images) also provide ethnographic insight (Monney & Baracchini, 2018, p. 535). We have documented this for a range of sites, especially rock shelters, where ancestors resided and which are still being used today. For example, the Paimbumkanja rock shelter containing no rock art before 2017 was used between 3000 and 2000 years BP for stone knapping while

FIGURE 7. Pundimbung Motif Classification (following Brady, 2005, 2010).

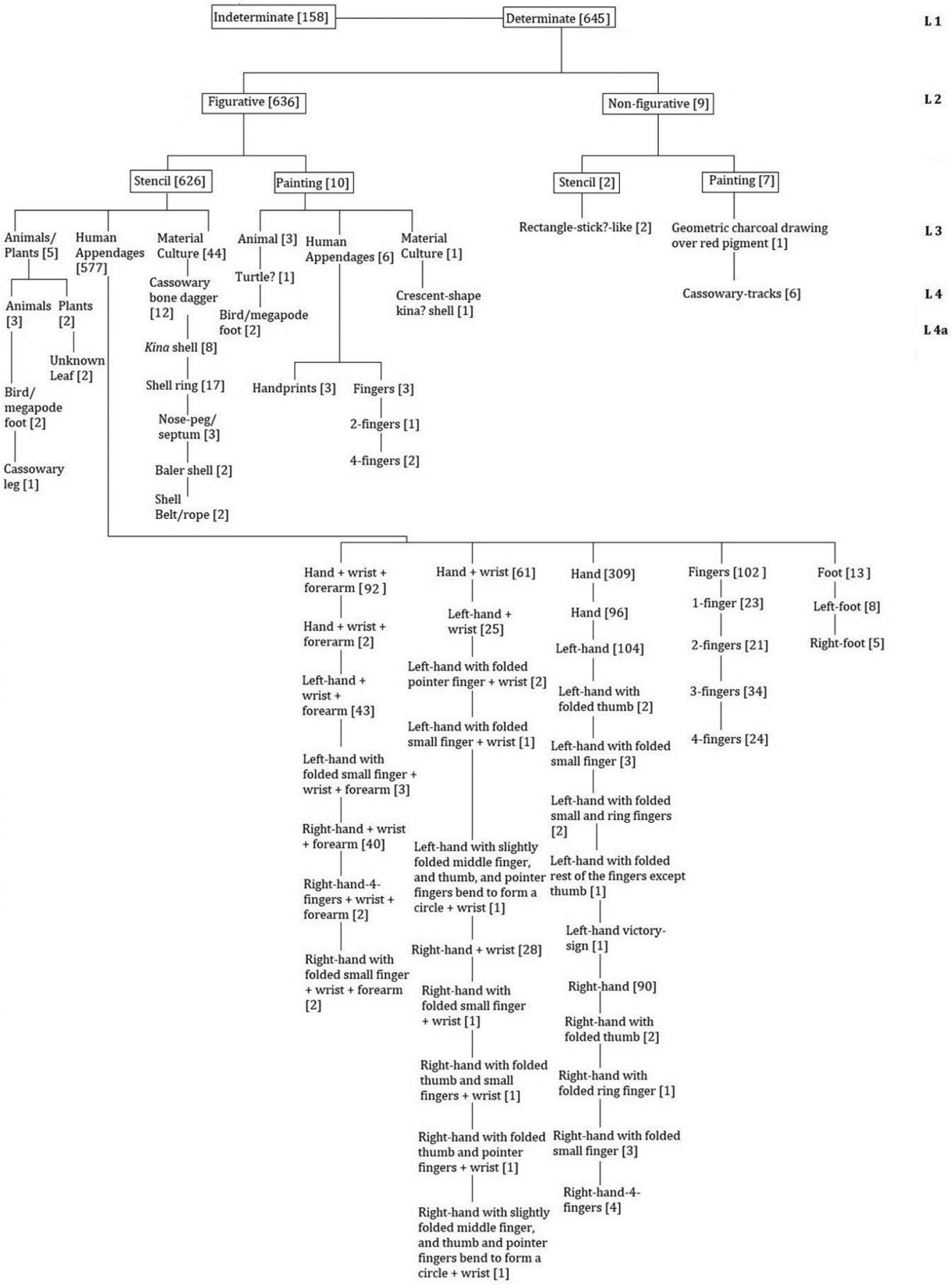


FIGURE 8. Auwim village chief/elder and co-author, Sebastien Katuk (front row middle - holding a steel bush knife) with local participants and clan owners of rock art sites visited in 2018 (Photo: Hubert Forestier, Papuan Past Project).

other stratigraphy layers represent remains of "meals, faeces, vegetable litter and fires" (Forestier et al., 2019, p. 126). After the first day of the excavation in 2017, there was no hand stencil. However, on the second day, a hand stencil was created (Figure 11). According to co-author, F-XR, one of the Auwim men (possibly adolescent given the observable comparison between F-XR's hand size against that of the stencilled hand in Figure 11) created the hand stencils to show they were at the site. The creation of a hand stencil after the first day at the site indicates the Auwim people's ongoing social interactions with rock shelter sites and producing hand stencils. However, further research is needed for clarification about their social relationships to the Paimbumkanja site. Other sites such as Apuranga were previously abandoned because of the information contained in the oral tradition narratives. Nonetheless, in 2018 local Auwim stencilled the rock shelters in the process of using the shelters again, although there are implications of researcher presence in this rock art creation (Tsang et al., 2021). Producing and reproducing rock art designs on other shelters and media (e.g., Sullivan, 2012; Tsang et al., 2021), scraping with introduced objects such as steel bush knife (Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b), smearing blood through initiation ceremonies, other initiation rites at the sites and depositing important objects at the sites (Edwards & Sullivan, 2008; Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b). Thus, in Auwim, the social interactions with pre-existing rock art sites are inherent in the physical changes to both the site and its rock art (Monney & Baracchini, 2018, p. 535).

Current ethnographic observations provide evidence of rock art being produced on existing rock shelters without pre-existing art (Tsang et al., 2021). However, reproducing rock art designs on other media (e.g., see Apthorpe, 1962; Wilson & Ballard, 2018) has not been documented among the Auwim, despite bark paintings being produced on paper (Sullivan, 2012). The author also observed steel bush knife scraping, outlining or overlaying at certain sites such as the Pundimbung rock art site in Auwim as evidenced by field observations (see also other parts of the world, for example in Sassoon, 1960, p. 51). In terms of smearing, in 1987, locals who accompanied Paul Gorecki and Rhys Jones mentioned that at two rock art sites that are restricted to women, "extensive areas of blood stains and smeared parallel lines made from blood" – produced through piercing of the penis glans through bamboo implements during esoteric male rites (Edwards & Sullivan, 2008, p. 18; Gorecki & Jones, 1987a, pp. 5–6). In other parts of the world, there is evidence of smearing of flour-paste onto cattle paintings (Balfour, 1956, pp. 83–85), however, in Auwim there is only a locally understood history of initiation rituals with rock art and hand stenciling production (Edwards & Sullivan, 2008; Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b; Roscoe & Telban, 2004; Sullivan, 2012).

The deposition of important and sacred objects in rock shelters was common during the contact period in Auwim (Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b). Particularly at Pundimbung, such ritual objects include "a large, decorated pot from the Middle Sepik, platforms

FIGURE 9. Hand stencils at Pundimbung rock shelter in 2018. Images (top) show a left hand + wrist and folded small finger stencils perhaps representing an individual from another clan (Original photos: William Pleiber, Papuan Past Project, enhancement by Roxanne Tsang).

containing human bones, woven armbands from dead people, and a sheltered alcove in which were placed sacred bamboo flutes" (Gorecki & Jones, 1987a, pp. 6–7). In 1987, Gorecki and Jones (1987a, pp. 6–7) with their local team spent the night there during which "two of the men played the flutes and danced several of the songs with which the site is related" (see also Gabriel & Gorecki, 2014). There are also a lot of memorabilia at the sites that belongs to those who are deceased, including hunting trophies such as bows, arrows, pottery and human and animal skulls (Edwards & Sullivan, 2008, p. 16; Tsang, 2018). In other parts of the world, examples of "depositing offerings" and "feeding rock art figures" are also common (e.g., see Monney & Baracchini 2018, p. 535 and references).

The third emic information involves the identification of the subjects depicted in rock art and their meaning/s. The types of emic information potentially available are in the form of identifying various rock art images with their names as well as local narratives associated with objects portrayed (i.e., material cultural objects), body-design parts and meaning (i.e., hand, foot and finger stencil signs) and the place in which they are located (i.e., rock shelters or caves). In Auwim, locals have identified various rock art motifs, especially the material cultural object stencils, such as the *kina* shell stencils which represent bride price ceremonies and long-distance trade networks (Edwards & Sullivan, 2008; Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b; Tsang et al., 2020), and bone dagger stencils which represents homicide events and boy's initiation (Edwards & Sullivan, 2008; Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b; Tsang et al., 2022). Individual artists were also identified, for example, some hand stencils were recognised as being made by a local elder's deceased brother whose skull was also placed in the cave; several informants were also able to demonstrate the production of hand stencils in addition to the identification of objects depicted; lastly, some hand stencils were documented as belonging to living and known individuals in 1987 (Gorecki & Jones, 1987a, p. 7, also Gabriel & Gorecki, 2014) and also in 2018 when the emotions of fear of Apuranga rock shelter were expressed through an oral narrative because of the information contained in the story (Tsang et al., 2021). Such affective and relational emotions linked with rock art sites and their motifs, explained

FIGURE 10. A hand stencil (a-b, d) was created by Samantha Katuk (c) in 2018 to demonstrate how hand stencils are produced. She used ochre from along this pictured creek (d) at Angarik old settlement site, south of Auwim village, Upper Karawari-Arafundi region, East Sepik, Papua New Guinea (Photos: William Pleiber, Papuan Past Project).

through oral narratives, are also observed in the southwest Gulf of Carpentaria in northern Australia (e.g., Brady & Bradley, 2016; Brady et al., 2016).

Apart from available knowledge of identifiable stencilled objects, local Auwim people were also able to link various origin narratives with the rock shelters in which the art was created. For example, and as noted above, Gorecki and Jones (1987a, pp. 6–7) reported that while they were overnight at Pundimbung rock shelter flutes were played and songs related to site were sung and that "these were origin myths related to the formation of various species of birds and animals and indeed the formation of the land itself" (see also Gabriel & Gorecki, 2014). One of these origin narratives recounts the emanation of all human language at the Pundimbung rock shelter (Gabriel & Gorecki, 2014, p. 25). Also, in 2018 the local Auwim created a new rock art site consisting of hand, foot, leaf and bone stencils as a way of reconnecting to an abandoned rock shelter that was once feared (Tsang et al., 2021). Important to this process was an oral narrative about the human remains present at the Apuranga rock shelter and they described how painting this rock shelter (i.e., through a place-marking strategy) was a way of overcoming fear of place/rock shelter (Tsang et al., 2021). Both the time of creation, and the sociocultural use of the shelter, was available, unique information relating to creating rock art in contemporary settings.

The last emic category is people's cultural connections with graphic expressions on media other than rock are another source of ethnographic information. In Auwim, there are both sago bark paintings as well as paper paintings depicting "mythic beings" and "non-figurative designs that act as mnemonic devices for clan histories" (Sullivan, 2012, p. 9). We also have cultural connections with graphic media in the form of community members engaging with photographs and representations that researchers showed them and/or the community members taking their own photographs of art and telling stories about the subjects.

FIGURE 11. A hand stencil created by an Auwim man at the Paimbumkanja rock shelter site in 2017 and co-author F-XR hand for scale/comparison (Photo: François-Xavier Ricaut).

One such example of community members engaging with the photographs that researchers have shown them is that of anthropologist, Nancy Sullivan, and her team (e.g., Sullivan, 2012, p. 14, see fig. 6 – a local identifying his bark painting from 1961). In 2010, Sullivan's team suggested "Auwim begin painting their designs on paper for sale to tourists and visitors" which she indicated that the difference between the designs (i.e., specific motifs) of bark paintings collected in the early 1960s has not changed much to those painted on paper (Sullivan, 2012, pp. 12–13, see also pp. 16–19, figs. 7a-z to 8a-n).

There is a huge difference between designs on bark paintings and those on rock shelters, whereby the bark painting designs, or motifs often directly represent or reflect origin narrative symbols of specific clans (Sullivan, 2012) rather than stencils which seem to be related to a specific individual as Forge (1991) argued. Importantly, people were able to recognise some of their bark paintings from 1961 or linked them with their deceased relatives. They were also able to create context and narrative links to specific motif designs on bark paintings as well as in recent paper paintings. For example, naming what a specific motif represents, such as *Uook Kumugna* which is the mother snake who advises men in the men's house (Sullivan, 2012, pp. 18–19, fig. 8l). There are, however, some differences in techniques of their paper paintings because of the different forms of surfaces. The differences include using acrylic pigment colours in paper painting (Sullivan, 2012) and not in bark paintings where "charcoal, lime, and brown and white clays to make elaborate spiral, animal, or anthropomorphic motifs are connected to specific artist's clan" (Edwards & Sullivan, 2008, p. 19; Haberland, 1966, pp. 43–44, table 13) and there are also a lot more symbols in the paper painting in certain individual's artwork (Sullivan, 2012, p. 15). This shows a wealth of emic information that is provided and shared by contemporary informants that own these rock art sites in the region.

DISCUSSION

In Auwim, past hand stencil productions are associated with male initiation ceremonies. One hundred percent of the motifs at Kundumbue are hand stencils (although the majority of hand stencils have faded leading us to identify them as indeterminate) (Figures 3 and 5). On the basis of our visual observation of the difference in hand sizes, these hand stencils consist of both adult and young children's hands indicating the age-range of participants in ritual ceremonies. Previous reports stated that Kundumbue was used for both male and female initiation ceremonies (Edwards & Sullivan, 2008, p. 26). Yet the site only maintains its male sacred ritual function today, evidenced by the local people's continuing protection of sacred information. The significance of Pundimbung being a creation place (Gabriel & Gorecki, 2014, p. 25) may directly link with the rock art and particularly the many hand stencils that adorn the rock shelter (Figures 6 and 7). Previous research documented that hand stencil sites were associated with religious activities; boys' initiation

ceremonies are a major part of the Auwim people's cultural obligation and at Pundimbung, the young initiate's penis was bled, using cane reeds inserted into their urethra, the palms of their hands were covered with blood and then pressed along the cave walls to make handprints (Edwards & Sullivan, 2008, p. 18; Sullivan, 2012, p. 13, 1998; Roscoe & Telban, 2004, p. 108). Through this locally understood history, the Pundimbung site maintains its identity as a rock shelter that was once a ritual and creation story centre for language, landscape and people (Edwards & Sullivan, 2008; Gabriel & Gorecki, 2014; Gorecki & Jones, 1987a, 1987b; Roscoe & Telban, 2004). These ceremonial events at these sites are still sacred in their society today, although most of the practices ceased between the 1960s and 1990s (Edwards & Sullivan, 2008, p. 11, 18; Roscoe & Telban, 2004). Therefore, specific knowledge relating to this initiation event is still restricted. The limited ethnographic information on the practices is thus not related to the lack of ethnography, but rather to local restrictions on sharing restricted information (e.g., see Monney & Baracchini, 2018, pp. 529–530).

The notion of the past production of hand stencils relating to only significant initiation rituals is changing to more mundane activities in contemporary Auwim. For instance, the present understanding of the significance of hand stencils in Auwim from our fieldwork in 2018 indicates mundane activities as place-making strategies. These activities have a twofold function in contemporary Auwim based on the type of hand mark. First, hand stencils in each rock shelter belong to members of the specific clan that owns the general area, suggesting they signal a claim of land ownership or boundaries. Hand stencils represent territorial ownership of land so that the next generation can relate to them. They represent clans and specifically individuals' identities – a story that will linger for the upcoming generations. Second, specific "finger stencils" represent individuals from another clan (Figure 9) and some distinctive "finger-messages" represent those within their clan who would rather be identified uniquely (Tsang, 2018). These stencils from outsiders occur when clan members invite someone (who is not their clan member but a relative) to their *ston-haus* (cave or rock shelter). To remember the time that someone visited their place, they are asked to put a distinctive hand mark on their rock shelter wall, such as, in one instance, Fideli's cousin, who is from the *Indumbukae* clan (Tsang, 2018, pp. 14–15). These distinctive hand or finger stencils occur at both Pukan and Pundimbung rock shelters amongst other rock shelters in the broader Upper Karawari-Arafundi region (Figures 3, 7 and 9). The continuation of hand stencil production and associated knowledge related to mundane activities was also demonstrated in 2017 and 2018 (Figures 10 and 11) (also Tsang et al., 2021). The histories of hand stencil production remain as static stories of the time the person was at the site. The sites also embody cultural history in that villagers go back and tell the stories associated with stencils to the next generation. Associated surface materials at these shelters also belonged to individual clan members who are now deceased and serve as a memory of the persons involved or had passed on (Edwards & Sullivan, 2008; Tsang, 2018).

The contemporary and historical engagement with hand stencils in Auwim contrasts with what previous authors have speculated about hand stencils in other parts of the world. For example, old hand stencils are often interpreted as the signalling of the first arrival of modern humans on the landscape because they were made close to the timing of the initial human occupation of these specific areas (for example in Europe, Southeast Asia [Sulawesi] and New Caledonia, see Aubert et al., 2014, 2018; Pike et al., 2012; Sand et al., 2006, also Taçon et al., 2014). In Europe, hand stencils and particularly those with 'missing fingers' or 'mutilated hands', have been theorised to have resulted from either pathological events (such as frostbite), the practice of shamanism or hunting magic, hallucinations or altered states of consciousness activities (see Currie [2016] and Morley [2007] for a review) and, recently hypothesised, sign performatives (Etxepare & Irurtzun, 2021). However, in Auwim culture, missing fingers or folded finger stencils are associated with people from other clans who visited the site (Tsang, 2018). Similarly, in central Queensland, mutilated hands are messages representing either individual signatures or records of visit, memorials after death, ancestral spirit messages, and story-telling amongst other possibilities (Moore, 1977, p. 322; Quinnell, 1976, p. 229). In other parts of Australia, such as western Arnhem Land, an elder's claim to a clan area has been associated with his mother's hand stencil, and they are often at rock shelters where people once camped (Gunn, 1989, 2006, p. 97; Taçon, 1989). Equally, in Auwim, hand stencils also represent clan ownership and boundaries of those who own specific rock shelters. On Uneapa in New Britain (PNG), people also relate to rock art (although engraved artwork) as the relevant intention of expressing clan ownership and identity which could be both visible and restricted to outsiders (Byrne, 2013). Likewise, in South Sulawesi, handprints in new houses in contemporary settings are done through a ritual called *Mabedda Bola* which marks the ownership of a family or group who dwells in the house and it is also done in past in particular caves (Permana et al., 2017). While these international examples provide insights into understanding hand stencils generally, our case study has provided more contextual evidence of what we can learn from hand stencil production in relation to place and place-marking in contemporary settings as a result of both ritual and mundane activities.

The notion of place-making is complex. It can incorporate both the idea of "social activities", and the "societies" in which these social activities are expressed based on the society's own societal structure (Malpas, 2018, p. 34). In this context, this refers to people's cultural belief systems which are a set of cognitive and behavioural practices that combine or separate groups of people. The notion of place here also includes the physical objects and events relating to it and its causal processes that were controlled by those social activities and society (Malpas, 2018, p. 34). Here Auwim is the society and place in which

narratives are embedded in hand stencil images and their links to people through oral traditions. These oral traditions are drawn from people's experiences (through social activities) and their knowledge of histories. Place always changes over time as noted by Seamon (2018) but in the narratives relating to hand stencil production the structure of Auwim places with hand stencils remains over time, nevertheless, the social narratives change over time owing to the purpose of production.

Additionally, the generative processes of place-making include creation, interaction and identity (Seamon, 2018), all of which are observed in Auwim's production of hand stencils, continued interaction with rock art sites and rock shelters, and identities through associations with hand marking. Each clan's ownership of a rock shelter consists of hand stencils amongst other graphic systems and memorabilia by which they construct their social narratives. Thus, these artworks, sites and associated features are often reflective of specific activities of individuals and societies and represent a shared communal history memorialised in place.

CONCLUSION

Our study of contemporary knowledge on hand stencil creation and rock art sites suggests a form of communal history for Auwim. The research has revealed that hand stencils can show multiple interpretations for similar motifs over time and across space. However, individuals, groups, or clans and religious activities that once took place through both esoteric magic during boy's initiations and/or mundane activities from another clan visitor resulted in aspects of individual and group identities and activities remaining in place in rock shelters as artwork for further community refection.

Thus, our case study from Auwim, Upper Karawari-Arafundi region, East Sepik, PNG provides new ways of understanding the use and role of producing hand stencils from living knowledge and practices of people directly linked with the artists. The two types of activities associated with the production of hand stencils in living memory or contemporary times demonstrate that hand stencils are a key part of communal history. They are also a priority of a clan and community's place-making through their social narratives manifested in rock art images such as hand stencils. These activities include past rituals and ceremonies (i.e., initiations of novices), and in contemporary settings, mundane activities (i.e., clan visitors or seasonal camping sites during hunting or tribal affairs). In addition, oral statements about hand stencils demonstrate that those with folded fingers represent other clan visitors to the rock shelter sites, which indicates that human behaviours associated with such universal body-design rock art themes can have multiple meanings over time and across space.

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