Shake Well Midden:
An archaeology of contemporary graffiti production in Perth, Western Australia

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Abstract

Following on from the inroads archaeologists have made into the study of graffiti, this project set out to examine graffiti production through the lens of its associated material culture. A graffiti midden comprising the detritus of mark-making paraphernalia and other contemporary residues was recorded. The study reveals that aerosol painting was the dominant technique employed in the production of graffiti. One component of the assemblage—the aerosol can—was selected as a focus for detailed analysis. The results show distinctive patterns in the archaeological remains suggestive of particular behaviours on the part of graffiti writers, including the selection of speciality aerosols and particular discard practices. The findings of this preliminary investigation indicate that an understanding of graffiti as an artefact-generating activity complements and broadens existing archaeological treatments of graffiti as artefact. This approach has the potential to reveal new insights into a wider context of activities surrounding graffiti production and the creation of graffiti writing places and communities.

Introduction

The last decade has witnessed an enormous growth in the scholarship of graffiti. Archaeologists have contributed to this literature by applying a range of tools, techniques and conceptual frameworks to the study of historic inscriptions, street art, public murals and other contemporary mark-making activities (Burton and Farrell 2013; Graves-Brown and Schofield 2011; Neal and Oliver 2010). Within the Australian context, studies have examined the production of graffiti across a variety of social, historical and institutional settings, from contact rock art, prisons and quarantine, to the streetscapes of late modernity (Agutter 2013; Clarke and Frederick 2012; Clegg 1993; Crisp 2010; Frederick 1997, 2000, 2012; Frederick and Clarke 2012; O’Connor et al. 2013; Wilson and David 2002). In their efforts to understand the cultural contexts and motivating forces underpinning mark-making behaviours, both past and present, archaeologists have tended to focus their approach on the content analyses and spatial distribution of graffiti itself (Baird and Taylor 2011; Casella 2009; Frederick 2009; Orengo and Robinson 2008; Ralph 2012; Wilson and David 2002; Winchester et al. 1996). To date there has been little investigation of other archaeological signatures created in the context of graffiti and its associated social activities. This paper seeks to redress this omission by presenting a preliminary investigation of a graffiti midden in Perth, Western Australia (WA). The aim of this study, undertaken in 2012, was to consider what other kinds of archaeological evidence might tell us about graffiti production and its social context.

The Study Area

The study area is located near the Swan River on the outskirts of Greater Perth, some 13 km northeast of the city proper (Figure 1). The suburb in which it is situated enjoys a semi-rural atmosphere due to low-density housing, expansive parklands, agistment paddocks and the area’s association with the historic settlement of the Swan River Colony. From the early 20th century the locale has served as a railway hub, with the Midland Railway Workshop servicing all WA Government railway stock. Although the Workshop closed in 1994, the area continues to provide a railway corridor for both commuter lines and commercial freight.

Figure 1 General location of Shake Well Midden and specialty aerosol suppliers in Perth, WA (by Ursula K. Frederick).

1 The location of the site is deliberately described in general terms only.
Shake Well Midden

The site under investigation covers approximately 0.7 ha where a railway crosses a small and seasonal tributary of the Swan River. The railway bridge across this watercourse spans approximately 100 m, with graffiti concentrated on and around the concrete bridge supports and embankments on either side of the river. The study area is zoned as rail and parks and recreation reserve (City of Swan 2014). Several pathways run through the site and, in addition to comprising a rail, river and recreation corridor, the land also abuts local properties and forms part of a walking trail used by the general public. Accordingly, the area is unfenced and access to the site is not difficult; however, much of the ground under and between the railway structures is overgrown and water flows through the centre of the site. This watercourse is not very deep, and a variety of objects (e.g. old tyres, planks of wood, milk crates, rocks and a metal ladder) have been positioned to facilitate passage across it.

The graffiti at the site corresponds to the general character of graffiti produced in the Perth and Fremantle metropolitan areas in that it is dominated by tags and elaborate ‘pieces’, with far less in the way of stencils, paste-ups, stickers or other kinds of sculptural forms (pers. obs.)2. The large-scale graffiti pieces are necessarily directed to the smooth and sizeable walls that buttress the rails (Figure 2), whereas smaller tags, motifs and other marks are spread across the steel girders, concrete beams, piers, footings and bridge embankments, as well as surrounding ‘natural’ surfaces (e.g. rocks and trees) and portable objects (e.g. plastic bottles or tyres) (Figure 3). The application of graffiti to natural and human-made structures and movable items inclusively, is indicative of a physical space that has been socialised—a landscape of graffiti—an environment which graffiti writers have attempted to remake as their own.

In addition to the graffiti itself, the site contains a wealth of archaeological material, much of which can be linked to mark-making activities. Aerosol cans were the most dominant artefact type, with other writing or marking materials and instruments, including felt markers, white-out pens, paint tins, brushes and rollers, and paint rags and roller trays, also present (Figure 4). Unique objects included a page from a sketch-book and pieces of cardboard that had been used as a basic stencil. In addition to those artefacts directly associated with graffiti there were a variety of other items. These provided a broader picture of the kinds of activities that appeared to be taking place on-site, including food and beverage consumption, sexual liaisons (used condoms) and marijuana smoking (Figure 5). The primary temporal indicator within the assemblage was the ‘use by date’ on drink bottle containers. Dates ranged from 18 months to the weeks immediately prior to the survey period.

Figure 2 View of the site environs, with an example of the large-scale graffiti pieces present on-site (photograph by Ursula K. Frederick).

Figure 3 Views showing how graffiti is integrated into the site environs (photographs by Ursula K. Frederick).

Figure 4 A variety of implements for painting demonstrate the use of different painting techniques at the graffiti site (photographs by Ursula K. Frederick).

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2 I make this observation on the local character of Perth and Fremantle graffiti with the obvious caveat that there are notable exceptions, including the large-scale stencil of Bon Scott under the Stirling Bridge, commissioned murals and works generated in the context of street art festivals like Dear William. I also do not include graffiti and urban art produced in Perth (e.g. UWA, West Perth) by non-local artists, such as Invader.
While marking implements and other paraphernalia of graffiti production were scattered across the 0.7 ha, the focus of archaeological recording was a large midden located under the rail bridge at the southeastern end of the site. Much of this matter was made up of discarded aerosol cans and their fragmented metal and plastic components (Figure 6). This area, henceforth referred to as Shake Well Midden, was chosen for further study because of its high density of surface artefacts. Archaeological material does not occur in such densities across the entire 0.7 ha, and Shake Well Midden appears consistent with being a localised aggregation place, rather than a representative sample of artefact distribution across the site area. A grid system of 3 m square quadrants was established in this portion of the site in order broadly to map the ground between the railway embankment and concrete support, covering a total area of 270 m². Artefacts were noted and numbered according to quadrant in the first instance, followed by more detailed recording of the aerosol cans as the most dominant artefact type.

All aerosol cans in the survey area were recorded according to their morphological features (such as size, brand and colour [where identifiable] and the type of valve system in use). Attributes relating to the condition of the can were also recorded, such as whether it was intact, empty, crushed or pierced, and whether paint residue and/or other marks were visible on its surface. Aerosol can parts were also recorded where possible; for example, a significant number of nozzles were found separate from the cans themselves.

Aerosol Can Morphology

In the 60 years since the aerosol can was first used for dispersing paint, various developments in the design and technology of the spray can have taken place (Laauwe 1976; Seymour 1951, 1956; St Germain 1959). When intact, commercially available aerosol cans comprise a number of essential components: a cylindrical casing or ‘can’, an actuator or ‘nozzle’, a valve system, a gaseous propellant and the substance that the can is made to contain and spray (i.e. the paint pigment). Most aerosol cans also incorporate a lid or cap which protects the nozzle and prevents inadvertent spraying. Aerosol paints also commonly incorporate ball bearings inside the can. When the can is shaken, these mix the propellant with the pigment, allowing the paint to be dispersed in an even mist. Along with these standard components, some artist aerosols also incorporate distinctive elements within the can design, such as a ring or doughnut to indicate the colour of the pigment inside the can (Figure 7). In addition, there is now an entire product range of aerosol can accessories specifically designed to meet the needs and desires of the graffiti writing community. Such accoutrements include a large range of speciality nozzles, pistol grip attachments and spray can ‘silencers’ to eliminate the notable rattle of the ball bearings (The Butcher Shop 2014a).

Aerosol cans use one of two types of valve system, generally referred to as ‘male’ and ‘female’. A male valve system requires a corresponding female nozzle in order to function properly and vice versa. In effect, nozzles are removable parts that may be used interchangeably with other aerosol cans, as long as the correct valve system is in use. Many commercial hardware aerosols, such as touch-up paints and all-purpose enamels, use the male valve system, whereas specialty paints produced for, and by, the street art and graffiti community generally use a female valve system. Nozzles (also called ‘caps’) direct the volume, shape and direction of the aerosol paint. If the hole in the nozzle becomes clogged the spray will not disperse. Most aerosol cans incorporate nozzles that can be removed, though they are not widely sold as separate parts. However, in recent years a specialty line of nozzles has emerged and a range of caps are now available for individual purchase. For the most part, these nozzles are designed and targeted at the graffiti writer, with each cap made to perform a purpose. There are, for example, caps for outlines, fast-release ‘fat’ caps for infill, and skinny nozzles to produce fine lines and...
details (Molotow 2006–2008). All of these caps are made for female valve system cans.

Similarly, early graffiti writers and street artists generally relied on all-purpose aerosol brands (e.g. Krylon or Aussie Export) sold in hardware stores, but today there exists a substantial market in speciality artist aerosols (e.g. Ironlak, Razorpaint, Molotow). The latter are increasingly favoured by graffiti writers and are purchased online or in specific art and graffiti supply stores. Within WA, aerosol paints cannot legally be purchased by anyone under the age of 18 and suppliers keep aerosol cans locked to prevent theft and minimise sales to minors. Hardware variety aerosols can be obtained from numerous outlets in the local vicinity, whereas the speciality paints preferred by graffiti writers are sold in only a limited number of places, located some distance from the study area (refer Figure 1).

Results

A variety of artefacts were recorded across the 270 m² area of Shake Well Midden, though much of it was concentrated in a central 45 m² portion of the survey area. Scissors, plastic drink bottles, wire, tyres, bottle glass, food wrappings, a dust mask, fabric and plastic bags, and a large plastic tub were amongst the artefacts found. The aerosol can, and its component parts, was by far the dominant artefact type and the results herein focus on that portion of the assemblage only. A total of 752 spray cans were recorded, representing a considerable degree of diversity, with 39 different brands in evidence (Figure 8). These range from the common hardware variety that occurred in fewer numbers (21%, n=161) to the speciality aerosols that dominated (73%, n=550). Of the total number recorded, approximately half (n=379) were represented by a single brand: Ironlak.

The condition of the spray cans revealed intriguing trends with regard to discard. Not only were there few intact cans, only 4.4% (n=33) of the assemblage was recovered with the nozzle attached. Furthermore, the majority of cans had also been pierced and/or crushed (Figure 9). Both puncturing and crushing would effectively release all of the propellant and render the device inoperable. Though there is paint residue around many of the punctures, it is difficult to discern how empty the cans may have been when they were destroyed. Cans appear to have been crushed by foot, at the centre where the metal is softest, while puncture marks reveal that a variety of instruments were used. Moreover, it would seem that the aerosol cans did not pierce easily, with many revealing numerous indentations suggesting unsuccessful puncture attempts. A number also show distinctive smudges, indicating that some graffiti writers chose not to wear latex gloves, even though remains of the latter are also present around the site.

An intriguing result emerges when the numbers of aerosol cans and nozzles recovered on site are compared. With only 197 nozzles retrieved in total, and a total of 752 cans, approximately 75% of the nozzles appear to be missing entirely. This significant disparity becomes more apparent when considering the dominance of the Ironlak brand. Because each 400 mL Ironlak can comes with a total of three nozzles—a pink ‘outliner’ cap and two NY fat caps (Ironlak 2014)—a total of 1139 Ironlak nozzles alone might feasibly

![Figure 8](image-url) A variety of different aerosol cans recovered from Shake Well Midden. The cans on top use a ‘male’ valve system, the cans below use a ‘female’ valve system (photograph by Ursula K. Frederick).
occur on-site. This means that only 13% (n=197) of the 1510 nozzles that originally came with the aerosol cans deposited at Shake Well Midden remain.

Despite the relatively low number of nozzles recovered, there was considerable variety, with a total of 24 different types represented. Almost 90% (n=177) of the nozzle assemblage was made up of male caps that fitted the female valve system, indicating that the majority of caps remaining on site were designed to work with speciality paints. This trend is broadly consistent with the high proportion of speciality aerosols evident in the spray can assemblage. While eight types of nozzle dominated this assemblage (Figure 10), many of the caps recovered were non-standard items that would have been purchased separately. Interestingly, many of the nozzles showed signs of multiple use, with traces of more than one colour at the point of pigment dispersal indicating that a system of nozzle exchange was in operation on site (Figure 11).

As the spatial distribution of the cans and nozzles indicates, the majority of the archaeological material was concentrated in the centre of the area recorded, under the bridge girders but away from the concrete surfaces where the larger graffiti pieces have been sprayed (Figure 12). Adjacent to the midden was a large plastic tub, turned on its side, with some aerosol cans at the bottom. The association between this container and the large density of archaeological material nearby suggests that the tub may have served as a large rubbish bin that was subsequently knocked over. If this was the case then it suggests that either someone has been involved in cleaning up the site or that the graffiti writers themselves sought to maintain some kind of order. This complements the other trends observed regarding material discard: that graffiti writers are making conscious choices about what, how, and where they dispose of the materials they use in the course of graffiti production.

### Discussion

A number of interesting trends emerge from the archaeological material recorded at Shake Well Midden. Key amongst these was the dominant use of speciality artist/graffiti products, including particular paints and non-standard caps. The significant proportion of Ironlak and

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3 Previously the site has been the focus of clean-up activities by local residents, as well as the subject of a university student architecture workshop.
other speciality aerosol cans present on site indicates a clear preference for paints produced by, and for, the graffiti writing community. Because such speciality aerosols are neither inexpensive nor readily sourced nearby, the dominance of these brands is worthy of note. The choice of speciality materials over hardware varieties suggests a desire for greater control and quality over expediency and low cost. The high proportion of Ironlak and Razorpaint cans is also significant. At the time of this study these brands were the only Australian-owned artist aerosols on the market.

Owing to state legislation regarding the sale of aerosols to minors, such materials are not easily acquired or carried in bulk. Nor are they cheap. Compared with the price of a standard can of Aussie Export aerosol paint (under $4.00), a 400 mL can of Ironlak currently retails for $7.95 (The Butcher Shop 2014b). Based on the number of cans recorded in the midden and the average price of the cans used, it would seem that the graffiti writing community has spent at least $5000 in making these marks. Of course the cost of doing graffiti can be much higher. In WA graffiti is treated as a criminal offence, resulting in serious penalty. In addition, the State Graffiti Taskforce aims to reduce the production of graffiti ‘vandalism’ significantly by reporting, rapid removal and prevention; since 2010 their Operation Eraser has charged 692 people (State Government of WA 2013). If convicted of property damage, a graffiti writer may face imprisonment for up to three years, in addition to a fine of up to $336,000. If this was not a sufficient deterrent, under s.557G of the Criminal Code Act Compilation Act 1913 a person who is ‘in possession of a thing with the intention of using it to cause damage consisting of graffiti is guilty of an offence and is liable to a fine of $6000’. Accordingly, graffiti writers take on considerable risk simply by transporting their materials. With the closest sources of artist aerosols located more than 10 km from Shake Well Midden, graffiti writers clearly come to the site prepared and with a purpose. In the context of WA policing and graffiti legislation it is hardly surprising that writers dump their cans when they have finished making their marks, as this undoubtedly reduces the risk of discovery on their return journey from the site. But how then do we account for the relatively few nozzles discarded?

It is possible that nozzles are missing as a result of taphonomic factors. The light plastic is no doubt susceptible to displacement by the seasonal flows of the river that runs through the site. Furthermore, the small size of the nozzles means that they might easily be stepped on and pushed into the upper layer of soil, although the soil is highly compacted near the midden proper. Certainly a few nozzle fragments recovered from the area indicate that some nozzles have been crushed as a result of on-site activities. Nevertheless, both processes would require that nozzles were removed from cans intentionally, because the can system has been designed so that nozzles do not fall off easily. One reason nozzles might be removed is that they can clog and thereby block the aerosol paint from dispersing effectively. In this instance the clogged nozzle could be replaced by a spare so that painting could resume. Alternatively, a nozzle might be removed once a spray can has been emptied for reuse with a different can.

Another possible explanation for the low proportion of nozzles recorded at Shake Well Midden is that they were curated by graffiti writers for later use. The small size and minimal weight of the caps make them easy to carry, hide or quickly discard if necessary. The discard pattern of the cans lends weight to this interpretation because more than 95% of cans had their nozzles removed before disposal. Further, it is apparent from the crushing and piercing of spray cans that there was a series of disposal conventions practiced on-site. Spray cans may have been damaged for the purpose of entertainment, or to prevent cans from rolling underfoot. Another interpretation is that the cans were destroyed, particularly if pigment remained, as a deliberate strategy to ensure that other writers could not use the remaining paint to write over, and ruin, earlier artwork.

Conclusion

The purpose of this study was to expand an archaeological approach to graffiti research to incorporate an investigation of the material culture produced in the context of graffiti creation. A survey of the archaeological remains recorded at Shake Well Midden indicated that the site had been used for a range of different activities and that graffiti was produced with a variety of different implements. Material such as this has the potential to broaden our understanding of how graffiti is produced and to show what other kinds of activities take place at graffiti sites. Further investigations of this kind offer the potential to explore the motivations and intentions of graffiti writers, as well as interrogate how community perceptions of graffiti writing compares with the material evidence of graffiti related activities. In-depth analysis has the potential to explore questions relating to social identity and issues, including age, gender, education and the social demographics of individuals and groups.

A preliminary analysis of the dominant artefact type—the aerosol can—has yielded a number of interesting trends, suggesting definitive choices and behavioural patterns made on the part of graffiti writers with regard to their techniques, materials and disposal practices. These conventions clearly demonstrate, alongside the graffiti itself, that graffiti production is a highly socialised and communal, albeit ‘illegal’ and illicit, activity. By this I propose that Shake Well Midden is a social hub shared and contested by different individuals and crews, and that it is also a site of group activity in which specific practices are maintained. The artefacts analysed indicate that graffiti is a planned pursuit, requiring cost, commitment and risk on the part of the individuals undertaking such ventures. The distance of the site from the source of speciality graffiti supplies, combined with the presence of food and beverages, clothing and other evidence of ‘occupation’, signals that the site is not simply a place for hasty territorial ‘bombing’. Moreover, the location of the site, situated in a semi-rural setting away from the highly populated sites of the city, suggests that the graffiti here is not made to be seen by as many people as possible. Instead, it would seem that these writers are making graffiti to be seen and shared primarily by members of their community. The archaeological signature and the site environs itself—resonant with all manner of marked surfaces—would seem to evoke a more considered and enduring desire on the part of the graffiti writer. That is, despite the deterrents of law enforcement and legislation and an apparent dearth of legal walls in the Perth and Fremantle metropolitan areas (Legal Walls n.d.), Shake Well Midden reflects that human longing writ large—to find, make or somehow mark out a place of one’s own.
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