

Exploring the Biography of Gaming Stones at Aredhiou, Cyprus during the Late Bronze Age

Abstract

This paper explores the social lives of gaming stones, a significant number of which have been found at the Late Bronze Age farming settlement of Aredhiou *Vouppes*, Cyprus. The number of gaming stones found at the site is unprecedented within a Late Cypriot context. Comparatively few are found in the contemporary urban centers, and in general they appear to be more typical of the Middle Cypriot social world. The purpose of this paper is to investigate the agency of these gaming stones, and to consider them as social mediators within the community of Aredhiou. It explores the social and cognitive lives of these objects, examining how they might be transformed and re-imagined as they moved through myriad states of existence throughout their object-life, and thus the various ways in which they were entangled in the social life of the settlement.

Excavations at Aredhiou *Vouppes* (fig. 1) have uncovered the remains of a small Late Bronze Age site dating to the thirteenth century BCE (Steel and Thomas 2008; Steel 2016a). Based on substantial quantities of pithos sherds, plain ware vessels, and ground stone tools (Steel and McCarthy 2008) found at the site, it has been suggested that Aredhiou was involved in intensive agricultural production (Given and Knapp 2003: 179–82; Steel and Thomas 2008), possibly to support copper extraction in the nearby Troodos foothills. Three buildings and a chamber tomb have been uncovered in excavations (Steel 2016a). Building 1 was a substantial L-shaped or courtyard building, previously thought to have been used for centrally controlled production (Steel 2016a: 522–5) but now more plausibly interpreted as a household, based on parallels with contemporary architecture from sites such as Apliki (du Plat Taylor 1952). Immediately to the west of Building 1 was the sunken Room 103, which has been interpreted as a performative, heterotopic space for rituals, ceremonies, and feasting (Steel 2021). Some 25 m to the north was Building 2, identified as a storage facility for primary agricultural produce. This had two long, open-ended rooms adjoining a large open courtyard area and a smaller room enclosing a well. The pottery and other finds, primarily ground stone tools, recovered at the site are typical of a LC IIC settlement (Steel and McCarthy 2008); however, the unusually high concentration of gaming stones (Allen 2008; Crist 2016) found in a Late Bronze Age context on Cyprus stands out. While stone gaming boards were plentiful in Early–Middle Cypriot contexts there was a marked reduction in their number in the Late Cypriot period (Crist 2019: 10). Instead, in the better documented coastal urban centers there was a marked preference for wooden or ivory gaming boards and a shift from the ancient game of senet to new games, such as the game of twenty squares, introduced from the mainland, suggesting the Cypriot urban elites chose to mimic practices of their new Canaanite and Egyptian trading partners (Crist 2019: 10). As Crist (2021: 77–8) notes, the materiality of the game would be a conscious choice in response to the specific properties of stone or wood, and this would affect people’s physical experiences of play. That the materiality of games at Aredhiou continued a more ancient Cypriot tradition therefore, is intriguing and potentially tells us much about the sociality of smaller rural communities in the island’s hinterland during the Late Bronze Age. This paper considers the materiality and agential capacity of the gaming stones, focusing specifically on their social lives, to throw light on how they were social embedded within daily life at the site.

GAMING STONES FROM AREDHIU

Six complete gaming stones (Table 1) have been found at Aredhiou, two half stones, and a fragment. The gaming stones (fig. 2) are typically marked with three rows of ten pecked out depressions, consistent with the Egyptian game of senet (Swiny 1980: 62–4; Crist et al. 2016a: 41–80). There is a single example from Aredhiou of a double-sided gaming stone. On one side the game of senet is marked and on the other side the peck marks appear to be organized within a spiral shape, suggesting the Egyptian game of mehen. Nine other mehen–senet double-sided gaming stones have been identified on Cyprus (Swiny 1980: 71; Crist et al. 2016b: table 1), ranging in date from the mid–late third millennium at Marki *Alonia* (Frankel and Webb 2006: S211), Sotira *Kaminoudhia* (Swiny 2003: 274) and Alambra *Mouttes* (Coleman et al. 1996: 174–6) to the end of the Late Bronze Age at Maa *Palaeokastro* (Karageorghis and Demas 1988: 111, pls. LVII, CLXXXII). The breakage of some of the gaming stones is not uncommon, but it is unclear whether this was deliberate, accidental, or the result of taphonomic processes (see Crist 2021: 81–4). The number of gaming stones identified at Aredhiou is unusual for the Late Cypriot period. This might reflect a bias in excavation on the island, which has been largely skewed towards the coastal urban centers, where wooden or ivory game boards are more usual (Crist 2019: 10, fig. 8). The choice of stone gaming boards and the persistence of senet, rather than the game of twenty squares introduced to the island in LC II, appears to reflect the agricultural production aspect of Aredhiou. Certainly, Crist (2019: 11) has noted that gaming stones were more common in the sites that have been identified as belonging to the lower tiers of the island’s settlement hierarchy (see Knapp 1997; 2013: 354–6) and suggests

that these objects were more typically associated with Late Cypriot non elites. Consequently, the gaming stones from Aredhiou, the sheer number of which stands out amongst the Late Cypriot corpus, should allow us to explore how these were both social (Appadurai 1986) and cognitive (Malafouris and Renfrew 2010) objects, and how they were embedded in lifeways in the island's rural hinterland.

THE SOCIAL AND COGNITIVE LIVES OF GAMING STONES

Recent studies of the materiality of objects have highlighted their entanglement in people's social worlds. Objects become socially meaningful through people's physical and cognitive interaction with them (cf. Hodder 2012), perhaps suggesting their agency is distributed (see Gell 1998). Alternatively, it might be argued that an object's agency is separate and distinct from the humans who make, use, and interact with it; simply by *being*, an object has the capacity to effect change within social and material worlds. Kopytoff's influential paper, *The Cultural Biography of Things* (1986), draws attention to the social lives of objects. Throughout its use an object might accumulate multiple identities and associations, each reflecting distinct phases in its use and ownership. This approach not only recognizes how the things made and manipulated by people gain meaning through social praxis, but equally highlights how they are continually shaped, transformed, and renegotiated throughout their life-use, in a recursive relationship with people. The function, meaning, and value of an object are culturally ascribed and these inevitably alter as the object is exchanged between people, as well as over time, and so gains or loses associations. The culturally defined social lives of the Aredhiou gaming stones might be revealed through a detailed analysis of their context. Whether they are found in primary or secondary contexts, to what extent they had been carefully curated, re-used, and possibly even integrated within the built environment, potentially will reveal how these objects were socialized, valued, exchanged, and cared for, or otherwise broken and discarded. The double-sided gaming stone (fig. 3), for example, appears to have been modified during its life-use and on one side the peck marks are indistinct, as a result of being re-pecked over earlier depressions. This illustrates continuing haptic engagement with the stone, perhaps over several generations, and hints at its ongoing use and social value within daily life.

As recreational artefacts, gaming stones should also be recognized as cognitive objects (Malafouris 2010; Malafouris and Renfrew 2010), which has implications for our understanding of embodied practices and social interaction at the site. This approach recognizes that people think and act through the material world and blurs the boundaries between mind, body, and object. People think through things, actively engaging mentally and physically with the social world through the objects they make and use. Playing games is a socialized practice through which people mediate social relations in a battle of wits and skills. "Through play we experience the world, we construct it and we destroy it, and we explore who we are and what we can say" (Sicart 2014: 4). This social activity connects people, not just the participants but equally spectators (Sicart 2014; Crist 2016: 45). Crist (2021: 80) for example, draws attention to the conceivable theatricality and performativity of playing on a gaming board, possibly slamming the gaming counters down in much the same way as is documented for both backgammon and mancala. More than simply a means of relaxing and passing the time, or equally the inevitable tension inherent in a struggle of wits and skills, recreational pursuits occur in liminoid spaces, in which restrictions on people's identities might be temporarily suspended and transformed (Turner 1974; Sicart 2014: 4–6; Crist 2016: 47–9; 2019: 2–3). As such, game playing has been demonstrated to be a social lubricant that might allow people to manipulate and potentially subvert their social situation (Crist et al. 2016b: 180–1), as well as being embedded in significant ceremonies (cf. Townshend 1979: 794–5). As Sicart (2014: 5) comments, "[w]e need play precisely because we need occasional freedom and distance from our conventional understanding of the moral fabric of society", thereby preventing cultural customs and traditions from becoming "mindless habits".

Board games, such as the Aredhiou gaming stones, are a prime example of a cognitive object through which people interact and compete (fig. 4), and illustrate the blurred boundaries of mind, body, and object. "[T]he human body provides the fundamental mediation point between thought and the world" (Tilley 1994: 14). Material worlds are structured through embodied actions and social relations are mediated via the world of objects. Nonetheless, the gaming stones were more than material agents in human-object entanglement; instead, I would argue that we should question the boundaries of inert object and thinking human agent. The players were in correspondence (Ingold 2013: 110) with the gaming stones (and counters or tokens, as well as with each other); their gaming skills derived from repeated tactile, sensory, and cognitive attunement with these objects, which effectively became part of the players' distributed cognitive system (cf. Malafouris 2008: 111). Thinking about the interplay between person, object, and mind allows us to re-envisage object agency and as a corollary object biography. The significance of the gaming stones lies in the socialized behaviors inevitably incorporated in their use, and the inevitable kudos obtained from gaming prowess. The relationship between body, somatic experience, and material culture is taken forward by Malafouris' discussion (2008) of embodied cognition; this draws attention to the repetitive interplay between a person, an object (gaming board and pieces), and the mind.

Gaming stones therefore, enabled intellectually situated interactions and competition, as much as relaxation, creating a specific social (or socializing) space within the community at Aredhiou. As such they should be considered as having agency and the ability to shape the thoughts and actions of the people who created and used them.

GAMING STONES IN CONTEXT AT AREDHIU

Drawing further on diverse object–human relations, the following discussion considers how objects are not bounded or contained within one existence but instead shift into new roles and meanings depending on how people interact with and categorize them. A first attempt to understand how gaming stones were entangled within the lived experiences of the community at Aredhiou focuses on their find context (fig. 5). Unfortunately, none were found in a primary context that we might identify as a gaming space (see Crist 2019: 7–10). Instead, most were recovered on the surface during field-walking, frequently mixed in amongst the stone field boundaries; in these cases, no firm assumptions can be made as to how the objects were situated within the living or working spaces at Aredhiou during the Late Bronze Age. Nonetheless, it is worth noting that the diabase pebbles making up these boundaries were intrusive to the site, having been brought up from the nearby Aloupos riverbed, and it appears these were in fact built up from accumulations of building stones that were removed over the centuries from the gradually dismantled Late Cypriot walls. This implies that the gaming stones mixed among them had once been incorporated (or used) within the built environment. In this respect it is interesting to note that the four gaming stones that do have a fixed findspot (Table 1) derived from secondary contexts (fig. 6). One was found in rubble tumble from the southern wall of Building 2, two were deliberately walled into the foundations of Buildings 1 and 2 respectively, while the fourth was found associated with the bench abutting the external western wall of Building 1. At Aredhiou therefore, we might conclude that these objects were deliberately incorporated into the fabric of the community; they were built into the foundations of walls of significant buildings and became an integral part of the built environment. This is paralleled at other Middle and Late Cypriot sites, where gaming stones were frequently used to mark entrances into buildings, such as Building 1 at *Alambra Mouttes* and at *Maa Palaeokastro* (Crist 2016: 175, 184, figs. VII.34, VII.39). Certainly, thresholds are frequently adorned, acknowledging their powerful, transformative, and liminal character, controlling and protecting access to potentially vulnerable internal spaces (Lang 1985; Eriksen 2013), while a wall’s foundation supports the entire structure and thus merits esoteric protection. The threshold and foundational use of gaming stones therefore appears intentional, a deliberate and meaningful re-purposing of an agential object during the creation of the built environment. Whether this can be extended to the secondary use of gaming stones seemingly more randomly walled in structures – such as Building C at *Hala Sultan Tekke*, Rooms 55 and 87 at *Maa Palaeokastro* (Crist 2016: 181, 184) and Buildings VI and IX at *Kalavassos Ayios Dhimitrios* (South et al. 1989, Cat. Nos. K-AD122, K-AD334) – is still the focus of enquiry (Crist 2019: 11). The walled gaming stones might simply have been ad hoc building materials that were incorporated within the structures because they happened to be at hand. Even so, this “did not necessarily mark the end of use-life but [instead] the beginning of a new phase in object biography...as a part of a place, the lived-in environment” (Herva 2005, 224), and reflects shifting phases in their life history (cf. Kopytoff 1986).

Given the number of gaming stones found at Aredhiou, it is worth considering whether it is possible to identify any gaming places at the site. Crist’s (2016: 77–80) identification of places specially designated for playing games focuses on the portability and quantity of gaming stones found in specific locations. He draws attention in particular to the presence of several gaming stones found in the same space, or otherwise games that had been incorporated within a building’s architecture, or were too heavy to realistically be moved frequently (Crist 2016, 133–6). While ethnographic studies suggest that people tend to play board games in open air, public spaces (fig. 7; Popova 1976: 440; Townshend 1979: 795; de Voogt 2005: 218), the evidence from Bronze Age Cyprus situates these activities more firmly inside buildings, and present evidence indicates that this was likewise the case at Aredhiou. Even though a number of possible courtyard spaces have been identified at the site, no gaming stones were found in these. Indeed, only one possible in situ gaming stone has been identified at Aredhiou, associated with a substantial stone bench adjacent to the entrance of Building 1 (fig. 8) in a narrow passageway communicating with the heterotopic space of Room 103 (Steel 2021). Given the poor preservation of the bench, it is unclear whether the gaming stone had been re-used in a secondary context or was deliberately placed on the bench to be used in play. Plausibly it had been used in this space, perhaps by people playing games to pass the time while waiting for admission to either Building 1 or Room 103, and the broken fragment was left there when the site was abandoned. The direct association with the bench is intriguing and recalls the broken gaming stone deliberately placed on a bedrock ledge in Room 10 of Building III at *Alambra* (Coleman et al. 1996, 67, 174; Crist 2016: 175–6). Likewise, we should note the gaming stones found on the long bench in Unit 12c at *Sotira Kaminoudhia* (Crist 2016: 159, 245; Crist 2019: 8) and the senet stone found in a room furnished with two benches at *Morphou Toumba tou Skourou* (Vermeule and Wolsky 1990, 26–7). The “Room with Benches” at *Morphou* has been interpreted as part of a potter’s workshop, and its close association with production is

suggestive for our understanding of the relationship with game-playing and economic (agricultural) production at Aredhiou (see also Crist 2016: 251). Indeed, the bench-gaming stone association and its potential accompanying activities, together with its location in the space connecting Building 1 with Room 103, reiterates the special character of this part of the site as a performative and transformative place.

FOLLOWING THE LIFE STORY OF A GAMING STONE

The gaming stone walled into room 161 in Building 1 (fig. 9; Steel 2013: 191) provides an intriguing example of an object that underwent multiple transformations, experiencing different “careers” (Kopytoff 1986: 66) during its social life, and reflecting the myriad ways that an object might be socialized, reworked, and reinvented as it flowed into and out of relationships (see Averett 2023). It shifted state and status from a humble grinding stone to a gaming stone, it was walled within the built environment at Aredhiou, and eventually it became the object of the archaeologist’s gaze. Object biography allows us to consider changing relationships with different human actors and different values embedded in the gaming stone. Initially, this object was created as a rubber, part of the rubber-saddle quern grinding kit used to crush grains and pulses. As with other Cypriot Bronze Age sites, grinding stones are common at Aredhiou and these undoubtedly shaped the daily lived experiences of at least some of the inhabitants. Ethnographies suggest that on average between three and five hours a day would be devoted to grinding grain to produce sufficient foodstuffs for a household’s daily needs (Steel 2016b: 87; Hayden et al. 2017: 59–62). Grinding grain was both a major economic activity within the household and also a primary somatic experience for the member(s) of the household whose responsibility this was. Through analogy with the surrounding cultures of the East Mediterranean, it seems reasonable to assume that this was primarily a female task, and one which physically shaped the person’s body through repeated physical action on a daily basis. As with other repetitive tasks that become subconsciously sedimented in the body, working with the grinding stone was an embodied cognitive process that blurred the boundaries of mind, body (hands), tools (quern-rubber kit), and grain/pulses (cf. Malafouris 2010: 17–18). Moreover, although a time-consuming, labor intensive, and arduous task, this, together with other aspects of food production, would undoubtedly have been a very social activity. Fendin (2006: 161) for example, highlights the importance of singing to accompany and mimic the rhythmic process of grinding activities, and so help to pass the time, at the same time cementing relationships. Knapp similarly draws attention to the importance of rhythm and music in such group work, enabling “human bonding and interaction and...[the] cognitive and emotional responses that condition group behavior” (2011: 129). The ground cereal provided the daily bread that sustained the household, further embedding the object within the social life of the community. Over a significant period (given its use-wear) the rubber formed part of the daily grind, mediating female experiences and interactions (Steel 2016b: 87).

At some point in its existence the rubber was broken, either purposefully or by accident (see Crist 2021: 81–4), and was repurposed, being physically modified to fashion a new object with very different social associations and values. The addition of three rows of ten pecked marks transformed it into a gaming stone, radically altering the way in which it was situated in daily activities. Such makeovers of tools into gaming stones were not unique in Late Bronze Age Cyprus; at Maroni *Tsaroukkas* for example, an anchor was similarly reworked as a gaming stone (Crist 2021: 80), reflecting some degree of expediency with which people worked with and reworked materials. No longer incorporated within the realm of household production, the rubber-gaming stone had moved into an arena of relaxation, recreation, gaming, competition, and shared cognitive interactions. Conceivably, its gendered associations also shifted; certainly, playing backgammon in public places in the contemporary East Mediterranean is traditionally a male past-time, as is attested in countless coffee shops throughout the region. Likewise, Bayless describes how boardgames in the Middle Ages had elite, martial associations and were “conceptually the province of high-status men ... [and a] potent battlefield for status” (2021: 185). We should not however, discount the possibility of women playing games in the Late Cypriot world. Indeed, women are depicted playing *senet* in contemporary New Kingdom Egypt (Fig. 10; Piccione 1980: fig. 6) and representational evidence from Medieval Europe similarly demonstrates that games might be considered a suitable pursuit for women of a certain social standing (de Voogt and van Mourik 2017). That the gaming stone was integrated within ongoing competitive interactions, play, and relaxation is a given, but what we cannot explore is where it was used, who played it, and how it was socially embedded. This important stage of its object biography remains largely hidden from view.

Finally, for the ancient community of Aredhiou at least, the gaming stone was walled into the east wall of room 161 in Building 1 (Fig. 11). This clearly represents a new phase of being for the artefact. Elsewhere, the incorporation of gaming stones within the built environment has been explored as a process of enchainment – the deliberate, structured disposal of an object as part of its life-cycle (Steel 2016a: 530–2). This implies that the physical deposition of the rubber-gaming stone created a symbiotic relationship between object, person, and place. It is notable that key structures within the community were marked in this way, reiterating the notion that this practice was used to mark place. Building 1, where the rubber-gaming stone was deposited, appears to have

been a significant household within the community, controlling access to the heterotopic Room 103. Similarly, a gaming stone and a Plain ware jug were incorporated within the foundations of the settlement's major storage facility, Building 2 (Steel 2016a: 530, 531, fig. 15), and a second gaming stone was found in the rubble collapse south of this building (Steel 2016a: 522, 529). Equally, these objects might simply represent a builder choosing to place a simple memento of personal, rather than cultural, significance within the walls of the building, much as builders still do to this day (Steve Thomas, pers. comm.). Nonetheless, the physical removal of the rubber-gaming stone from circulation did not destroy it, nor did it denigrate the social meanings previously invested in the object; instead, through its marking of place we might consider this object to have continued agency within the ancient community of Aredhiou. The rubber-gaming stone therefore, was an object with a biography and multiple shifting cognitive entanglements. It was variously shaped, handled, interacted with, modified, perceived, and embedded within diverse social and embodied practices during its life-use, until its final deposition within the built environment, in which it was permanently anchored within the settlement where it plausibly helped create a sense of place.

In conclusion, we might consider the ongoing biography and changing relational ontology (cf. Averett 2023: 173) of the gaming stone as it became the object of the archaeologist's gaze. It was uncovered in excavation, identified, and photographed *in situ*; it was then removed from the site, recorded, and repositioned in the modern world, thereby becoming part of the Cypriot archaeological narrative. Together with the other Aredhiou gaming stones, it now resides in the Cyprus Museum in Nicosia, hidden away in storage after having been photographed, drawn, measured, catalogued, and studied – thereby taking on the potential to contribute to research, conferences, and publication. In this process the stone has been externalized and objectified – it effectively has become a disembodied artefact to be discussed and intellectualized, but no longer used or handled. The object still has cognitive agency – allowing us, if we so choose, to interact at second hand with the ancient community that made and used it – but it is no longer incorporated within embodied practices, and instead languishes out of sight on a museum shelf. While we no longer haptically participate with the gaming stone, we should nonetheless recognize its ongoing agency as a social and cognitive object, which continues to shape our material and intellectual worlds as we engage with it on paper or on screen and theorize how it was once handled, used, and perceived.

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Table 1: Gaming Stones from Aredhiou

Registration Number	Location	Context	Type
AV-04-05-01	1110/1020;	Surface find (survey)	Double-sided gaming stone: senet and mehen (complete)
AV05-06-03	1121/997	Topsoil [context 24]	Senet (fragment)
AV05-06-04	1040/1100	Surface find (survey)	Senet (half)
AV06-06-01	1069/1035	Rubble collapse, south wall of Building 2 [context 93]	Senet (complete)
AV06-06-02	1069/998	Bench along outer west wall of Building 1 [context 98]	Senet (half)

AV07-06-01	1069/1035	Walled into west wall of Building 2 (left in situ) [context 126]	Senet (complete)
AV08-06-01	Field 3/4 boundary	Surface find (survey)	Senet (complete)
AV08-06-08	Field 1033	Surface find (survey)	Senet (complete)
Unregistered	Field 1033	Surface find (survey)	Senet (fragment)
AV08-05-04	1083/1000	Walled into north wall of Building 1, room 161 [context 180]	Senet (complete): broken rubber