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Making beads and bead making: an introduction

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ABSTRACT

Beads are a prominent category of material culture in the African past. Crosscutting their study across temporal periods and geographical areas are some general methodological and theoretical convergences: the categorisation of beads in terms of materials and methods of manufacture, an emphasis on provenance and distribution, and the analysis of beads as ‘social signals’ in relation to identity, networks and status. This paper outlines the conceptual framework of ‘making’ and discusses how such a framework can expand on existing analyses and provide new avenues for studying beads in the African past. Beads, like all forms of material culture, are the culmination of a dynamic process between materials and makers: the intermixing of ideas, substances and tools in time and space. A focus on making draws our attention to exploring the processes of bead composition in deeper focus, examining not only recycling and reuse but also the ways in which beads were made into composite items, such as garments or adornments. At the same time, a focus on making brings to light a concern for the encounters between material properties, knowledge, memory and sensory affects, encouraging an exploration of bead making as an assemblage of material and non-material things. We draw on a range of case studies from various regions across the African continent to illustrate the relevance of our approach for developing new insights into beads in the archaeological record.

RÉSUMÉ

Les perles constituent une catégorie importante de la culture matérielle du passé africain. Leur étude transversale à travers les périodes temporelles et les zones géographiques présente certaines convergences méthodologiques et théoriques: la catégorisation des perles en termes de matériaux et de méthodes de fabrication, un accent sur les questions de provenance et de distribution, et l’analyse des perles en tant que ‘signaux sociaux’ en relation avec des questions d’identité, de réseaux et de statut. Notre article décrit le cadre conceptuel de ‘fabrication’ et explore comment un tel cadre peut élargir les analyses existantes et fournir de nouvelles avenues pour l’étude des perles dans le

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passé africain. Les perles, comme toute culture matérielle, sont le point culminant d'un processus dynamique entre les matériaux et les créateurs : le mélange d'idées, de substances et d'outils à travers le temps et l'espace. L'accent mis sur la fabrication attire notre attention vers une considération plus approfondie des processus de composition des perles, examinant non seulement les questions de recyclage et de réutilisation, mais également la manière dont les perles furent transformées en objets composites, tels que des vêtements ou des ornements. Dans le même temps, l'accent mis sur la question de la fabrication met en lumière une préoccupation pour les rapports entre propriétés matérielles, savoirs, mémoire et effets sensoriels, encourageant une exploration de la fabrication de perles en tant qu'assemblage de choses matérielles et immatérielles. Nous nous appuyons sur une série d'études de cas provenant de diverses régions du continent africain pour illustrer la pertinence de notre approche pour le développement de nouvelles connaissances sur les perles dans les archives archéologiques.

Introduction

Beads, which we define here as small objects created or modified to include a perforation so that they can be threaded (be it onto a cord, a thread for sewing or hair), exhibit great material diversity, being made of glass, shell, stone, clay and minerals, to name just some examples. The history of the manufacture of materials into beads in Africa covers a huge geographical and temporal range and beads have a long antiquity of use, with the perforation of *Nassarius kraussianus* shells in southern Africa representing some of the earliest evidence of symbolic behaviour associated with anatomically modern humans (d'Errico *et al.* 2005). As objects of personal adornment, often closely associated with the body, beads afford a significant opportunity to explore intersecting themes related to identities, personhood and belonging (Bar-Yosef Mayer *et al.* 2017; Robertshaw 2020; Mattson 2021). Similarly, as artefacts that were made and exchanged widely, beads provide a critical window into regional networks of interaction and past political economies (Wood 2019; Mitchell *et al.* this volume).

Drawing inspiration from Ingold (2013) and from a rich body of research on materiality in African archaeology (Meskell 2005; Crossland 2014; Insoll 2015; Ogundiran 2022), the focus of this paper on making aims to draw attention to the various and inter-related ways of 'making' that can be explored in the study of archaeological bead assemblages. Both making beads and bead making allude to processes and practices: technologies, knowledge, skill, the transformation of raw material or recycling and reuse. However, the double emphasis on making in the paper's title attempts to bring a broader interpretation of making to light, one that receives perhaps less attention in archaeological enquiries, namely a movement away from studying beads as finished artefacts, or a distinction between material and maker, towards examining the *morphogenetic* process of becoming that is central to the making of beads (cf. Ingold 2013).

The specific focus of this paper, on 'making beads and bead making', developed out of an interest in exploring an interdisciplinary methodology for studying beads. Art historians and anthropologists, among others, who are privileged with a more complete



Figure 1. Ceremonial Luba-Hemba staff, made up of wood, shell, brass, fibre and glass beads. (Sainsbury Centre, University of East Anglia; UEA 266) (Image courtesy of Sainsbury Centre).

material record than are archaeologists, approach beads and their making and meaning in varying ways. In the case of African art, beads are often part of larger assemblages and are combined with a variety of different types of materials, fabrics and substances to form composite objects such as carvings, clothing and masks (Figure 1). In these contexts, the symbolic potential of beads is assessed in relation to the composite form of which they are a part. For example, examinations of the use of beads in a carving or dress generally address the interaction between the beads and the other material and non-material things in creating a composite meaning in a given historical context (Drewal and Drewal 1983; Arnoldi and Kreamer 1995; Blier 1995). Similarly, studies of the process of making related to beads in African art often draw attention to the ways in which materials are combined or substituted, as well as to the interactions between different substances (cloth, cotton, glass, resin etc.) that shape the process of making (Labelle 2005; Pemberton 2008; Nettleton 2016).

Such research can offer inspiration for archaeologists interested in examining the agency and materiality of the African archaeological record (Insoll 2015). At the same time, archaeological studies offer important complementary avenues for an interdisciplinary endeavour examining bead making and the making of beads. Archaeological studies of beads have developed complex methodologies, including experimental and ethnoarchaeological research, for examining the manufacture and use of objects. Some have considered the nature of motor capacities and processes of apprenticeship among beadmakers today, aiming to inform questions of social organisation and technological transfer in archaeological contexts (for an example, on bead makers in Gujarat, see Roux 1993/94). Although only applied to a select few bead types, modification and use-wear analysis have demonstrated the potential presented by examinations of the ways beads may have been strung, worn or reused through time (Alarashi 2018; Falci *et al.* 2019; Collins *et al.* 2020). Different ways of cutting, rounding, polishing, sorting and stringing beads would have been products of different communities of practice and may leave characteristic traces on the beads produced (Robertshaw 2020) or they may reflect the skill of individual bead makers (Baysal and Yelözer 2023). Additionally, chemical and petrographic analyses of material sources and bead objects also allow for complex patterns related to origin and provenance to be assessed (Dussubieux 2017; Wood 2019; Klehm *et al.* 2023).

Drawing inspiration from the various disciplines that study African beads and bead making as a starting point, this special issue explores the potential for an interdisciplinary approach to generate new perspectives around bead making in the African past. In doing so we bring together analyses of beads of different materials from different geographical regions and chronological periods, emphasising the potential for fostering discussions that span these conventional archaeological divides. In the following section we discuss some of the theoretical frameworks that can inform these studies. We elaborate on notions of making, assemblage and taskscape, as well as on some of the underlying ideas that have developed out of the ‘material turn’ in anthropology.

Theoretical strands

In his seminal book on making in anthropology, archaeology, art and architecture Tim Ingold (2013) argues that some of the dominant approaches to examining the process of making in material culture studies mistakenly frame making as a process of *hylomorphism*, the imposition of an idea onto an object. Instead, Ingold argues that making is an interactive process, a confluence of forces and materials, that is better conceptualised as a *morphogenetic* process. ‘Making, then, is a process of correspondence: not the imposition of preconceived form on raw material substance, but the drawing out or bringing forth of potentials immanent in a world of becoming ... In the act of making the artisan couples his own movements and gestures — indeed his very life — with the becoming of his materials, joining with and following the forces and flows that bring his work to fruition’ (Ingold 2013: 31).

Implicit in this approach is a recognition of the vibrancy of materials and their agentic ability to shape the process of making (Bennett 2010). One avenue that archaeologists, in particular, have used to examine processes of becoming — and the agency of materials to shape these — is through the idea of assemblage (Hamilakis and Jones

2017; Crellin 2017; Jervis 2018). Assemblage theory is underscored by the relational view that human action results from shifting interdependencies between material, narrative, social and geographical elements and it is concerned with the qualities resulting from associations between humans and non-humans. Assemblage theory foregrounds the deliberate act of bringing things, beings and entities into association, stressing the agency involved in this process and the assemblages of both material and non-material in the form of values, knowledges and meanings.

African archaeology, influenced by anthropological studies of technology, has a strong tradition of examining the intersection between specialist knowledge, bodily practice and technologies of making (Reid and MacLean 1995; Warnier 2007). A very well-developed body of theory that has been considered by anthropologists, art historians and archaeologists concerns specialist craft groups, often endogamous and sometimes referred to as 'technical specialists'. Members of these groups may be subjected to rules for their separation from wider society, rules that may be unevenly applied but feed into their status as society's marginals. The ethnographic record presents several examples of communities of practice that were organised in guilds and claimed a foreign origin, such as potters, iron-smelters and iron-forgers or glassworkers (Haour 2013; Robertshaw 2020).

The focus on crafting and embodied knowledge draws attention to the physical spaces in which these interactions occurred. Crafters frequent different settings in the course of their practice: among others, sources of raw materials, workshops, firing places, markets, place of initial learning, the residences of kin and friends and places frequented on a temporary basis, for example during seasonal migrations. In thinking about this constellation of localities, and the mutual constitution of people and space, the notion of 'taskscape' is helpful. In the words of Ingold (2000) (but see also Gosselain 2016; Michelaki *et al.* 2019), a taskscape refers to the interlocking of the ensemble of tasks that people undertake in a given environment as part of their day-to-day life. Tasks derive their significance from their spatial and temporal relationship to the many other tasks undertaken in a landscape, while any given place derives its own significance from all the tasks taking place within it. Importantly, the situations from which learning and belonging emerge in practice settings are not disconnected from other realms of the participants' experience. Some parts of the landscape may be considered appropriate for raw material selection or other parts of the process of making; and other activities may be conducted alongside, since resources may co-occur, and the interlocking of various daily tasks may mean that some could be perceived as socially related. Raw materials are not distributed homogeneously over undifferentiated landscapes, nor do crafters move across the landscape randomly or solely with the purpose of resource acquisition. Thus, raw material choices tell us the histories of the learned and attuned interactions among people, materials and landscapes (Michelaki *et al.* 2019).

These various theoretical developments serve as a scaffolding for our concern here with a series of core themes. These include a concern with recycling and remaking and with composite objects, values and assemblages.

Core themes

Beads from archaeological contexts in Africa are generally catalogued according to distinct raw materials and finished object types. Moreover, research on specific bead types

tends to draw on comparative research within distinct chronological periods and geographical regions. The focus of this special issue, on bead making and making beads, offers the opportunity to explore a new set of questions and themes that stretch beyond conventional disciplinary categories and traditions.

A pertinent question that arises when considered this expanded concept of making is when a bead is 'finished' or at what stage it is indeed 'made'. In African archaeology beads are often classified using dichotomies such as 'local' and 'foreign', or 'finished' and 'unfinished', shaping particular assumptions around their manufacture and authorship. A notable example is that of glass beads, long assumed to have been imported as finished objects into various regions of Africa from other parts of the globe. Colleagues working in West Africa have demonstrated that glass was manufactured locally and made into beads (Babalola *et al.* 2018; Babalola, this volume), but it is becoming increasingly evident that glass fragments, beads and bangles were also melted and recast into beads in other parts of the continent (Duckworth *et al.* 2016; Rødland 2023; Wynne-Jones, this volume). Similarly, Magnavita (2019) has suggested that certain hard stone beads may have been traded as rough-outs, to be refined at their final destination. This point is equally applicable to cowrie shells traded across the Sahara in the early second millennium AD that appear, based on one well-documented assemblage from Mauritania, to have been pierced for threading only once they arrived at their destination (Christie and Haour 2018). The recovery by Babalola and his team (this volume) of a complete *chaîne opératoire* for glass bead-making at Ile-Ife, Nigeria, not only recentres West Africa within the 'glass bead roads', but also illustrates how some items created as part of the process of making beads were mistakenly identified in previous scholarship as finished products rather than production waste.

This process of making, or remaking, challenges dichotomies of 'unfinished' or 'finished' or 'local', or 'foreign', by considering the technologies of making that even 'finished' objects can undergo and draws attention to the itineraries of beads (Joyce and Gillespie 2015). Focusing on these processes reveals how technological innovation may take place and calls up the linkages between different spheres of material practice. An example of this is the melting and casting of small glass beads in crucibles to form larger, new bead types in southern Africa during the early second millennium AD (Wood 2011). This innovation may have been influenced in part by experimentation linked to the melting and casting of copper, bronze or gold beads, which involved similar materials and perhaps spaces (Moffett and Walz 2023). As Wynne-Jones (this volume) argues, a focus on the form in which beads are remade can reveal local taxonomies through which people viewed objects in the past. Similarly, Munisi *et al.* (this volume) demonstrate how colour was an important factor in the selection of glass beads, which, they argue, fitted into existing 'cultural logics' of consumer demand.

Beads from archaeological contexts recovered as individual items are often categorised and catalogued according to their distinct material types. An emphasis on making draws our attention to the ways in which beads may have been part of composite items, moving us away from a concern with their individual attributes and encouraging explorations of distinct beads in relation to each other and to the broader archaeological assemblage. This may also extend to considering bodies and other agentive non-material factors (Harrison-Buck and Hendon 2018). Together, this points to the need to explore not only the specific archaeological contexts in which beads occur, such as associations of

specific bead types with different individuals, but also the juxtaposition of different bead types and their positioning on the body. For example, in southern Africa beads made of ostrich eggshell, *Lissachatina spp.* (land snail) shell, glass and metal were sometimes combined. Burial data from sites ranging between the tenth and thirteenth centuries AD suggest that these beads may have been strung together, or stitched into a now perished organic material, and worn around the neck and waist area (Steyn and Nienaber 2000). This comment applies to one of our case studies discussed below, that of a burial at the mound site of Birnin Lafiya in Bénin, West Africa. These observations move beyond discussing beads as identifiers of ‘long-distance’ trade or élite identity to examine practices of adornment, encompassing regional styles and historically contextual shifts in adornment along with questions of expression and personhood (Bvocho 2005; Moffett and Chirikure 2016; Munisi *et al.* this volume). Wingfield (this volume) examines how the bead, with its transformative potential to move between realms of public and private, remains central to addressing questions of value in the human past.

Examining beads with attention to broader processes of making and composition draws attention to a broader array of overlapping and intersecting material and non-material interactions that may have shaped and reshaped value. Drawing from assemblage theory, we can think about the creation of value as part of encounters between material affordances (*sensu* Ingold 2007), knowledge, memory and sensory affects and emotion. This encourages an exploration of the composite and relation value of beads, something that a focus of ‘making’ can more readily access (Wingfield this volume). As an example, Ann Stahl’s (2018) work on shrine assemblages from West Africa drew on evidence of the repeated bundling of glass and carnelian beads along with python vertebrae, iron and other objects to explore how these combinations created dynamic meaning associated with new ritual practices. Such observations foreground the potential for variation in how attributes were perceived by past societies. As Mitchell *et al.* (this volume) argue, ostrich eggshell beads may similarly have had special potency due to their association with ostriches, potentially affording their wearers supernatural powers.

Lastly, drawing attention to the processes of making and shaping materials into beads encourages exploration of specialist knowledges, practices and spaces related to bead making and how these may relate to the identities of bead makers themselves or become imparted in the value of beaded assemblages. Munene *et al.* (this volume) reveal how the making of ostrich eggshell beads among the El Molo community of Kenya is embedded in a wider body of knowledge surrounding the sources and manufacture of a range of materials (stone, thread). As outlined above, a technical act is a social act because it takes place in the context of a community with pre-existing history, traditions, preferences and memories that are tacit and corporeal as much as they are conceptual and social. Babalola and Ajayi (2022) have recently explored how beads of various materials exemplify complex human engagements with the natural environment, arguing that, while there has been a heavy focus on materiality, the material itself has, in fact, and rather paradoxically, received little attention. They survey a range of case studies across West Africa illustrating processes of making beads and consider the agency of the makers. For example, they highlight the long experience that crafters probably had of working with stones or the skill and patience required in shaping shell; ‘Be it ostrich, snail, or cowry shell, the production of shell bead is delicate, intriguing, and requires a lot of time.’ (Babalola and Ajayi 2022: 213).

In the following section we consider case studies that explore the application of an expanded concept of making and composition in the archaeological record. In doing so we hope to provide a starting point for methods and frameworks that may guide future research in bead studies, and to contribute to the rich case studies that follow in this special issue.

Making shells into beads: the potentials of interdisciplinary research methods

Cowrie shell beads of the *monetaria* species occur widely in the African archaeological record and have been documented in many regions of the continent across time periods (Then-Obłuska 2015; Haour and Christie 2019; Insoll 2021; Moffett *et al.* 2021). Cowrie shell beads are often recovered from archaeological contexts as single items, or in depositional contexts associated with other beads and inorganic materials. To transform the shell into a bead, cowries are often perforated on the dorsal surface. In a similar manner to the analysis of beads of other materials, analyses of cowrie shell beads in African archaeology have largely focused on cataloguing the finds according to size and shape and identifying the species, which can link the origin of the shell to particular regions.

Despite the widespread presence of perforations on cowrie shell beads, evidence of the ways in which these shell beads were strung or attached to other materials is rare and limited by the lack of preservation of organic materials. Yet, few studies have attempted to examine evidence of the making of cowrie shells into beads and composite objects from African archaeological contexts. Addressing these issues requires novel methods, such as the examination of microwear traces and residues or experimental reconstructions to identify anthropogenic processes (see, for example, Alarashi 2018). One step towards identifying the manufacturing and use patterns on archaeological bead specimens is to examine ethnographic objects (Falci *et al.* 2019). Studying ethnographic collections can give us insights into a range of conditions to which beads may have been subjected, while also helping us think about beads as part of composite items within which value was ascribed.

Given the paucity of microwear studies on cowrie shells, analyses of modification and use-wear patterns on cowrie shells from ethnographic collections provide an important starting point for constructing comparative insights into attachment, wear and compositional patterns in the archaeological record. In the present study nine composite objects containing cowrie shells were examined from the Pitt Rivers Museum collections of the University of Oxford, United Kingdom, (Figure 2; Table 1). Examination included identifying types of attachment and potential wear patterns caused by these, noting other evidence of use-wear on the cowrie shells and also the location and choice of shells in composite objects. Objects were selected from southern and eastern Africa as part of a broader study by the authors aimed at examining cowrie shells in this region.

Observations of use-wear on these objects, although limited by sample size, reveal some preliminary patterns. On four objects, striations and polish were visible in the canals of the cowries attached with string (Figure 3a). This polish may have been caused by repeated rubbing of the string to the shell. The same four objects also had highly polished perforations on the dorsal surface (Figure 3b). All were attached to

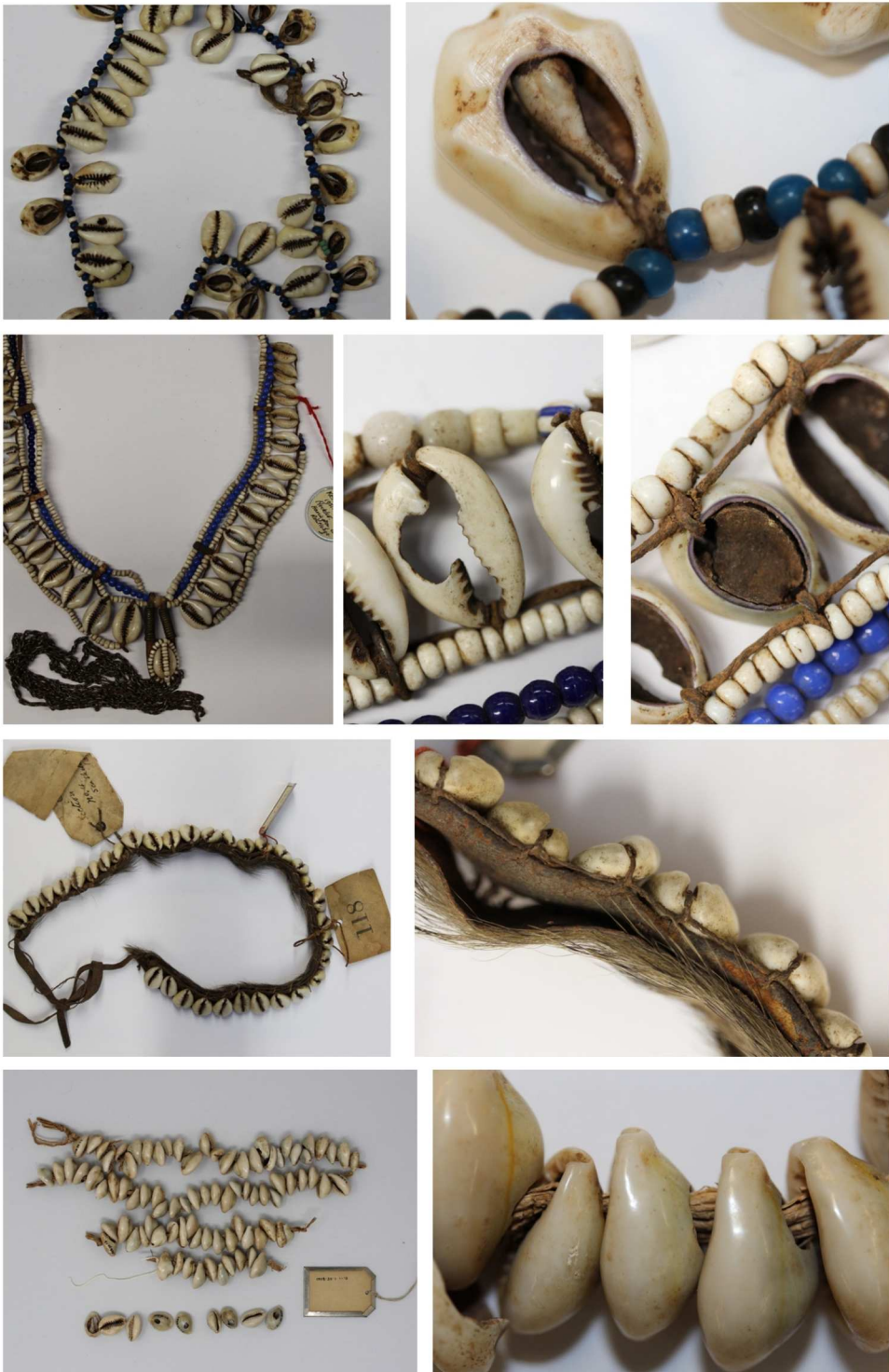


Figure 2. Examples of some of the objects analysed from the Pitt Rivers Museum collections (Top to bottom: 1936.4.7; 1951.10.32; 1936.4.8; 1908.30.1 1–13).

Table 1. Details of modification and use-wear patterns on cowrie objects from southern and eastern Africa (Pitt Rivers Museum collections).

Original object identification	Materials	Species and number	Stringing	Use-wear
1936.4.7 Neck ornament. South Africa. Collected by Henry Balfour, 1936.	Cowrie shells, small white, black and blue glass beads, brown fibre/string	<i>Monetaria moneta</i> (36)	Similar-sized cowries. Uniform orientation. Strung through anterior canal.	Flattened dorsal perforations, standardised height. Striations on dorsal perforations, but minimal polish over striation marks.
1951.10.32 Neck ornament. Kenya, Kikuyu. Collected by William Scoresby Routledge, 1951.	Cowrie shells, blue and white glass beads, copper/brass wire, leather	<i>Monetaria annulus</i> (27)	Similar-sized cowries. Uniform orientation. Strung through their anterior and posterior canals.	Flattened dorsal perforations, standardised height. Bevelled edges, no evidence of striation or polish on dorsal perforations. Small striation marks on ventral surface. Ventral teeth breakages on many shells.
1936.4.8 Headband/ornament. South Africa. Collected by Henry Balfour, 1936. Labelled ' <i>Ingcuka</i> '-Xhosa word for hyena.	Cowrie shells, leather/hide.	<i>M. moneta</i> (34)	Similar-sized cowries. Uniform orientation. Strung with fibre/string through their anterior and posterior canals.	Flattened dorsal perforations, standardised height. Evidence of polish on sections of the dorsal perforations. Evidence of polish below the string on apertures. Build-up of residue between shell and leather. Some shells contain organic fill.
1901.4.153 Neckpiece, described as a mourning necklet. Obtained by Dr Ansorge, Lake Victoria, Nyanza	Cowries, leather, iron, meteoric iron ore/slag	<i>M. annulus</i> (26)	Shells vary in size along the object. Uniform orientation. Strung through their anterior and posterior canals.	Flattened dorsal perforations, standardised height. Evidence of grinding and polish on the dorsal perforations. Residue build up on areas of dorsal breaks. Polish visible on the aperture of a number of shells where strings are missing. Six of the shells have perforations of ventral surface, with labial teeth missing.
1908.30.1 1-13 String of 100 cowrie shells. Buganda, Uganda Protectorate. Collected by Ernest Balfour Haddon. Described as currency.	Cowrie shells, fibre string	<i>M. annulus</i> (100)	Vary in size with small and medium sized ones. Strung through dorsal perforation.	Small dorsal perforations. Only two have perforations that are flattened (below the yellow ring). Perforations are jagged, irregular and no evidence of polish. One exception is a shell with large flattened and polished dorsal perforation.

(Continued)

Table 1. Continued.

Original object identification	Materials	Species and number	Stringing	Use-wear
2006.50.1 Headband/ornament. South Africa. Collected by Henry Balfour, 1889	Cowrie shells, leather, string	<i>M. moneta</i> cowries (35)	Similar-sized cowries. Uniform orientation. Strung through their anterior and posterior canals.	Flattened dorsal perforations, standardised height. Evidence of polish on sections of the dorsal perforations. Wear and polish visible on a number of canals. Striation marks on ventral surface of shell.
1925.16.12 Head/leg garment. South Africa. Donated by G. Verney: possibly Gwendolen Verney, 1925.	Cowrie shells, leather, string (plant fibre)	<i>Monetaria</i> sp. (27) (<i>Moneta</i> cowries, some undefined)	Similar-sized cowries. Uniform orientation. Strung through anterior and posterior canals. Attached to a string on the anterior end and directly onto the leather on posterior end.	Flattened dorsal perforations, standardised height. Evidence of polish on sections of the dorsal perforations. Ochre/organic residue build up in the teeth and on the dorsal surface of the shells.
1970.13.31 Head band. Mozambique. Donated by Chloe Vulliamy, 1970	Cowrie shells, animal hide, animal skin/fur, textiles, cotton thread	<i>M. annulus</i> (66)	Similar sized cowries. Uniform orientation. Two rows of 17 flanking two rows of 16 cowries. Strung through anterior and posterior canals and sewn onto a piece of hide.	Very rough chipped dorsal perforations, no signs of polish. Broken teeth with very rough serrated breaks on ventral surface. Five shells have evidence of chipped teeth; all on labial side.
1971.34.83 Headdress. Tanzania. Donated by J.D.H. Collinson, 1971.	Cowrie shell, animal hair, animal hide, paper, string	<i>M. annulus</i> (2)	Strung with thin pieces of cotton thread, wound a number of times through the anterior and posterior canals, and then threaded through onto paper and the paper-hair-skin.	Flattened dorsal perforations, standardised height. Minimal evidence of polish on the dorsal perforations. Some striations and pitting on the ventral surface.

leather with twine. In comparison, objects not attached directly to material (such as the two necklaces 1936.4.7 and 1951.10.32) had unpolished dorsal perforations and no polish was visible on the apertures. One exception to this pattern was object 1970.13.31, which, although attached to material, also had cowries with unpolished dorsal perforations. This object is modern, stitched with a sewing machine, and the cowries were attached to textiles versus leather.

Most of the shells with small dorsal perforations, such as those making up the ‘currency strings’ (1908.30.1) also showed no evidence of wear or polish on the dorsal breaks. Interestingly, two shells did have polish and striations on the dorsal breaks. These two shells may have been part of other objects or had different uses prior to being combined with the cowrie strings.

Other patterns warrant mention. Cowries with small dorsal perforations were confined to those shells used as ‘currency’ (Figure 3c), while cowries used in composite items for adornment had large round dorsal perforations (Figure 3d). Although this is a preliminary observation, it points to the suggestive potential of differentiating the itinerary of a cowrie based on its modification stage. However, examples of cowries with small perforations used as necklaces have been noted elsewhere. Three objects contained cowrie shells that had

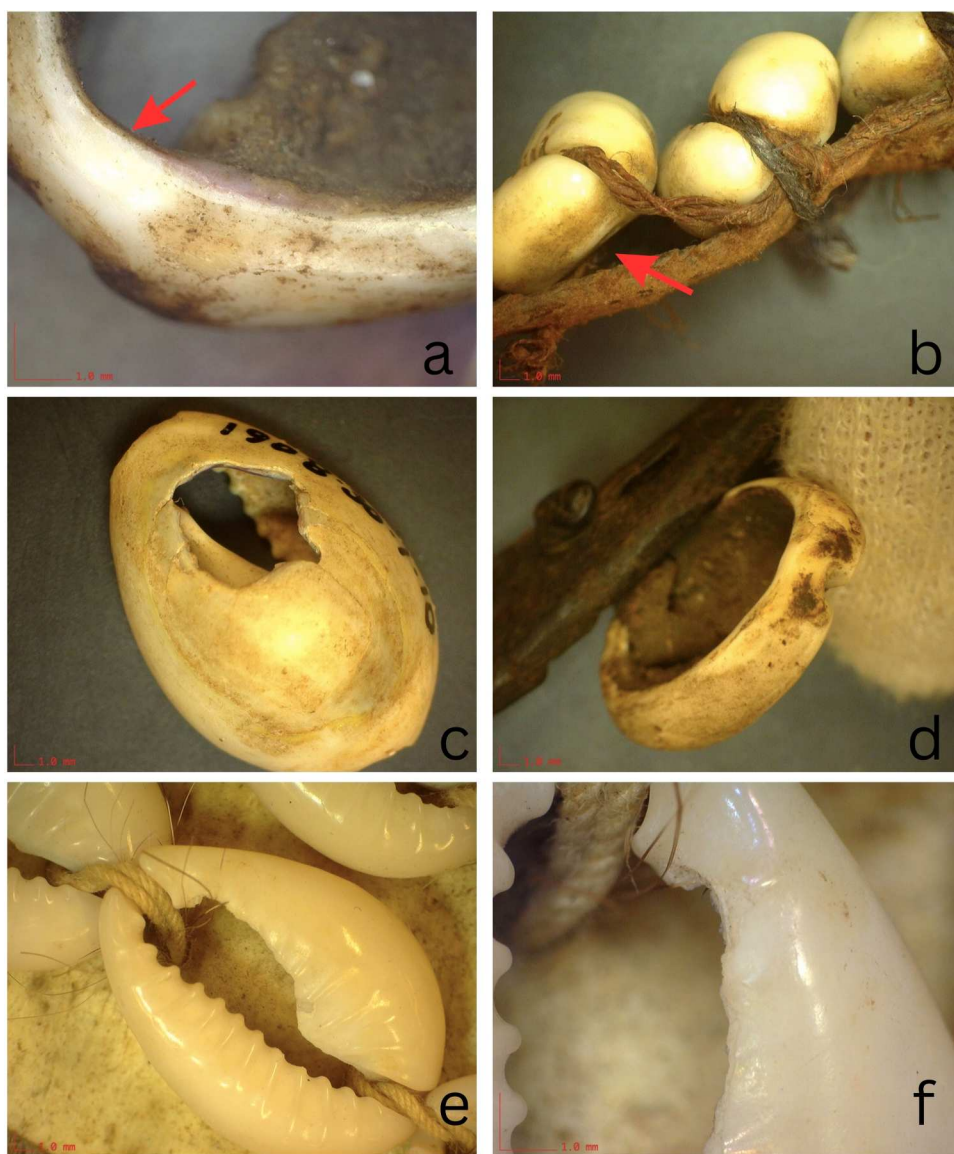


Figure 3. Examples of particular use wear patterns observed on different shells in the Pitt Rivers Museum collection a) 1901.4.153; b) 1925.16.12; c) 1908.30.1 1–13; d) 1901.4.153; e) 1970.13.31; f) 1970.13.31.

missing teeth (Figure 3e–f for an example). Microwear analysis suggests that these were deliberate breaks from the top downwards. This breakage pattern may reflect a deliberate removal of the teeth to achieve a given aesthetic quality. It may also have resulted from a particular perforation technique in which a sharp item was inserted between the teeth of the shell to perforate the dorsal surface, a technique undertaken by some contemporary craftsmen.

In terms of attachment and composition, cowrie shells were either directly attached to materials such as leather, paper and cloth or strung with twine/string alongside other

beads. In all cases, shells were strung orientated in the same direction (either sideways or facing upwards) and a similar sized shell was used in each composite object. These choices suggest a particular understanding of the form of shell in the mind of the maker — concepts of front/back and top/bottom, as well as a preference for size. These compositional choices point towards a culturally embedded conception of cowries and their form. Specific objects and materials were deliberately chosen or excluded from the composition of these objects. Leather, hides, certain animal skins, organic substances, glass beads and a limited amount of metal wire were included in the assemblages. While the cowrie shells lend themselves to being used as beads, the placement and stringing of these shells on most of the objects underscores a differentiation in the maker between shell beads and glass or metal.

Of particular interest were the headbands from South Africa, which contained bands of cowries on a leather back. Similar examples are present in the British Museum's collections, containing large numbers of cowries strung together on leather. In the recent past in southern Africa cowries were closely associated with divination and healing (Moffett and Hall 2020). This appears to have limited their use in other aspects of material culture. It is possible that the accumulation of cowries and animal hair, another potent object on these headbands, may also have been part of materialising ancestral connections or healing. Two of the headbands from the Pitt Rivers Museum's collection contained shells with significant organic residues on the insides, one shell appearing to have been deliberately filled with an organic substance. Such processes may reflect the use of the shell as a container for a medicinal substance (Insoll 2011).

Making and assembling beads in the archaeological record

How does this focus on composites help us think about archaeological objects? While recovered from archaeological contexts as individual items, beads are widely used in composite objects in the recent past. Historical and ethnographic studies indicate how the affordances of particular beads influenced the materials with which they were combined. In the case of cowrie shells, their white colour, linked with values of ancestry, influenced their combination with other white beads in composite objects related to healing (Moffett and Hall 2020). At the same time, combinations of beads with other inorganic materials or with hair, fur or skin allowed beads to accrue new composite values (Stahl 2018). Combined, these may have had new affective qualities or enabled psychotherapeutic practices (cf. Blier 1995).

We may take these various observations to the archaeological record in different ways. In the case of studying the modification and wear patterns on modern collections, examination of attachment methods and traces indicates the potential that exists for identifying these in the archaeological record. For example, in a recent study of cowrie shells from archaeological collections in southern Africa, we examined modification and use-wear patterns on four assemblages of cowrie shells dated to between AD 750 and 1350 (Moffett *et al.* 2022). The majority (96%) of these shells were modified, with their dorsal surfaces removed. The dorsal shells of the cowries had different degrees of modification and wear. However, many of the shells had fairly horizontal dorsal breaks with polish on the dorsal aperture (N = 72, 64%), a modification pattern that was dominant

across all four collections. This modification and wear pattern is suggestive of attachment to leather or clothing, indicating that at some point in their itineraries these shells were attached to materials or other substances as composite items.

While cowries may have been attached and used as adornment, a range of other modification techniques, from small perforations to uneven chipping and grinding, revealed other aspects of the itinerary of a cowrie shell. These different modifications noted in the assemblage indicate a degree of experimentation in the preparation and use of cowries across the sites and through time. This may have been the result of the individual skill of particular crafters (cf. Baysal and Yelözer 2023). Different modification techniques (such as chipping and grinding) may be the result of the modification of cowries alongside other beads using similar spaces and techniques and reflecting wider taskscapes (Ingold 2000). For example, ostrich eggshell and *Achatina* shell beads were common shell beads on agriculturalist sites of the late first/early second millennia AD in southern Africa.

In addition to this, an emphasis on assemblages focuses our attention on the contextual information related to beads in the archaeological record. Beads are often deposited in domestic middens with other refuse. This may limit the recovery of contextual data. Noting the prevalence of other beads, and possible associations in terms of production and use, may nevertheless provide valuable information. In terms of craft activities, we may begin to explore potential interactions between bead producers of different materials (such as shells of various types, glass, stone) and examine spatial evidence of manufacture or modification to explore questions related to issues of labour, gender and specialisation (Babalola, this volume).

Beads are also recovered from burial contexts, which can provide unique insights into their combination and assemblage with people and things. In our second case study, we develop a brief discussion of one of the major contexts in which beads were recovered during archaeological work at the site of Birnin Lafiya, a large mound site in northern Bénin, as part of a European Research Council project that ran between 2011 and 2015. While the beads were the focus of a dedicated chapter (Magnavita 2019) in the project monograph, the present paper offers a chance to examine these materials in fuller detail. The context in question is a burial (Trench 11, Contexts 21 and 23) which, alongside a well-preserved structure (Trench 3/10), yielded a great part of the 162 beads recovered at Birnin Lafiya. This burial offers us a good opportunity to think of bead usage in a snapshot in time. Trench 11 was a 2 × 2.5 m unit (Figure 4) and its excavation exposed a range of deposits (Lee 2019). Several instances of collapsed wall features were noted, possibly associated with ash and burnt soil, and a portion of a potsherd pavement was recovered, dated by association to 920 ± 30 BP (Beta-412223). This trench also features one of only two *in situ* burials recovered at Birnin Lafiya (Figure 5). Its context is directly dated to 1560 ± 30 BP (Beta-345492), that is the fourth to sixth centuries cal. AD. The skeleton was lying on the back, fully flexed, with the skull facing west; the upper part of the body was well preserved but the lower part was decayed. Two small objects were found near the neck, as well as stone and organic beads. Two clusters of non-diagnostic potsherds were placed on either side of the body. Below the pelvis was a rectangular metal object resembling a belt buckle, as well as further beads (Lee 2019).



Figure 4. Location view: Trench 11 at Birnin Lafiya. Photograph by Alan McLaughlin.

Altogether, 84 flat discoid shell beads were recovered from this burial, both near the head and near the waist (Figure 6). They are probably of mollusc or gastropod shell rather than ostrich eggshell and three morphological types were defined, based on the sizes of the bead and its perforation (Magnavita 2019: Fig. 20.1, #1-3). Additionally, 20 or more soft stone beads, termed ‘Type 2’ by Magnavita (2019: Fig. 20.1, #7) in her analysis of the corpus, were recovered. They have very smooth, glossy surfaces and sharp edges and, in contrast to almost all the other stone beads in the assemblage, appear to have been drilled from both sides (Magnavita 2019: 201). Their context of recovery suggests that they likely



Figure 5. Birnin Lafiya: the Trench 11 burial under excavation. Photograph by Anne Haour.



Figure 6. Birnin Lafiya: beads from the Trench 11 burial. Items from the lowest row were recovered from the waist area (SF 2013-29), while the rest (SF 2013-27 and 2013-28) were from the neck area. Photograph by Andi Sapey.

formed a set, a fact also suggested by their relatively uniform characteristics. Some were identified by micro-X-ray fluorescence as being made from bauxite, an aluminium ore (Chloe Duckworth, pers. comm.). This ore, found in pebble form, can be made into beads, a practice especially common in Ghana, suggesting that these items may have been traded from quite a distance (Magnavita 2019). The visible banding within some of the stones suggests that they may have been intentionally selected for their heterogeneity (Chloe Duckworth, pers. comm.).

Such bauxite beads, and almost all the shell beads, were found exclusively in funerary contexts at Birnin Lafiya, and not across the rest of the site, another reminder of the importance of considering archaeological context and differences between contexts. Within the Trench 11 burial, the stone and shell beads were apparently worn together; if not strung together, at least worn simultaneously around the waist and neck. Near the head (SF 2013-27 and 2013-28) were about 63 beads, of which 18 were stone, while at the waist area (SF 2013-29) were five shell beads and three stone ones. Exact numbers of shell beads are, however, difficult to assess, given their layered structure and because they were partly agglomerated.

The reasons why these beads were combined and selected for use in the burial context at Birnin Lafiya are of interest. In a study of the changing character of cloth, pipes and beads in the Banda region of Ghana over four centuries (between the sixteenth and twentieth centuries), Ann Stahl (2002), working to develop a ‘cartography of taste’, noted that locally or regionally produced ceramic and shell beads continued to be made even when

imported glass beads were plentiful, a fact that she interprets as evidence of the continued relevance of earlier practices of taste. This may also have been the case at Birnin Lafiya, where beads of local manufacture and those from more faraway places were combined and their meaning reconfigured according to a particular cartography of taste or meaning. Their context — that of a burial — offers a unique opportunity to consider these beads within the framework of an assemblage.

Unfortunately, except for the above-mentioned bauxite beads, we know little about processes of manufacture of beads in the wider landscape around Birnin Lafiya. The area is known, historically, as the source of the so-called ‘lantana’ beads amply reported in twentieth-century accounts. Such beads were a major trade item of the area around Birnin Lafiya, quarried and delivered by Hausa traders downriver to the city of Ilorin (Daniel 1937; O’Hear 1986; Babalola and Ajayi 2022). The process of making the beads some hundred years ago was described by Daniel (1937) and Clarke (1938). First the lantana stone, secured between the toes of the beadmaker, was chipped roughly into shape with the aid of a small chisel and a double-headed hammer. It was then pierced by chipping from either end; a coarse point would be used at the beginning and replaced by finer ones as work progressed. The pierced bead was worked vigorously across a grinding stone before its final polishing on a smooth board. By Daniel’s reckoning (1937: 8), in 1921 there were 500 beadworkers in Ilorin, but in 1935 just 15. This precipitous decline came about because the value of the beads ‘no longer justified the long and tedious hours of work’, whereas just decades before, the beads commanded high prices, and the beadmakers’ income was high (O’Hear 1986: 38). These historical accounts cast a vivid light on the choices and commercial decisions made by crafters, some of which responded to external factors and fluctuations in fashions and tastes.

Concluding thoughts

In this special issue of *Azania: Archaeological Research in Africa* we provide a range of case studies that demonstrate the potential of research into bead ‘making’ for opening new areas of enquiry in African archaeology and beyond. Geographically, they span the continent; Munene and colleagues, Wynne-Jones and Munisi and colleagues all discuss eastern Africa, Mitchell and colleagues southern Africa and Babalola western Africa, while Wingfield takes a near-global perspective. Thomas’ comment piece identifies both commonalities and disparities in the treatment of beads by Africanist researchers. Our hope is that this special issue provides impetus for increased inter-disciplinary research on the topic. A wide variety of analytical techniques, ranging from using isotopic and geo-chemical signatures for provenance research to the use of Scanning Electron Microscopes to examine the microstructure of bead types, provide additional avenues for researching these questions. We hope that this is just the beginning of a renewed interest in the global story of beads and bead-making.

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