INTRODUCTION

Toward a Culturing of the Paleolithic Body

April Nowell and Benjamin Collins

Contributors to this volume present a wide range of case studies of what it means to culture the body in the Paleolithic period (ca. 3.3 million–12,000 BP[1]). In this brief introduction to the volume, we consider what is meant by the term "body." We then look more deeply at what is involved in "culturing" a body. Finally, we explore the challenges of culturing the "Paleolithic" body specifically.

What Is a Body?

At its most basic, the body is a biological entity, a physical structure that includes skin, bones, muscles, and organs, and yet to all of us who possess one it is so much more—our body is what allows us to move through and experience the world around us. But where does our body end and the world begin? Malafouris (2008: 115–16) argues that the body is not "a passive external container of the human mind that has little to do with cognition *per se* but a constitutive and integral component of the way we think. In other words, the mind does not inhabit the body, it is rather the body that inhabits the mind. The task is not to understand how the body contains the mind, but how the body *shapes* the mind" (emphasis in the original). The human brain is characterized by plasticity, with many studies documenting the influence of social, cultural, material, and environmental factors as well as individual experiences on the shaping of human cognitive processes and behavioral outcomes (Nowell 2021). Because of this recursive relationship between

Culturing the Body
Past Perspectives on Identity and Sociality
Edited by Benjamin Collins and April Nowell
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the internal and the external, Malafouris (2013) emphasizes that archaeologists need to consider an *extended* cognition—one that extends beyond the skull into the material world of artifacts (Nowell 2021). Using a classic example, Malafouris (2013) asks where a blind man's mind/body ends and his world begins—is it at the tip of his cane where the tactile is transformed into the visual?

A move away from a Cartesian understanding of the mind-body divide toward an extended and embodied cognition has profound implications for the archaeologist. Loren (2022: 218) argues that while archaeologists routinely study human and material engagements in the past, we often omit sensorial experience—"taste, touch, smell, sight and hearing—that is also synesthetic, with multiple senses working in unison . . . . These sensual engagements are as much culturally constituted as physically given and social and historically specific." When a flint knapper begins making a stone tool, the affordances (or properties) of the core—for example, its size, shape, color, texture, and chemical composition—allow for certain possibilities, for certain tools to be made with greater or lesser difficulty. As the knapper works, they rely on all of their senses.[2] When an unexpected inclusion or impurity in the rock is struck, there will be auditory, tactile, and visual cues that will change what the knapper knows about this core and will impact their subsequent actions (Nowell 2021). In a very real sense, there is no divide between what the knapper knows/senses and the material objects that are also actively engaged in the act of tool making. The knapper acts upon the stone and the stone acts upon the knapper. Acknowledging the role of things in the constitution of cognition and bodily experience offers archaeologists a more robust way of interpreting the past than traditional methods that rely on technological and typological analyses alone.

Exploring the Cultured Body

Extended cognition and embodied cognition are also a useful framework within which to approach a study of the cultured body. As Nowell and Cooke (2021: 400) observe, "the human body lies at the interface between the individual self and the group . . . . As a product of both nature and culture, it can be modified to fulfill, challenge, or rebel against ideals of beauty . . . and expectations related to age, gender, social status, kinship, ethnicity, group membership, sexuality, religion, and occupation." Humans modify their bodies in multiple ways including through the use

of cosmetics and personal ornaments (e.g., rings, necklaces, bracelets, etc.), corsets and other clothing, managed hair, tattooing, scarification, cutting, branding, and other procedures and alterations for culturally specific reasons (Nowell and Cooke 2021; see also Myers 1992).

Body Worlds and Body Schema

Robb (2008; see also Borić et al. 2013; Harris and Robb 2013) argues that clothing and personal ornaments act as a second skin giving the body color and texture and connecting it to materials, places, and people—blurring the boundary between the body and the world. In this sense Borić et al. (2013: 41) speak of a "body world" that is "a set of assumptions about the kind of thing the body is, combined with discourses and practices which make the body a generator of social meanings and relations."

As Joyce, in the foreword to this volume, has cogently pointed out, the entanglements between bodies and materials literally and figuratively run much more deeply than Robb (2008) envisions—tattoo ink penetrates the surface of the skin, scars even more so. A constricting corset may remodel the waist and even tight socks leave a temporary impression on the skin. But what about the ornaments that archaeologists study—the shell beads and abalone pendants (see Mitchell and Stewart, chapter 1; Collins et al., chapter 2; Miller, chapter 3; Walshe, chapter 4; André, chapter 5; Bicho and André, chapter 6)? Do these constitute a "second skin" that we can shed at will? Malafouris (2008) argues, "if the body shapes the mind then it is inevitable that the material culture that surrounds that body will shape the mind also." He (2008 and references therein) gives the clinical example of a woman whose left arm is paralyzed as a result of a stroke. When viewing the arm, she insists that it is not hers, that it belongs to someone else, as do the rings worn on "its" hand. When these same rings are worn on her right hand or presented in front of her she recognizes them immediately. She is also able to describe the rings independently of looking at them. Malafouris (2008) argues that those rings, habitually worn on her left hand, are so much a part of the woman's arm that when she ceases to recognize that part of her body, she ceases to recognize them as well. In the same way, when we take off a ring or a necklace we are used to wearing we feel its loss and often touch the place where the ornament should be.

These sensory experiences are related to what Malafouris (2008: 115) and references therein) refers to as "body schema," which is "the complicated neuronal action map associated with the dynamic config-

urations and position of our body in space . . . [it] is not a simple percept of the body, but it is closely associated with cortical regions that are important to self recognition and recognition of external objects and entities . . . [it is] a powerful means for linking neural and cultural plasticity." In a very real sense, the woman's rings were not simply adorning her body, they were her body, and when she no longer associated herself with her left arm, her rings disappeared as well.

Bodies, Performativity, and the Archaeology of Identity

The archaeology of identity is another way in which archaeologists study culturing the body. This research explores the material correlates of the intersection of gender, age, ethnicity, religion, social status, and able-bodiedness in the creation of self. Identity is personal and expressive, embodied and performed, ephemeral and relational. Identities can be fluid and multifaceted, changing over time and in response to audience or situation. The fact that identities are performative (e.g., manner of speaking, behavior in social situations, choice of clothing,[3] posture) has important implications for archaeologists studying the body because these performances often take place through the body, with people's bodies being the central element of their performance (Johnson 2020: 177). In this sense, the body itself can be considered as material culture that is modified and manipulated. As Johnson (2020: 177) notes, much of the archaeological record is "about the constructions of the body, e.g., grave goods, personal items like jewelry, grooming items like combs, tweezers, dress and other items." The archaeology of identity moves us away from the conception of bodies as simple, inert, essential, fixed, and biologically determined (see Johnson 2020).

Culturing the Paleolithic Body

In studying cultured bodies in the Paleolithic archaeologists encounter challenges particular to this period. It is clear that not all practices leave direct, obvious, and enduring archaeological signatures. Some body modifications such as clothing, personal ornaments, hairstyles, and the bleaching, waxing, and shaving of hair are temporary and can be easily altered; while others such as piercing, scarification, branding, female genital cutting, male circumcision, and foot-binding are more permanent and endure throughout an individual's life (Nowell and Cooke 2021). Intuitively, we expect that more permanent modifications and

ones that impact hard tissue (bones, teeth) rather than soft tissue (flesh) would leave more visible traces for the archaeologist to uncover but this is not necessarily the case. Foot-binding, for example, would have greatly impacted an individual in life, but the actual practice does not deform the individual's foot bones (Stone 2012)—once the binding rots away there are no direct traces of this behavior (nor links to the experience of moving through the world in this way) left in the archaeological record (Nowell and Cooke 2021). By contrast, body painting, tattooing, and clothing that has long since disintegrated can be inferred from needles, figurines, prints of shod feet in mud, and wear on tools, ochre, and beads (see Dutikiewicz et al., chapter 7; Hodgskiss, chapter 8; Nowell and Skala, chapter 9). Differential preservation impacts all archaeologists, but the deep time involved in studying Paleolithic body modifications means that taphonomic processes play an even greater role than they do in more recent periods.

A second challenge is that while the Paleolithic spans millions of years (beginning with the oldest evidence for the use of stone tools at 3.3 million years ago, see McPherron et al. 2010), the vast majority of the evidence we study (and indeed presented in this volume) derives from the Middle and Upper Paleolithic and to a lesser extent the Middle and Late Stone Age in Africa (roughly 300,000–12,000 BP). This is partially an accident of history (i.e., these geographic regions are historically where there has been the greatest research intensity) but may also be due to population densities and other cultural and environmental factors. As Paleolithic archaeologists, we detect behaviors only once they increase in frequency and/or transfer to a more visible medium.

A related issue is that virtually all the artifacts we associate with culturing the body (personal adornment, ochre, tattooing needles, tools for making clothing) are associated with *Homo sapiens* and again this bias is reflected in the chapters in this volume. There is limited evidence of the manufacture and use of personal ornaments with Denisovans and Neandertals, and ochre usage with Neandertals and even earlier hominins species and clothing manufacture by Neandertals (Chang and Nowell 2020; Nowell and Cooke 2021; Hodgskiss, chapter 8, this volume; Nowell and Skala, chapter 9, this volume). But as White (1992) observed, it is no exaggeration to say that there are more items of personal adornment in a cubic meter of sediment in an Aurignacian site (ca. 40,000–30,000 BP) than in all of the sites dating to the first >3 million years of the Paleolithic period combined. Not only does this fact lead to a concentration of data in the final stages of the Paleolithic, but it also constrains the kinds of assumptions archaeologists can make

when not studying *H. sapiens*—what would performativity through the *H. erectus*[4] body look like?

A final challenge to be considered here is the fact that for the entirety of the Paleolithic hominins exclusively followed a foraging lifestyle that included degrees of sedentism. As Hurcombe (2014) reminds us, the majority of forager material culture is organic in nature and not all practices will leave visible signatures. Nonetheless, she cautions (2014: 2) that these facts "[do] not and should not preclude them from being an essential aspect of archaeological thinking." An example of this thinking is represented in ostrich eggshell beads (see Mitchell and Stewart, chapter 1; Collins et al., chapter 2; Miller, chapter 3), where these beads are often recovered in isolation or small numbers, and therefore potentially reflect jewelry and ornaments comprised of thousands of beads, made by many hands, over many generations (Wilmsen 2015). These tiny beads offer the potential for insight into past behaviors and into the novel perspective of individuals, within groups and between groups, as they connect individuals to ancestors, the supernatural, and one another.

Conclusion

Embodied and extended cognition approaches to stone tools permit archaeologists to explore questions related to learning, skill acquisition, and communities of practice and apprenticeship in the Paleolithic. As Nowell (2021: 100) writes, "there is a dynamic, fluid relationship between cognition, perception and action . . . between object, affordances and the human agent; between the lithic toolkit, the possibilities of stone and antler and the knapper. It is this full embodiment of the toolmaking process that transforms a novice into an expert, and in the Paleolithic, perhaps an adolescent into an adult." Similarly, when the authors in this volume study the means through which people cultured their bodies in the Paleolithic they are not only recording information on trade, techniques of manufacture, and the (re)creation of individual and communal identities, they are also bearing witness to the entangled social, cultural, material, and biological relationships of which these now static artifacts were once a part.

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Notes

1. Years before present.
2. Even taste may be called upon if the knapper cuts their finger (a common occurrence) and instinctively sucks on the wound.
3. See Nowell and Skala (chapter 9, this volume) for a discussion of ontological and perspectivist approaches to studying transformations of the body when people don animal skins and other body parts.
4. The taxon *Homo erectus* is being used in the broadest sense to include populations from Africa, Eurasia, and Europe from roughly 2,000,000–50,000 years ago.

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CHAPTER 1

Enveloping Oneself in Others

Semiotic, Spatial, and Temporal Dimensions of Ostrich Eggshell Bead Use in Southern Africa

Peter J. Mitchell and Brian A. Stewart

Introduction

Ostrich eggshell beads are one of the oldest forms of personal decoration, first appearing in southern Africa ca. 40,000 years ago (d'Errico et al. 2012) and are still made, used, and traded by numerous San peoples today (Wingfield 2009; Hitchcock 2012). Anthropological interest in them stems largely from their prominence in the delayed, reciprocal gift-exchange system practiced by the Ju/'hoãnsi (!Kung) San of the Kalahari, which provides participants with alternative residential and subsistence options when resources become scarce in their own home ranges (Wiessner 1977, 1982, 1986, 1994, 2002). Via enduring connections with consanguineal and (indirectly) affinal kin that extend over distances of up to 150–200 km (Wiessner 1982), Ju/'hoãnsi minimize the risks of resource failure by strategically selecting exchange partners who offer access to both complementary ecologies and potential marriage partners (Mazel 1989), while simultaneously reinforcing egalitarian social values through a never-ceasing circulation of material items (Lee 1979).

Archaeologists have used this research to explore past exchange networks in many parts of southern Africa (e.g., Hall and Binneman 1987; Wadley 1987; Mazel 1989). Frequently, though not always (see Mitchell 1996), such studies employ the term *hxaro* in ways that suggest direct

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analogies with the precise form of mutual gift-giving recorded among the Ju/'hoãnsi, despite this being but one of several such traditions observed among the San (Barnard 1992; Hitchcock 2012), some of whom seem not to have engaged in similar practices (Heinz 1966). *Hxaro*'s appeal is nevertheless great because it ties together multiple themes that go to the heart of how hunter-gatherers make a living: risk minimization, access to subsistence resources and information, biological reproduction, sharing, securing desired items unobtainable at home, and seasonal shifts in settlement and group organization between aggregation and dispersal phases of social life.

As one of the most common, highly valued, and traditionally important gift items that Ju/'hoãnsi exchange, and as items frequently found in excavation, ostrich eggshell beads play a significant part in archaeological discussions of hunter-gatherer exchange networks. Being objects of adornment (necklaces, bracelets, on headbands or bands, or attached to clothes and bags; Hitchcock 2012; Viestad 2018; see also chapter 3, this volume), they were presumably employed for interpersonal and/or intergroup signaling, yet we know little of their function beyond the twentieth-century Kalahari. The antiquity, drivers, development, precise functioning, and socioecological contexts of the networks of which they formed part remain obscure. Moreover, because ostriches are ubiquitous across most of southern Africa, often we cannot even be sure that beads made from their eggs had moved anywhere at all, let alone the directions and distances involved (Mitchell 2003).

Southeastern southern Africa (Figure 1.1) offers an ideal focus for gaining purchase on these questions since ostriches (*Struthio camelus australis*) were absent there in historic times, except in the Caledon Valley and further west into South Africa's interior.[1] High altitude, rugged terrain, and cold temperatures excluded them from the Maloti-Drakensberg Mountains that comprise the region's core, while east of the uKhahlamba-Drakensberg Escarpment (hereafter "the Escarpment") higher rainfall and humidity kept them out of the broad-leaved savannas and coastal forests of the Eastern Cape and KwaZulu-Natal (Sinclair et al. 2011). Consistent with historical observations, archaeological evidence for *Struthio*'s presence is likewise absent in most of southeastern southern Africa: ostrich bones and ostrich eggshell are almost never found in excavation, preforms left from bead manufacture (Orton 2008) are extraordinarily rare, and such beads as do occur are almost invariably finished (Figures 1.2 and 1.3, Table 1.1), another indication that they were made elsewhere.

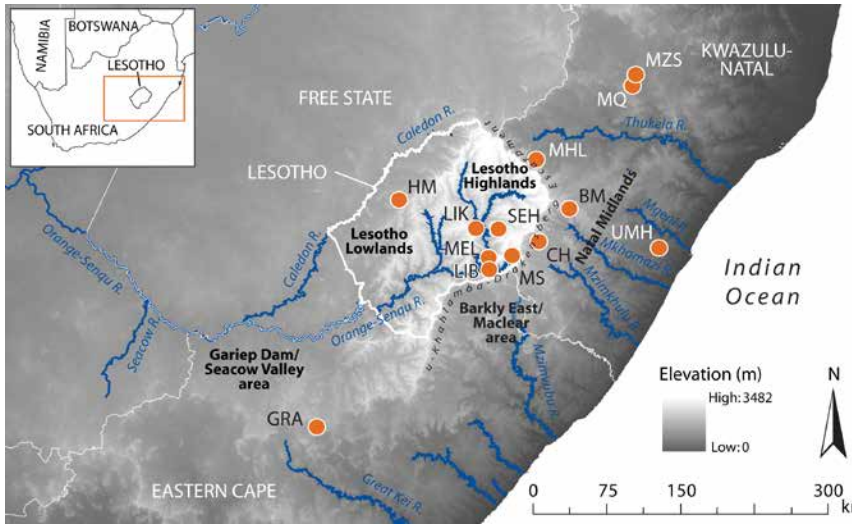

Figure 1.1. Map of southeastern southern Africa showing the locations of sites and areas mentioned in the text. Site names are abbreviated thus: BM, Bamboo Mountain; CH, Collingham Shelter; GRA, Grassridge; HM, Ha Makotoko; LIB, Libesoaneng; LIK, Likoaeng; MEL, Melikane; MHL, Mhlwazini; MQ, Maqonqo; MS, Moshebi's Shelter; MZS, Mzinyashana 1 Shelter; SEH, Sehonghong; UMH, Umhlatuzana. © Brian Stewart.

Previous work on the distributions of ostrich eggshell beads, bead preforms, and unworked eggshell fragments has posited South Africa's central interior as the most likely source area for those found in the Maloti-Drakensberg Mountains and the lower-lying areas to their east (Mazel 1989, 1996; Mitchell 1996). However, it was unable to distinguish between immediately adjacent regions (e.g., the Caledon Valley or other areas of the eastern Free State and the high-altitude grasslands in the northern Eastern Cape) and those further afield (e.g., the Karoo or the highveld grasslands of the northern Free State, Gauteng, and southern Mpumalanga). Strontium (Sr) isotope analysis of ostrich eggshell beads from two long-sequence, late Quaternary hunter-gatherer sites in highland Lesotho—Sehonghong and Melikane—now provides a means of discriminating between these possibilities by matching the Sr isotope ratios ($^{87}Sr/^{86}Sr$) of individual beads to those of southern Africa's bedrock geology (Stewart, Zhao, et al. 2020). As expected, results remove highland Lesotho as a possible source, but in many cases also exclude areas where the bedrock comprises sandstones, mudstones, and shales of the Stormberg and Beaufort Groups. Instead, they point to sources from

Figure 1.2. Two views of ostrich eggshell bead production at Ncaang, Kgalagadi District, Botswana, October 2022. Ostrich eggshell fragments are first drilled into bead blanks (A) before being strung, ground, and smoothed *en masse* (B) to create standardized end products. Photographs by Gréine Jordan for British Museum Endangered Material Knowledge Programme funded project "Making Things from Animals" (2020SG12), CC BY-NC-SA 4.0.

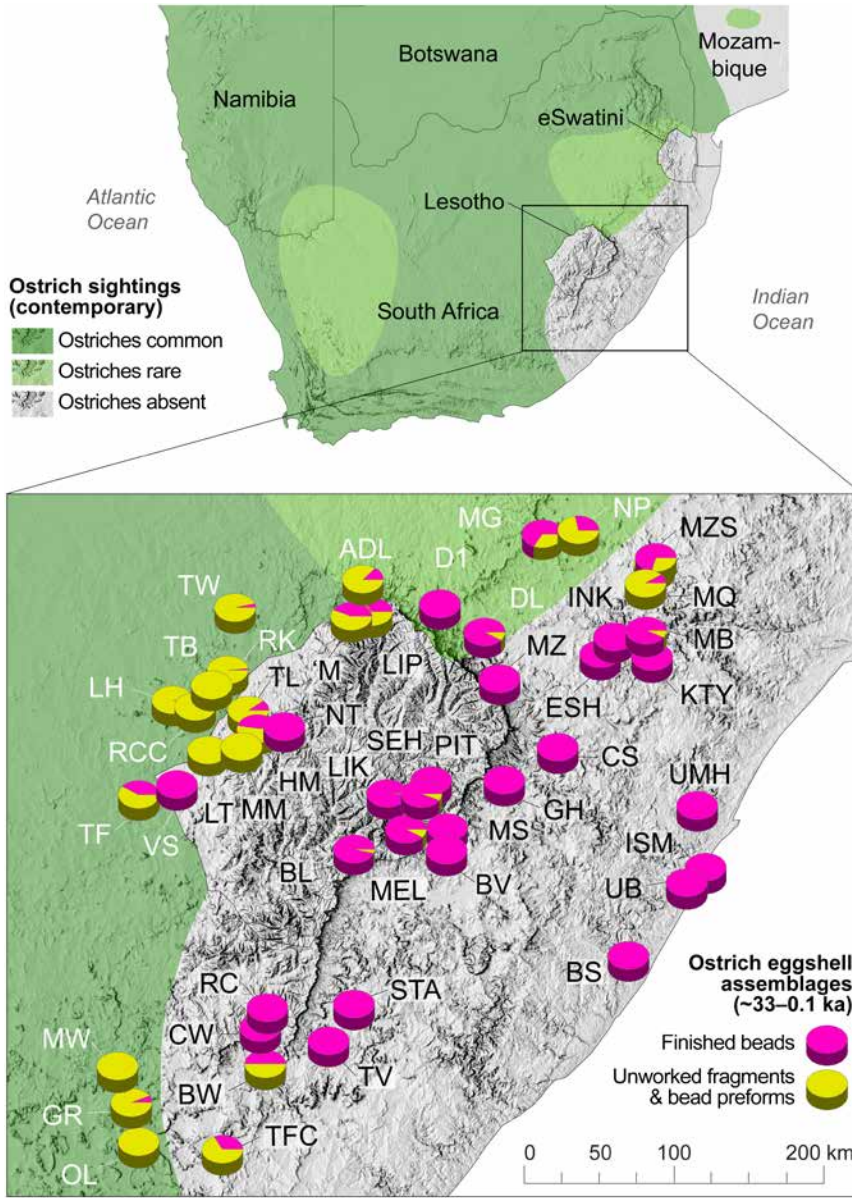

Figure 1.3. Map (*upper*) showing the distribution of ostriches in southern Africa based on contemporary sightings, with detail (*lower*) of southeasternmost Africa, including Lesotho and the Maloti-Drakensberg, showing contemporary ostrich distributions against proportions of finished ostrich eggshell beads versus unmodified fragments plus bead preforms for late MSA and LSA archaeological sites in the region (~33–0.1 ka) (modified after Stewart, Zhao, et al. 2020: Fig. 5). © Brian Stewart.

Table 1.1. Distribution of evidence for onsite ostrich eggshell bead manufacture in southeastern southern Africa (+ present; – absent; n/a not available because no sites fall within the period specified). Sites within the Thukela Basin are grouped into the three spatial regions and central area identified by Mazel (1989), including Collingham Shelter within the Injasuthi region. Maqonqo and Mzinyashana 1 (Mazel 1996, 1997) are grouped together as "northern Thukela Basin." Other data are drawn from references in Mitchell (1996, plus unpublished data) and from Brooker (1980), Esterhuysen, Behrens, and Harper (1994), Backwell et al. (1996), Opperman (1996), Wadley (1996, 2000a, 2000b), Mazel (1999), Thorp (2000), Wadley and Laue (2000), Hobart (2004), Plug and Mitchell (2008), Kaplan and Mitchell (2012), and Mitchell and Arthur (2014).

Region	Marine Isotope Stages 3 and 2 33–12 ka	Early Holocene 11.5–8.2 ka	Mid-Holocene 8.2–3.5 ka	Later Holocene 3.5–1.9 ka	Later Holocene <1.9 ka
Caledon Valley	+	+	+	+	+
Highland Lesotho	–	–	–	–	—
Thukela Basin—Northern	n/a	n/a	+	+	+
Thukela Basin—Ndaka	n/a	n/a	–	–	—
Thukela Basin—Injasuthi	n/a	n/a	–	–	—
Thukela Basin—Toleni	n/a	–	–	–	+
Thukela Basin—Central	n/a	n/a	n/a	n/a	—
Southern Escarpment	n/a	–	–	–	—
KwaZulu-Natal lowlands	–	–	n/a	–	—
Barkly East/Maclear area	–	–	–	–	—

within, or even beyond, the distribution of the underlying Ecca/Dwyka Group at minimal distances of ~160–330 km (Stewart, Zhao, et al. 2020) (Figure 1.4). Although such rocks also occur nearer than this below the Escarpment in KwaZulu-Natal and the Eastern Cape, *Struthio*'s historical distribution and habitat preferences strongly suggest that these more humid areas could not have been the source for beads found in highland Lesotho or other parts of the wider region.

Our initial exploration of bead provenances thus confirms their exoticness to the Maloti-Drakensberg region. The minimum distances involved, moreover, are indicative of transfers that linked members of adjacent macroscale social networks (Stewart, Zhao, et al. 2020; cf. Whallon 2006). While the precise territories of these groups remain elusive, historical and archaeological evidence that ostriches are long-term

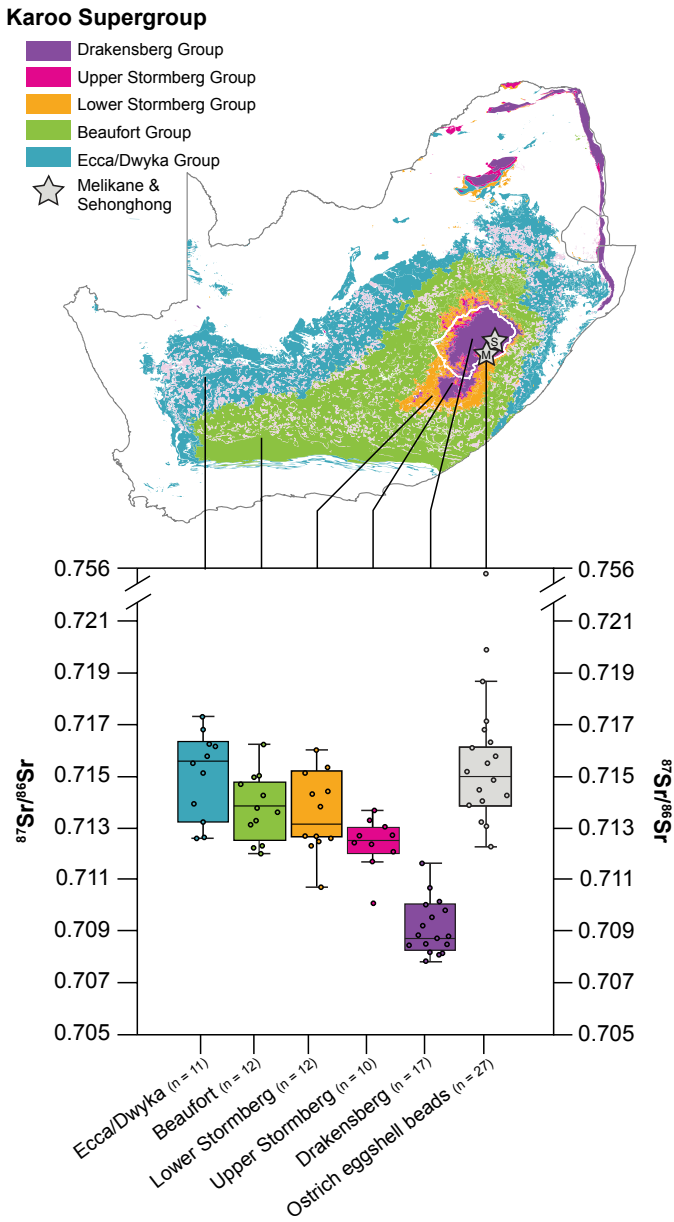

Figure 1.4. Ostrich eggshell bead $^{87}Sr/^{86}Sr$ versus Karoo Supergroup $^{87}Sr/^{86}Sr$. Boxplot showing Melikane and Sehonghong ostrich eggshell bead $^{87}Sr/^{86}Sr$ values against those generated for the Karoo Supergroups primary lithological units. Boxes color-coded to the map above (after Stewart, Zhao, et al. 2020: Fig. 4.). © Brian Stewart.

aliens to southeastern southern Africa suggests that they inhabited regions deep in the subcontinental interior. Social networks linking montane with interior groups were, moreover, not only long-distance but also long-lasting, with our data showing persistence over the past ~33 ka (Stewart, Zhao, et al. 2020). Yet our results also raise many questions. For example, what aspects of ostrich eggshell beads made them of interest to people? How did the magnitude and direction of the networks responsible for the introduction of ostrich eggshell beads into the region change through time? How do these diachronic trends in ostrich eggshell bead transfers compare with those of other indicators of interaction? We tackle these three questions here, concluding with some thoughts on how we may further our understanding of ostrich eggshell beads and the social networks they materialized.

Ostrich Eggshell Beads as "Things of Consequence"

Animals are famously "good to think" (Lévi-Strauss 1962: 128). Numerous studies show that species like eland (*Taurotragus oryx*) (Vinnicombe 1976) and gemsbok (*Oryx gazella*) (Biesele 1993: 94–97) hold particular salience for San populations, something reflected in the choices made when creating rock art imagery and in beliefs that artifacts such as skin bags or cloaks retained aspects of the animals from which they were made, including their supernatural potency (Lewis-Williams and Pearce 2004). Ostriches are also one of the few birds to figure prominently in San folklore (Low 2011) and are especially relevant in myths concerning the creation of the world as we know it today, where people and animals occupy quite distinct statuses, behave in wholly different ways, and can no longer readily communicate with each other (Biesele 1993; Guenther 1999; Low 2009). They were widely recognized as powerful beings (Hollmann 2001) that had once ruled over all the other animals (Eastwood and Eastwood 2006: 108); or provided people with knowledge of fire (something symbolically equated with men learning about sex from women [Guenther 1999: 152; cf. Schmidt 1995: 158; Valiente Noailles 1988: 134–36]); or even created people in the first place (Valiente Noailles 1988: 218). The /Xam, moreover, linked ostriches to concepts of rebirth and resurrection (Bleek and Lloyd 1911: 139; Low 2009: 82), an idea that, with its implication of an ability to move between the spirit world and this one, finds a clear parallel in widespread San beliefs about the capacity of shamans to "die" on entering trance and then return to life (Katz 1982: 115–16).

The ostrich's elevated ontological status, supernatural power, and sheer physical strength, speed, and size feed directly into how its individual body parts or products are employed given the widespread San belief that "by wearing, sniffing, eating and rubbing on animals' parts, people become owners of particular animal strengths or abilities" (Low 2011: 302).[2] While they also used ostrich dung, feathers, and leg tendons, southern African hunter-gatherers and herders alike considered ostrich *eggshell* to be "the most widespread" medicine of all (Low 2011: 308) and employed it in a wide variety of contexts, from a treatment of first resort for sick children to an antidote against sore eyes, a cure for influenza, and a means of strengthening infants (Low 2009: 76–77). Of specific interest here, ostrich eggshell beads are widely held to possess healing properties, such that just wearing them may make babies strong, protecting them from illness or the shadow of the mythical birds of prey that can cause it (Low 2011: 302, 305). Ju/'hoãnsi gift bead necklaces to infants when they first walk and keep their umbilical cords in beaded bags until they can be safely disposed of at age three or four (Marshall 1999: 124, 128). Conversely, when young people are initiated, when children become sick, or when women give birth for the first time they are stripped of ostrich eggshell beadwork ornaments (Marshall 1999: 43, 119, 209). However, during the Eland Dance that celebrates a girl's entrance into puberty, adult women hang strings of ostrich eggshell beads down their bare buttocks to represent the tails of eland cows and, at the rite's conclusion, the girl herself is adorned with as many ornaments as possible (Marshall 1999: 199–200). The Ju/'hoãnsi think of ostrich eggshell beads as indicators of humanness and San-ness and as a means by which participants in healing dances can make themselves attractive to the spirits with whom they seek to communicate (Dowson 1989). They also believe that people learned how to make beads from the mythical Gemsbok People, who invented them at the very beginning of all things (Marshall 1999: 246).

Despite these many observations, uses, and avoidances, previous analysis of precolonial San beliefs has insisted that Kalahari San do not consider ostrich eggshell beads to contain supernatural potency (Dowson 1989: 90). We suggest, to the contrary, that their significance has been greatly under-appreciated. This is particularly so if we remember that the potency (*n/um*)—or capacity of people, animals, and other phenomena to do and bring about "things of consequence" (Low 2011: 300)—that San seek in altered states of consciousness is widely dispersed, occurring in ostrich eggs among many other things. For the Ju/'hoãnsi, for instance, ostrich eggs are implicated in beliefs about

n!ao, a force that interacts with the weather to bring rain or drought, and they must be disposed of respectfully to avoid attracting predators to the camp (Biesele 1993). Moreover, "a most stringent rule" forbids both young hunters and girls during their first menstruation from drinking from ostrich eggshell containers because the eggs have very strong *n/um* (Marshall 1999: 105, 152, 192). Were girls, in particular, to do so, or to eat ostrich eggs at this time, they will become insane, and an equally strong avoidance seems likely during male initiation ceremonies (Marshall 1999: 193, 217). More generally, ostrich eggs are said to be so "strong" that their consumption is avoided until people "are old enough to have had five children," a restriction that for young people also extends to ostrich meat, particularly the wings, legs, and feet that may touch the eggs as the birds incubate them (Marshall 1999: 105; cf. Bleek 1928: 7, writing of the Nharo). As Marshall (1999: 112) suggests, these avoidances likely derive from the ostrich's anomalous status as an animal that, though clearly a bird, is singularly incapable of accomplishing that most avian action—flight.

The potency inherent to ostriches, their eggs and, we would argue, the beads made from them, is reinforced by descriptions of what some San shamans observe when in altered states of consciousness. Thus, Keeney (2003: 42, 60) records how the threads seen linking heaven and earth are actually threads of ostrich eggshell beads. Moreover, following Hahn (1881), some San likely connect the sparkling whiteness of ostrich eggs to the shiny brightness of the sun (Low 2011: 304, 308), an entity understood by Ju/'hoãnsi to be so charged with *n/um* and potential danger as to warrant being termed a "death-thing" (*!khi tshi*) (Marshall 1999: xxxiv). Developing these associations further, we know that nineteenth-century /Xam valued things (including ostrich eggshell beads?) that sparkled and shone, not least for their capacity to keep lions at bay (Lewis-Williams 2015: 112–13). They may have extended such ideas to quartz crystals, lightning, hail, and rain, all phenomena with shamanistic associations (Lewis-Williams and Challis 2011: 130–31), to which we might add ochre and also specularite, a sparkling black pigment used both for decorating the hair and head (e.g., Bleek and Lloyd 1911: 377–79) and for painting (Lewis-Williams and Challis 2011: 46). More recently, Keeney (2015: 5–6) has reported that Ju/'hoãnsi acknowledge the "oval shining light" that is God's ostrich egg (*!Xu dsuu-n!o*) to be the source of "all the songs and dances and everything that is important for living and for healing" that shamans seek. The most experienced healers may see this egg when awake or in a dream and the "ropes to God" (i.e., the threads by which they ascend to Him) become evident when, in

their visions, it cracks open (Keeney 2015: 26). The placement of ostrich eggshell fragments inside moth cocoons to create dance rattles (e.g., Tanaka 1980: 42; Katz 1982: 39) reveals yet another trance-related association.

Numerous lines of evidence thus point to ostriches playing a key role in San ideas about the Creation and suggest that their eggs and eggshell partake of the birds' potency. We find it hard to imagine that this constellation of beliefs did not carry over into ostrich eggshell beads and note in particular that at times of crisis or transition these were either worn (by adult women celebrating a girl's initiation) or removed (male initiation, first childbirth, illness among children) (Marshall 1999). Given the widespread significance of ostriches in San myth and thought, the supernatural power with which they and their eggs and eggshells are associated, and the food avoidances associated with this, there is therefore a compelling case for seeing ostrich eggshell beads too as attractive, supernaturally charged items. By wearing them directly or on clothing or bags, people would literally have enveloped themselves in the power and potentiality that both they, and the material from which they were made, embodied. The desirability of doing this may have been all the greater in those places where, as in most of southeastern southern Africa, ostriches did not exist and the true size and form of the bird from which they came may have been unknown, exaggerated or otherwise divorced from reality (Pluskowski 2004; Conneller 2011).

Ostrich Eggshell Beads: Spatiotemporal Variation

Multiple data show that hunter-gatherers living in southeastern southern Africa maintained connections across hundreds of kilometers. Here, we discuss the evidence for such connections provided by the distribution and sourcing of ostrich eggshell beads, leaving other indicators of interaction to the next section. We frame our discussion in broadly chronological terms (Table 1.2), using calibrated radiocarbon dates throughout.

Our oldest evidence for ostrich eggshell beads entering the region comes from terminal Middle Stone Age (MSA) deposits at Sehonghong in highland Lesotho ~33 ka. Subsequently, occasional beads occur there both before and after the Last Glacial Maximum (LGM) in Later Stone Age (LSA) assemblages dated ~25–13 ka. Strontium isotope analysis of the single bead recovered from Layer BARF, which dates to the Younger Dryas stadial, a period of significantly depressed temperatures ~13.0–

Table 1.2. Distribution of ostrich eggshell beads in southeastern southern Africa. Sites within the Thukela Basin are grouped into the three spatial regions and central area identified by Mazel (1989), including Collingham Shelter within the Injasuthi region. Maqonqo and Mzinyashana 1 (Mazel 1996, 1997) are grouped together as "northern Thukela Basin." Other data are drawn from references in Mitchell (1996 plus unpublished data) and from Brooker (1980), Esterhuysen et al. (1994), Backwell et al. (1996), Opperman (1999), Wadley (1996, 2000a, 2000b), Mazel (1999), Thorp (2000), Wadley and Laue (2000), Hobart (2004), Plug and Mitchell (2008), Kaplan and Mitchell (2012), and Mitchell and Arthur (2014).

Region	Marine Isotope Stages 3 and 2 33–13 ka	Early Holocene 11.5–8.2 ka	Mid-Holocene 8.2–3.5 ka	Later Holocene 3.5–1.9 ka	Later Holocene <1.9 ka
Caledon Valley	13	238	106	42	83
Highland Lesotho	14	44	292	2	367
Thukela Basin—Northern	n/a	n/a	153	69	101
Thukela Basin—Ndaka	n/a	n/a	25	32	24
Thukela Basin—Injasuthi	n/a	n/a	–	17	24
Thukela Basin—Toleni	n/a	–	–	11	18
Thukela Basin—Central	n/a	n/a	n/a	n/a	23
Southern Escarpment	n/a	–	–	–	5
KwaZulu-Natal lowlands	4	15	n/a	13	36
Barkly East/Maclear area	–	–	3	5	34

11.7 ka, shows that it—like that from the MSA—came from Pre-Cambrian geological settings beyond the Karoo Supergroup >325 km distant (Stewart, Zhao, et al. 2020). In contrast, the single bead analyzed from Layer RBL-CLBRF (~15.7–15.0 ka) returned a value consistent with an origin in the Clarens sandstones that principally outcrop immediately beyond the highland Maloti-Drakensberg in the Caledon Valley, some 100 km away in a straight line (albeit over both the Front and the Central Ranges of the Maloti Mountains); both beads and bead-making are evidenced in the Caledon Valley at this time (Mitchell and Arthur 2014). Beads from the overlying Layer RF (14.8–13.7 ka; n = 3) have values consistent with an origin further away among more distant Karoo rocks (Stewart, Zhao, et al. 2020). Elsewhere, Umhlatuzana, located ~35 km inland of Durban in the coastal lowlands of KwaZulu-Natal, provides the only other Pleistocene instance of ostrich eggshell ornaments moving

into areas where ostriches can be excluded on ecological grounds, and it is not impossible that they could have transited Lesotho to reach this site.

The early Holocene (~11.5–8.2 ka) record is richer, with significant datasets present in highland Lesotho, the Caledon Valley, the Eastern Cape, and the Thukela Basin of KwaZulu-Natal (Mitchell 2002). Ostrich eggshell beads continued to reach both Sehonghong and Umhlatuzana (Mitchell 1996). While we have yet to apply Sr isotope analysis to them, broadly contemporary evidence of bead-making in western Lesotho provides a potential source no more than 115 km away (Mitchell 1993a, 1993b; Mitchell and Arthur 2014). The Barkly East/Nqanqarhu (Maclear) area of the Eastern Cape, on the other hand, offers just two examples (Opperman 1987).

From the start of the middle Holocene (8.2–3.5 ka) ostrich eggshell beads also begin to appear at Maqonqo in the northern Thukela Basin, joined by small, but persistent, numbers of preforms and quantities of unworked eggshell, even though this site and the nearby Mzinyashana 1 Shelter are ≥150 km from the nearest historical ostrich sighting (Mazel 1996, 1997). Movements of a similar order of magnitude seem likely to account for the $^{87}Sr/^{86}Sr$ ratios of those from Sehonghong's Layer ALP (~8.0–7.7 ka), which derive from areas where the Beaufort and Elliot/Molteno Formations are exposed (n = 3) and others beyond this underlain by Ecca/Dwyka Group lithologies (n = 2) (Stewart, Zhao, et al. 2020). While a lack of observations from Umhlatuzana or elsewhere in lowland KwaZulu-Natal makes it impossible to say if beads continued to arrive there, as they had occasionally done before 8.2 ka, they are definitely absent south of the Thukela River, supporting Mazel's (1989) argument that hunter-gatherers in this area constituted a different alliance network (his Injasuthi social region) from those to its north near Maqonqo or in the neighboring Ndaka region. The continued near total lack of ostrich eggshell beads at sites near Barkly East and Nqanqarhu suggests that this area, too, remained outside the networks along which ostrich eggshell beads were transmitted (Opperman 1987), although hundreds of beads and considerable evidence of bead manufacture do occur more than 100 km further to the southwest at Grassridge 7.3–6.7 ka (Collins et al. 2020).

We divide the late Holocene (≤3.5 ka) in two to take account of the arrival of agropastoralists in savanna areas of KwaZulu-Natal and the Eastern Cape from the early centuries AD and their subsequent expansion into the Grassland Biome during the second millennium. Acknowledging the likelihood that interaction networks changed considerably during this period, the chronological controls available at most sites

make it difficult to track them with greater certainty. For this reason, and because our concern here is primarily with how hunter-gatherers interacted with each other, we also exclude discussion of their relations with incoming farmers, summaries of which exist elsewhere (Mitchell 2009; Whitelaw 2009).

Between 3.5 and 1.8 ka the $^{87}Sr/^{86}Sr$ ratios of ostrich eggshell beads from highland Lesotho suggest that hunter-gatherers living there maintained long-distance connections comparable to those of their predecessors. While those from Likoaeng are not yet analyzed, those from Melikane (n = 11) range widely, with some deriving from areas underlain by Elliot/Molteno/Clarens and Beaufort geologies, but others sourcing to those where the Ecca/Dwyka Group or older Pre-Cambrian formations constitute the bedrock (Stewart, Zhao, et al. 2020). More clearly than before, this hints at multiple sources—and perhaps multiple routes—being involved in transmitting beads into the Lesotho highlands. In contrast, the Barkly East/Nqanqarhu area again seems to have had minimal access to—or little interest in acquiring—them (Opperman 1987). KwaZulu-Natal likewise maintains its mid-Holocene profile, with beads found only to the north of the Thukela River (Mazel 1989, 1996, 1997) and (once more) at Umhlatuzana (Kaplan 1990).

The situation becomes more complex from early in the first millennium AD. While ostrich eggshell beads continued to enter highland Lesotho and the northern Thukela Basin, they now also reached hunter-gatherers across a much broader span of KwaZulu-Natal, including the northern uKhahlamba-Drakensberg Escarpment, the Natal Midlands, the central Thukela Basin, and the province's southern coast. This situation continued during the second millennium (Mitchell 1996), when beads at last register a clear, though still very low key, presence in the northeastern Eastern Cape (Opperman 1987). Our $^{87}Sr/^{86}Sr$ results suggest that all those analyzed from Sehonghong's Layer DC (n = 5) could derive from Elliot, Molteno, or Clarens geologies, a potentially more restricted provenance than earlier in the Holocene, although the poorly constrained dating of beads at Melikane means that we cannot exclude continued inputs from further afield (Stewart, Zhao, et al. 2020). The large belt of ostrich eggshell(?) beads worn by Soai, leader of a group of San attacked at Sehonghong ca. 1870, suggests that those inputs continued late into the nineteenth century (Dornan 1907: 450). In sum, though our Sr isotope data for ostrich eggshell beads remain few and unevenly distributed through time, the latter tentatively appear to have moved further on average during the Pleistocene than during the Holocene (Figure 1.5).

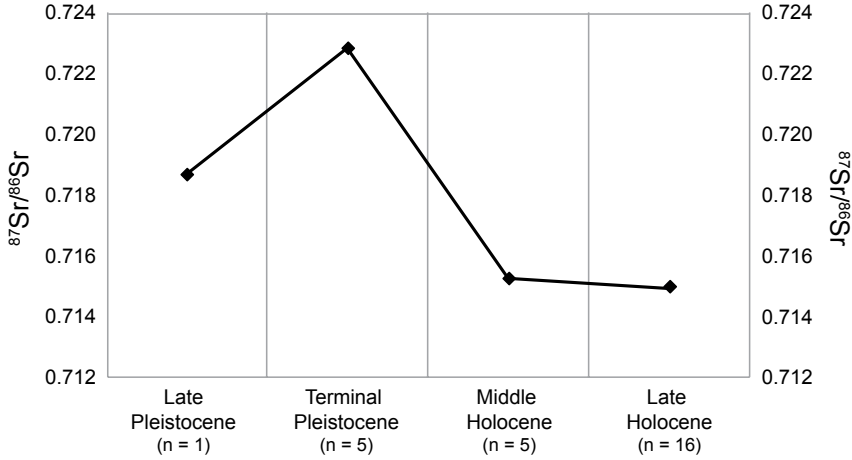

Figure 1.5. Diachronic trend of mean strontium isotope ratios ($^{87}Sr/^{86}Sr$) for ostrich eggshell beads from Sehonghong and Melikane, highland Lesotho. © Brian Stewart.

Other Indicators of Interaction

As well as ostrich eggshell beads, southeastern southern Africa's archaeology provides several other clues to the changing morphology of past interaction networks. We discuss four of them here: (1) the occurrence inland of ornaments made from estuarine and marine shell obtained from the Indian Ocean coast; (2) the recovery of other elements of specific faunal taxa that seem ecologically "out of place"; (3) the distribution of pressure-flaked stone artifacts during the late Holocene; and (4) rock paintings that depict animals exotic to the areas in which the motifs occur.

We begin in the late Pleistocene with two categories of faunal evidence that directly connect Sehonghong to the coastal belt of KwaZulu-Natal. The first consists of marine shell ornaments from Layers BAS and RF (Plug and Mitchell 2008) that date to a time when the Indian Ocean coast was ~200 km east of the Lesotho highlands. The second comprises the scapula of a vervet monkey (*Chlorocebus pygerythrus*), a species that prefers woodland savanna or riverine forest of the kind found below the Escarpment. This, too, must be exotic given the significantly colder, less vegetated conditions expected in Lesotho immediately before the LGM (Plug and Mitchell 2008). While we lack any Pleistocene record from the Thukela Basin (Mazel 1989), excavations in the Caledon

Valley give no sign that such connections extended that far west at this time (Wadley 1996; Mitchell and Arthur 2014).

This situation changes in the early Holocene. The site of Ha Makotoko on Lesotho's side of the Caledon River has produced remains of blue duiker (*Philantomba monticola*), a small antelope restricted to forests, thickets, and dense coastal bush and one that seems very much ecologically out of place here, even allowing for a broadly warmer, more mesic early Holocene climate (Stewart and Mitchell 2018). Instead, it is possible that these animal parts "were brought in from . . . coastal regions through trade, gifts, or exchange" (Plug 1997: 725). Documenting movement over a distance of some 300 km in a direct line, this is unambiguously true of three beads made from the estuarine mollusk *Nassarius kraussianus* also found at Ha Makotoko and dated to ~8.6–7.8 ka (Mitchell 1993a). Over sixty more such beads, as well as two instances of the marine taxon *Trachycardium* sp., come from contexts at Sehonghong dating ~11.6–7.7 ka (Plug and Mitchell 2008). There is no evidence, however, that such ornaments reached the northeastern Eastern Cape at this time (Opperman 1987) or the Thukela Basin before ~8.4 ka (Mazel 1996), although terminal Pleistocene (13.5–11.7 ka) and mid-Holocene (7.3–6.7 ka) examples are known from Grassridge (Collins et al. 2020).

Further connections between highland Lesotho and the lowlands/coast of KwaZulu-Natal are attested in the middle Holocene by additional *N. kraussianus* beads, drilled specimens of *Trachycardium* sp., and a second vervet monkey bone from Sehonghong's Layer GWA ~6.9–6.5 ka (Plug and Mitchell 2008). While there is no evidence that such contacts reached further west to the Caledon Valley at this time (Mitchell 1993b; Wadley 2000a), marine shell also continued to reach up to 150 km inland into the northern Thukela Basin (Mazel 1989, 1996). Like highland Lesotho, this area thus participated in connections stretching as far as the Indian Ocean on the one side and well into the South African interior on the other.

These connections remained active in the late Holocene, with a few marine shell items at the highland Lesotho site of Likoaeng dating to ~2.4–1.7 ka (Mitchell, unpublished data). Alongside continuing transmission into the northern Thukela Basin (Mazel 1989), a few fragments of *Perna perna* shell at Mhlwazini now also extend their reach to hunter-gatherer populations newly established in the northern Escarpment (Mazel 1990). Reinforcing this are the remains of at least one blue duiker (*P. monticola*) and two red duiker (*Cephalophus natalensis*), both of them species at home in the closed bush of lowland KwaZulu-Natal rather than the montane grasslands in which Mhlwazini lies (Plug 1993).

Following the arrival of agropastoralists in southeastern southern Africa early in the first millennium AD we see a further expansion in the transmission of marine shell ornaments inland, even though they remain resolutely absent from the northeastern Eastern Cape (Opperman 1987). In the first millennium, such artifacts occur in highland Lesotho, the northern Escarpment, the Natal Midlands, the central Thukela Basin, and KwaZulu-Natal's south coast (Mitchell 1996; Plug and Mitchell 2008), with further extension into the southern Escarpment (Cable, Scott, and Carter 1980) and as far inland as the Caledon Valley, 300 km from the sea (Ouzman and Wadley 1997), after AD 1000. Perhaps significantly, this expansion is matched by increased variety in the marine mollusks used: not just *Nassarius kraussianus* and *Perna perna*, but also *Conus* sp., *C. piperatus*, *Cypraea* sp., *C. felina*, and *Polinices mammilla* (formerly *P. tumidus*).

Geographically wider connections are also evident in lithic assemblages. First, pressure-flaked backed microliths at Collingham Shelter below the Escarpment in KwaZulu-Natal and at Likoaeng and Moshebi's Shelter in highland Lesotho match similar artifacts in the Caledon Valley and far inland in the Gariep Dam/Seacow Valley area of the Eastern Cape. Likely innovated late in the first millennium BC, these artifacts continued to be produced into the second millennium AD (Mitchell 1999). A second class of pressure-flaked stone artifacts, bifacial projectile points that are often bilaterally or unilaterally tanged, are much more widely distributed. Known mostly from undated surface contexts, available dates again place them within the last 2,200 years or so. Found across the Free State, eastern Karoo, and Lesotho, they extend as far as Kimberley in the northwest, the Vaal River to the north, and Collingham Shelter and the northern Thukela Basin in the east (Mitchell 1999; Bradfield and Sadr 2011), connecting a broad swathe of southeastern and central southern Africa.

Turning to rock paintings, the Maloti-Drakensberg Mountains are well known as the home of one of southern Africa's richest concentrations of San art. Thus far, work on how far the spatial distribution of specific motifs maps onto areas of interaction delimited by movements of material culture has largely focused on nineteenth-century paintings comprehensible in part by reference to colonial documents that name specific San or creolized San groups (e.g., Blundell 2004; Challis 2012). Representations of thin red lines often fringed with white dots that signify both supernatural potency and ostrich eggshell beads are probably older than this. Understood as depictions of the pathways along which shamans travel to God when in trance (cf. Keeney 2003: 42, 60), these

images are widespread within the Maloti-Drakensberg but occur only rarely elsewhere in southern Africa (Lewis-Williams et al. 2000).

Paintings of animals foreign to the areas where they are depicted also speak to large-scale patterns of connection. Three giraffe images and another of an elephant in the Caledon Valley, for example, occur hundreds of kilometers beyond the known Holocene distributions of these taxa (Ouzman and Wadley 1997). Other paintings in the same area, as well as in the Chris Hani District of the Eastern Cape, southeastern Lesotho, and near Underberg, depict mormyrid fish (probably the bulldog, *Marcusenius macrolepidotus*) that live in rivers ≥200–400 km further north, beyond the Thukela. Their detailed depictions are arguably only explicable if the artists who painted them had firsthand knowledge of their subject matter (Ouzman 1995). Connections on a much smaller scale are suggested by detailed parallels in other kinds of imagery, including scenes depicting distinct modes of fishing that concentrate within specific areas of Lesotho and parts of the adjacent Escarpment (Hobart 2003).

Discussion

We are only at the beginning of sketching out the possible socioecological contexts for the patterns of interaction identified above and two caveats in particular must be expressed before we attempt to do so. One concerns the truism "absence of evidence is not evidence of absence," for we are condemned to work only with what survives in the archaeological record and what is identifiable as exotic to the place where it is found. Intangible aspects of culture or those made from perishable or unsourceable materials remain beyond our ken. Moreover, when we identify things as foreign, we still do not necessarily know how, or by what route, they reached their final destination. We thus risk underestimating the complexity of the movements involved, although considerations of regional topography and physiography may help here even where numbers of archaeological sites remain few. Demonstrating that items were exchanged, rather than directly accessed, is much more challenging (Hodder 1984: 26) and remains largely a matter of plausibility based on the distance over which people are thought likely to have regularly moved given their transport technology and resource structure. That said, analyses of lithic technologies that explore the extent of core reduction, retouch frequency, and other attributes can provide an independent gauge of how mobile people were, especially where toolstone sources can be identified. In archaeological contexts where

such indicators suggest low mobility yet highly exotic finds are present, inferences about social networking are more secure. Unfortunately, however, such work has barely begun in our region and remains overwhelmingly confined to MSA contexts, rather than the Holocene LSA that forms our chief focus here.

With these reservations and the preliminary nature of our Sr isotope study in mind, we nevertheless draw attention to three main patterns. First are the long-distance interactions evident in the late Pleistocene: ostrich eggshell beads moved east to reach both highland Lesotho and close to the Indian Ocean coast ~25–13 ka, just as marine/estuarine shell ornaments and exotic fauna crossed the Escarpment in the opposite direction to reach Sehonghong. Straight-line distances of ~200 km to the sea and of >100 km to the nearest likely source of ostriches are implied for the latter site, but, in the case of Umhlatuzana, ostrich eggshell beads could have come from even further away. This is certainly true at Sehonghong at two moments—in the Younger Dryas and the terminal MSA—for both of which Sr isotopes source beads to geologies that find their closest matches at >325 km distant (Stewart, Zhao, et al. 2020). While only one bead was analyzed from each level, this might suggest that at ~33 ka and ~13 ka we are seeing an expansion of long-distance contacts—and thus of possibilities for accessing resources, marriage partners, and information—far beyond anything registered in the Holocene. Given *hxaro*'s primary function as a means of minimizing subsistence risk (Wiessner 1977), this is to be expected in contexts that were almost certainly extremely challenging environmentally, and perhaps also demographically; $\delta^{13}C$ analysis of ungulate teeth records a sharp drop in temperature in highland Lesotho ~33 ka within a period when mean temperatures were likely depressed ≥5°C relative to today (Loftus, Roberts, and Lee-Thorp 2016), while, except at Sehonghong, southeastern southern Africa has no evidence of human occupation during the Younger Dryas stadial (Stewart and Mitchell 2018).

A second pattern concerns the long-term persistence of connections with both coast and interior most obvious throughout the late Quaternary sequence at Sehonghong, though also supported by data from sites elsewhere. People occupying highland Lesotho clearly had access over thousands of years to both ostrich eggshell beads from sources in southern Africa's interior and to marine/estuarine shell ornaments derived from the Indian Ocean shore ~180–200 km away, notwithstanding the necessity of traversing a ~3,000 meter-high escarpment to the east and potentially two mountain barriers of near-comparable elevation to the west. As we noted above, the northern part of the Thukela Basin maintained a similar breadth of interactions from the early Holocene onward,

evidenced by finds of marine/estuarine shell on the one hand some 150 km inland, and of ostrich eggshell and ostrich eggshell beads and preforms on the other, notwithstanding the likelihood that ostriches themselves never occurred closer than the Free State side of the Escarpment some 150 km to the west (Mazel 1996). Contrasting sharply with both these areas, the Barkly East/Nqanqarhu region seems always to have stood outside the networks that moved marine/estuarine shell inland or ostrich eggshell beads coastwards: Opperman (1987) found no sign of the former and almost as little of the latter, while his sites' Holocene lithic assemblages recurrently feature hornfels much more frequently than those found in Lesotho, notwithstanding the ready availability of both this raw material and opalines in both areas (Mitchell 1996). This pattern is reinforced by the Karoo/Free State/Lesotho-centered distributions of late Holocene pressure-flaked backed microliths and bifacially tanged arrows, distributions that conspicuously exclude the Barkly East/Nqanqarhu area (and the former Transkei), but coincide closely with the areas that our Sr isotope results indicate were the likely sources of ostrich eggshell beads entering highland Lesotho and—most likely—the Escarpment and Thukela Basin of KwaZulu-Natal (Figure 1.6).

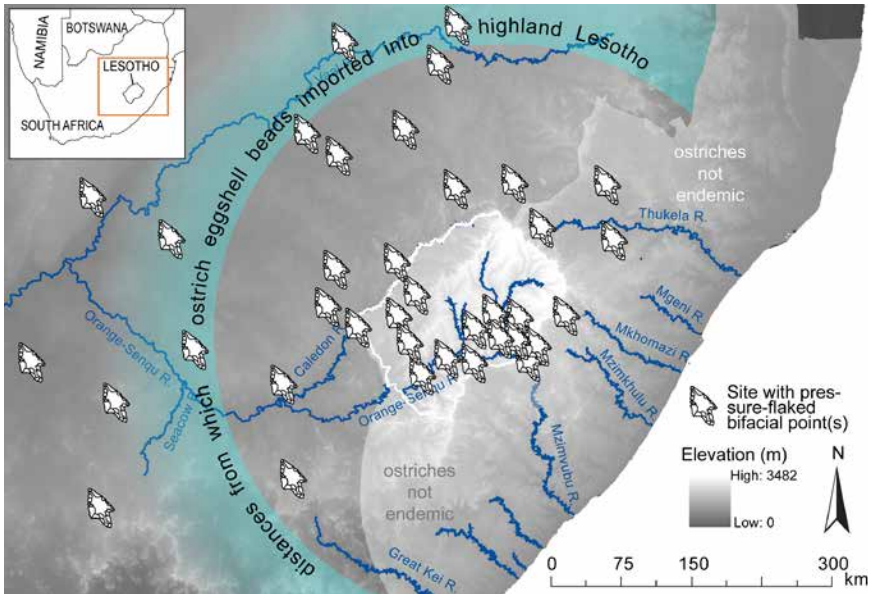

Figure 1.6. Map of the distribution of southern African sites with pressure-flaked bifacially tanged arrow points against the radius of the minimal distance (326 km) from which our most strontium-enriched ostrich eggshell beads were imported into highland Lesotho. © Brian Stewart.

Ostrich eggshell beads in southeastern southern Africa were thus not only for the most part introduced from afar, but they were also enmeshed in the movements of other items that themselves often travelled hundreds of kilometers from their source. Given these distances, in many, or perhaps most, cases exotic artifacts were likely transmitted through a series of connections, but the evidence of rock art suggests that at least some people sometimes traveled this far, acquiring detailed knowledge of mammals and fish species foreign to the areas in which they later depicted them (Ouzman 1995; Ouzman and Wadley 1997). Rock art points also to the existence of multiple, likely overlapping and nested, areas of interaction, from the sharing of the "thin red line" motif across the Maloti-Drakensberg region as a whole (Lewis-Williams et al. 2000) to the much smaller areas indicated by motifs such as men fishing from boats (Hobart 2003) or the triad of therianthropic figures dancing and holding sticks of the kind immortalized by Orpen (1874) at the highland Lesotho site of Melikane (cf. Solomon 2016: Fig. 10), but directly paralleled only at Libesoaneng a few kilometers to its south (Smits 1973) and Bamboo Mountain below the Escarpment in KwaZulu-Natal (Vinnicombe 1976).

The clear spatial patterning of late Holocene pressure-flaked backed microliths and arrows likewise surely reflects a sharing of ideas about stone tool manufacture. Once again, these interaction spheres appear to have operated at different nested scales, the latter encompassing much of the southern African interior, the former only its Lesotho/Caledon Valley/Orange Valley fraction. In both cases, the distinctive morphology of the artifacts and the high level of skill likely needed to make them provokes the suggestion that they were stylistic markers that signaled the identities of particular ethnolinguistic groups, albeit of different extents and, presumably, different orders of social networking (Humphreys 1984; Mitchell 1999). That LSA peoples used material culture in this way is very likely (e.g., Mazel 1989) and is well established for both twentieth-century Kalahari and nineteenth-century Karoo San, for both of whom differences in artifact choice and form frequently correspond(ed) to variation in dialect or language (Wiessner 1983; Deacon 1986).

Our ongoing work on ostrich eggshell bead Sr isotopes has provided the first firm confirmation that they did indeed move over considerable distances (Stewart, Zhao, et al. 2020). Yet it also allows us to begin considering more closely the physical pathways along which beads (and other objects) may have moved across the southern African landscape, while illustrating some of the wider cultural significances that exchanged items may have held for those gifting and receiving

them. With reference to the first point, we have argued previously that Lesotho's highlands—and the Maloti-Drakensberg region more generally—were an enduring focus for hunter-gatherer populations within southeastern southern Africa. Temporal patterning in radiocarbon dates shows repeated occupation of highland Lesotho during more arid periods and less stable climatic episodes (Stewart, Parker, et al. 2016; Stewart and Mitchell 2018). As well as higher, more reliable precipitation (and thus richer, more dependable plant and animal resources), the Maloti-Drakensberg offered abundant natural shelter, high quality stone raw materials, substantial fisheries, and (because of their broken topography) greater overall resource diversity per unit area. Conversely, the Karoo and highveld grasslands west of the Caledon River experience lower and more unreliable rainfall, have few natural shelters, are ecologically more uniform, and have more episodic archaeological records.

Three features of the *hxaro* networks studied by Wiessner (1977, 1982) are relevant here. First, Ju/'hoãnsi focused their *hxaro* ties on individuals living in areas with resources complementary to their own and over distances of up to 200 km (Wiessner 1982: 76). Second, the chains created by summing the *hxaro* partnerships of multiple individuals stretched even further than this, providing access to desired trade goods from beyond the bounds of kinship reckoning. The long-term persistence with which ostrich eggshell beads reached highland Lesotho echoes both the longevity and the extent of these Ju/'hoãn networks. Finally, since the Senqu/Orange River is an obvious, easy-to-follow route into highland Lesotho from the southern African interior—and few passes cross the mountains between the Caledon and Senqu Valleys, or the Escarpment separating it from KwaZulu-Natal—Lesotho's physical relief may itself have helped channel chains of exchange along the "prescribed course . . . reproduced through time" that Wiessner (1998: 515) describes for the Kalahari. Geospatial modelling of the ease of pedestrian travel into and through the Maloti-Drakensberg Mountains is one means by which we may be able to explore this further.

The second topic we have explored in this chapter concerns the likelihood that ostrich eggshell beads held value in and of themselves as conveyors and signifiers of supernatural potency, not just exotic trinkets. The strong symbolic load placed on ostriches by contemporary and recent San populations of diverse linguistic backgrounds suggests that these beliefs—like other religious ideas (Barnard 2007: 96)—were probably widely held in the past as well, and paintings of ostriches within our research area strengthen this possibility further (Figure 1.7). Adorning themselves, their clothes, and other items of daily life with ostrich

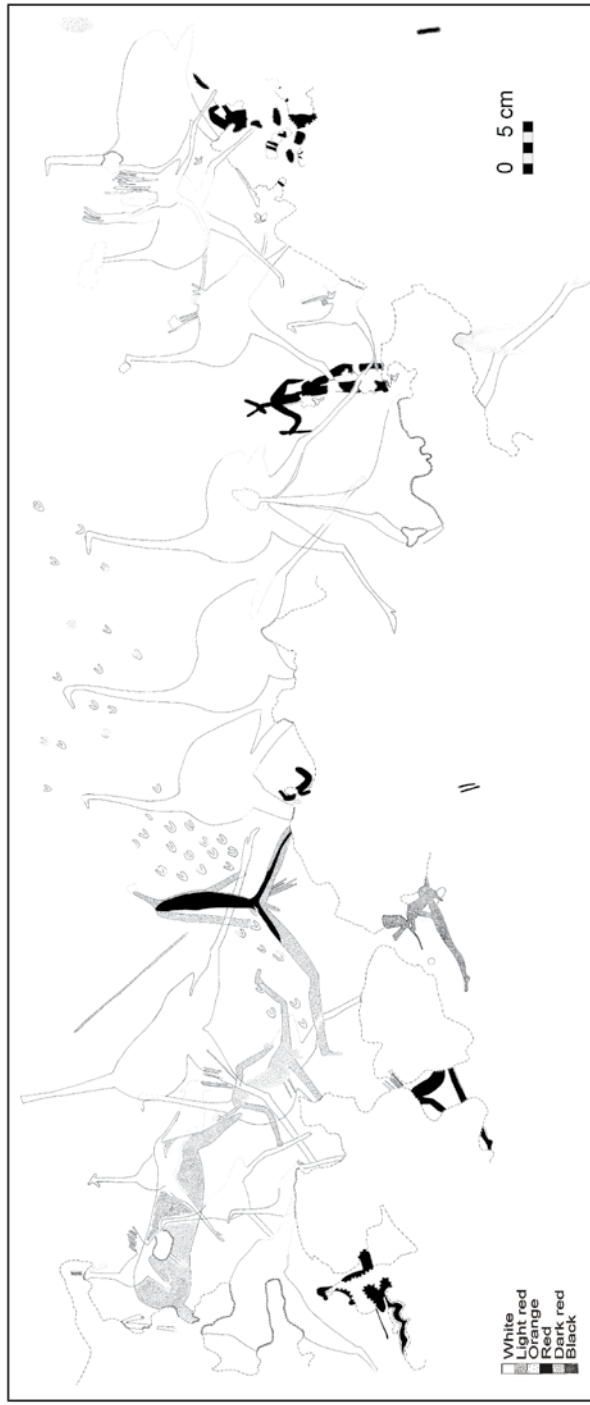

Figure 1.7. Tracing of a panel of ostriches from a rock art site at Ha Monamoleli, western Lesotho. © Lara Mallen, used with permission.

eggshell beads, people could literally envelop themselves in the values and powers that those beads and the birds from which they ultimately derived held. Given the evidence for widespread social connectivity and mobility across the broader region, the lack of direct human-ostrich interactions in the Maloti-Drakensberg did not, we suggest, detract from the imported material's power. As Conneller (2011: 71) notes, "just because there is not a direct [human-animal] relationship, it does not mean there was no relationship, rather that it was mediated through others (other people, other things)." Indeed, such mediations themselves—for example, via the telling and retelling of stories and myths during group aggregations and individual visits when beads were exchanged—likely only *enhanced* the intrinsic value of nonlocal ostrich eggshell by imbuing it with "particularly potent animal affects" (Conneller 2011: 71). Similarly—and recalling here the significance of work on the cultural biographies of artifacts and the histories that individual gift-exchange items may preserve and transmit (Malinowski 1922; Appadurai 1986)—we must also allow for the likelihood that when wearing ostrich eggshell bead jewelry or other items of beadwork people also knowingly enveloped themselves in networks of interpersonal and intergroup connection that stretched far beyond the areas with which they were most familiar.

Multiple analytical avenues likewise stretch before us as we seek to make more sense of those networks. What, for example, flowed west from highland Lesotho into the interior? Perishable items such as skins or cloaks? Medicines or ritual knowledge? Toolstone or pigments? Can we, via microscopy, identify differences in wear patterns that might reflect how individual beads were strung, given how much scope for variation exists here as a means of signaling personal or group identities? Might differences in drilling techniques (cf. Werner and Miller 2018) or mean size (cf. Miller and Sawchuk 2019) patterned spatially in ways consistent with access to different sources for beads or preferences potentially be reflective of group identity? What more might we learn as we seek to extend our preliminary Sr isotope study to a fuller range of periods within highland Lesotho and to sites beyond? We feel confident that the answers we shall obtain will further confirm that, far from being "little entangled in large amounts of human-made stuff" (Hodder 2014: 28), hunter-gatherers in southeastern southern Africa lived lives deeply enveloped in those of others, human and nonhuman alike.

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We are grateful to Chris Wingfield for supplying images from his fieldwork in Botswana reproduced here as Figure 1.2 and to Lara Mallen for providing us with a copy of her tracing of the painting of ostriches reproduced here as Figure 1.7. We also thank our collaborators, Joel Blum and James Gleason of the Department of Earth and Environmental Science, and Yuchao Zhao of the Museum of Anthropological Archaeology, University of Michigan, for their efforts towards our ongoing strontium isotope project with ostrich eggshell beads. We dedicate this chapter to the memory of our friend and colleague, Rethabile "Captain" Mokhachane.

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Notes

1. South Africa's small Forest Biome (Mucina and Rutherford 2006), located along the southern Cape coast and coastal forelands, represents another likely long-term ostrich-free region of the subcontinent (cf. Inskeep 1987: 172–74).
2. Another example, which we do not have space to discuss fully here, concerns the widely attested preference for ostrich leg bones as a raw material from which to make arrowpoints and linkshafts (Barrow 1801: 149; Stow 1905: 68, 73; Schapera 1927: 114; Burchell 1953: 142, 149; Sparrman 1975: 196). While these bones do indeed have relatively small marrow cavities and thick shafts that make them highly suitable for these purposes, we suggest that their physical structure does not exhaust their attractions. Rather, the strength, stamina, and, particularly, speed of the ostrich may all have been thought to continue to reside in the arrows made from its bones, contributing to their effectiveness as hunting weapons at the supernatural level. It is thus of interest that at Likoaeng in highland Lesotho the same layer that produced almost all of the site's ostrich eggshell beads (Layer III) also yielded an ostrich fibula fragment (Plug, Mitchell, and Bailey 2003); as we will discuss, both forms of the bird are likely to have been introduced from some distance, given that the area in question lies well outside the ostrich's natural habitat (see Stewart, Zhao, et al. 2020).

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