Primordialism and the "Pleistocene San" of southern Africa

Justin Pargeter[1,2*], Alex Mackay[3], Peter Mitchell[4,5], John Shea[6], Brian A. Stewart[7,8]

[1] Interdepartmental Doctoral Program in Anthropological Sciences, Stony Brook University, USA
[2] Department of Anthropology and Development Studies at the University of Johannesburg, South Africa
[3] Centre for Archaeological Science, School of Earth and Environmental Sciences, University of Wollongong, Australia
[4] GAES, University of the Witwatersrand, South Africa
[5] School of Archaeology, University of Oxford, United Kingdom
[6] Anthropology Department, Stony Brook University, USA
[7] Museum of Anthropological Archaeology, University of Michigan, USA
[8] Rock Art Research Institute, University of the Witwatersrand, South Africa

*Corresponding author: justin.pargeter@stonybrook.edu

Introduction

That living humans have late Pleistocene ancestors is beyond dispute. All humans alive today descend from people who lived in Africa between 100,000 and 200,000 years ago (Stringer 2012). None of us are morphologically identical to those ancestral Africans, rather, we share with them an evolved capacity for wide behavioural variability (Shea 2011). These facts stand in contrast to "primordialist" claims that particular ethnic groups have survived largely unchanged since Pleistocene times (e.g. Sollas 1911). Here we review recent arguments linking the San populations of southern Africa with the late Pleistocene Later Stone Age (LSA) (~44 ka) at Border Cave, South Africa (d'Errico *et al.* 2012). These and other claims for the Pleistocene antiquity of modern-day cultures arise from a fundamental misunderstanding of the nature of cultural and archaeological taxonomies and are a misuse of analogical reasoning. Our discussion is relevant not only in southern Africa, but also to archaeologists everywhere.

Background

Analogies are a critical component of archaeological thinking (Wylie 1989). They come in two primary forms, direct historical and relational. Direct historical analogies require that a demonstrated cultural continuity exists between source and subject. They are

equivalent to proposing homologous relationships in genetic and cultural evolutionary studies (Shennan 2009). Because of the difficulties with using archaeology to trace living communities directly back into the past, analogies that assume heritable continuity are rarely unproblematic (Lane 1994/95).

Relational analogies require that a relational link (functional, raw material or ecological resemblances, for example) exists between source and subject. By this logic, relational analogies explore the causes for apparent similarities *and* differences. This form of analogy requires that the quality of an analogical argument be assessed by examining whether the relevance and relational structure of the analogy are valid in the first place.

The San populations of southern Africa are among the best known and best documented ethnographic hunter-gatherers, having been extensively studied over the past 150 years (Biesele *et al.* 1986). These studies have generated models of foraging, mobility, site formation, kinship, and exchange, among other cultural facets, each taken to have broad analogical relevance to our understanding of hunter-gatherer behaviour (e.g. Lee & DeVore 1976). This relevance extends up to and includes employing the Kalahari San as archetypal mobile hunter-gatherers in many introductory anthropology texts. The data underlying these models, however, derive predominantly from just three groups—the now extinct /Xam of South Africa's Northern Cape Province, the Ju/'hoãnsi of northwestern Kalahari, and the G/wi of central Botswana (Mitchell 2010). All three groups come from what are now relatively resource-marginal, arid and semi-arid areas (Figure 1). Measured on a range of variables — meat consumption, mobility, plant food consumption, use of aquatic resources etc. — they are far from archetypal hunter-gatherers (Kelly 2013). More fundamentally, their location, behaviours, and identities are the product of centuries of interaction and integration in complex, shifting socio-political landscapes, the influences of which were active in the relatively recent past and remain so today (Solway & Lee 1990).

FIGURE 1

Notions of a mutable and evolving San identity propelled the so-called "Kalahari debates", which questioned the "pristineness" of populations depicted in the classic Kalahari ethnographies of the mid-twentieth century and their utility as analogues for prehistoric populations (Barnard 2006). Yet, conceptualizations of ethnographically documented San groups as in some sense holotypes of a deeper southern African hunter-gatherer identity continue to impact on how archaeological, genetic and linguistic research is carried out (e.g. Kim *et al.* 2014: 6).

That multiple analysts put "San" and "Khoisan" peoples close to the genetic "root" of the *Homo sapiens* family tree may itself encourage a view of them as "primordial". Proponents of primordialism see ethnic identity as fixed and persistent through long stretches of time (see Geertz 1983; Isaacs 1974). In archaeology, primordialism is conceptually aligned with culture-history, which assumes that "bounded, homogenous cultural entities correlate with particular peoples, ethic groups, tribes, and/or races" (Jones 1997:24). Beginning in the 1960s, primordialism and traditional cultural-historical archaeology suffered a series of devastating critiques centred around their inability to explain the permeability of ethnic boundaries, the historical and situational variability of individual and group identity, and processes of cultural change. In this vein, claims that a cultural pattern called "San" can be traced back into the Pleistocene ignore the effects of servitude, assimilation, political landscape change, genocide, and interbreeding on the demography and political economy of click-speaking groups, as well as the fact that the "San" fall into three distinct language families (Güldemann 2008). Add in the impacts of successive shifts in climate and ecology on human demography and tracing cultural identities back into the Pleistocene becomes a theoretically flawed exercise.

Border Cave and the origin of "San" material culture

Unit 1WA (>40 ka) at Border Cave has been claimed to show the origin of San material culture and the LSA in southern Africa (d'Errico *et al.* 2012). Recent analyses demonstrate the presence by ~44 ka of poisons, bone and tusk implements, shell beads, wooden digging sticks, and ground stone artefacts said to be similar in form to those used

by Kalahari San groups. These finds have revived notions of a late Pleistocene ancestry for "the San". Here we employ a formal approach (see Van Reybrouck 2012) to examine the direct historical analogy between the evidence from Border Cave and the "San".

In discussing the relevance of the Border Cave materials, d'Errico *et al.* (2012) chose only a single ethnographic example for comparison, the "San". When this comparative net is cast wider, as we have done in Table 1, it is clear that the San are not the only groups to employ such items. Bone awls, bone points, digging sticks, and digging stick weights are all found in ethnographic contexts wholly unrelated to the San. *Flueggea virosa*, the probable wood species used to make the Border Cave digging stick, is widely employed across southern, western, and eastern Africa (d'Errico *et al.* 2012), implying a general, rather than culturally specific, application for this material. Digging stick weights are far from universal among ethnographically attested San and go unmentioned in Kalahari ethnography, though they were used by nineteenth-century /Xam (Ouzman 1997). If indeed these objects are so inseparable from San identity and social organization as to signal their presence at Border Cave, then their absence from certain San groups and presence in non-San groups needs to be explained.

TABLE 1

The choice of source material in the Border Cave analogy is also questionable. Which San groups are being referenced: the desert-dwelling Ju/'hoãnsi, riverine fisher-herders like the Deti, or the now goat-keeping G/wi? Each of these groups is the product of different historical contingencies far removed from the mountainous contexts of southeast southern Africa where Border Cave is located (Figure 1). These contingencies are manifest in variable worldviews and economies (Barnard 1992) that represent anything but an "unambiguous parallel" (d'Errico *et al.* 2012: 13218) with the artefacts at Border Cave.

D'Errico *et al.* (2012) claim the bone points and other items of material culture found at Border Cave are similar enough to those found amongst San communities to suggest a

direct cultural link. To explore the issue of similarity between the Border Cave materials and various source data more systematically, we conducted statistical tests on the Border Cave bone point morphological data presented in SI Table 2 of d'Errico et al (2012) (Table 2). We used their comparative data on width and thickness for San bone points in the Fourie ethnographic collection from Namibia (n = 50) and bone points found at the South African Iron Age complex of Mapungubwe (n = 25). For our comparisons we employed Kruskal-Wallace tests, a form of non-parametric ANOVA. Our results demonstrate that the Border Cave bone points are statistically indistinguishable from those in the Fourie Collection, but that they are *als*o indistinguishable from those made at Mapungubwe (non-San). d'Errico et al. (2012) left this similarity between the Border Cave and non-"San" bone points undiscussed.

TABLE 2

D'Errico *et al.* (2012) focus only on how the poisons, bone implements, ostrich eggshell beads, and ground stone artefacts are *similar* to those found at Border Cave, not on the ways in which these items might differ or be discontinuous through time. For example, the *N. kraussianus* beads found there have no referent in Ju/'hoãn ethnography (Lee & DeVore 1976). Bone implements are also exceedingly rare for the 30,000 years following Unit 1WA at Border Cave, as are bored stones (Mitchell 2002).

Table 3 shows the occurrence of the Border Cave material claimed to be "San" compared to the major late Pleistocene Stone Age technocomplexes of southern Africa. These data show that six of the seven technocomplexes exhibit very little by way of material culture patterning that can be referred to as "San"-like by Border Cave standards. The only period containing these items consistently is the Wilton (c. 8-2 ka). Thus in the case of the Border Cave finds, there is currently very little evidence of continuity in this package of material culture across the approximately 40,000 years plus implied by d'Errico *et al.*'s (2012) argument. Moreover, since most of these organic items have preservation biases they should not be taken to indicate the presence/absence of the "San" in the Pleistocene archaeological record (cf. Henshilwood and Marean 2006).

TABLE 3

But even if we are to assume that a level of uniformitarianism existed in the Border Cave material, it need imply nothing more than strong, sustained, and stabilizing selective pressure on those artefact designs, not on "San culture" as whole. All late Pleistocene southern Africans were *Homo sapiens* with human cognitive abilities (Lombard & Parsons 2011). Facing a need for bone tools, glues, and projectile weapons of one kind or another, they surveyed their environment, devised a range of effective solutions, and stuck with them until those needs changed.

Conclusions

The fundamental problem with trying to identify a "San culture" in the Pleistocene is that this taxonomic unit holds little internal or external validity. Scientists generate taxonomic units to explore patterns in data. Named ethnographic cultures are abstract taxonomic concepts created by anthropologists and historians in reference to fluid human identities (Bayart *et al.* 2005). There is a difference between cultures as anthropological taxa and the cultural traits of which they are comprised. Taxa are stable and finite (albeit variably well-defined). Cultural traits, such as ideas, languages, and ways of doing things, are fluid, being transmitted with varying degrees of fidelity, altered, combined, and recombined in multiple different configurations over long timespans. Genes behave in a similar way. At any given time slice in this fluid continuum — including the "ethnographic present" — it is possible to identify a given cultural group in terms of its particular combination of traits, and to assign it a name. Yet if we trace a descendant population through multiple time slices, its cultural traits will be variously inherited, blended lost, or reinvented depending on selective pressures mediated by historical contingency (McGranaghan 2014). The characteristics of these cultures are not immutable. These factors make the use of direct historical analogy (or homology) in the search for specific named ethnographic cultures in the deep recesses of the archaeological record a fundamentally flawed endeavour.

Finally, why should anthropologists working outside southern Africa care about this issue? They should care because knowledge claims based on science have power that those derived from other sources do not. That particular human cultures can be traced into deep time and have thereby remained essentially unchanged over vast periods and across evolutionary timescales is one such idea. Unchallenged, politicians and other demagogues have used and will use pseudo-scientific claims about one culture's purity and lost glories, and another's inability to change with the times, to justify war, economic injustice, development agendas, and even genocide (Kuper 1988). Just as a former generation of anthropologists spoke out forthrightly against fixed and invariable "racial" taxonomies as an organizing principle for society (Montagu 1945), anthropologists today also need to speak out when we see claims about fixed and invariable human "cultures" used for similar purposes. We must not forget that it is not that long since links between some San groups and their "Stone Age culture" were invoked as a pretext for resettling them away from those fragments of land that they still retained (http://www.survivalinternational.org/news/6754).

References

BALICKI, A. 1970. *The Netsilik Eskimo*. Prospect Heights: Waveland Press

BARNARD, A. 1992. *Hunters and herders of the Kalahari*. Cambridge: Cambridge University Press.

BARNARD, A. 2006. Kalahari revisionism, Vienna and the 'indigenous peoples' debate. *Social Anthropology* 14: 1-16.

BAYART, J.-F., S. RENDALL, J.-L. ROITMAN & J. DERRICK. 2005. *The illusion of cultural identity*. Chicago: University of Chicago Press.

BIESELE, M., R. GORDON, R.B. LEE & L. MARSHALL. 1986. *The past and future of !Kung ethnography: critical reflections and symbolic perspectives*. Hamburg: H. Buske Verlag.

BORRERO, B. & BORELLA, F. Harpoons and travellers: Fuegian ethnographic collections and the recent archaeological record. *Before Farming* 2010(1) article 3.

CARTER, E. & CAMBELL, S. 2000. Preliminary report on the 1998 season of excavations at Domuztepe. In: *21st Kazı Souçları Toplantısı*: 133-142. Ankara: T.C.Kültür ve Türizm Bakanliği, Kültür Varlıkları ve Müzeler Genel Müdürlüğü Yayınları.

D'ERRICO, F., L. BACKWELL, P. VILLA, I. DEGANO. J.J. LUCEJKO, M.K. BAMFORD, T.F. HIGHAM, M.P. COLOMBINI & P.B. BEAUMONT. 2012. Early evidence of San material culture represented by organic artifacts from Border Cave, South Africa. *Proceedings of the National Academy of Sciences (USA)* 109: 13214-19.

GEERTZ, C. 1963. The integrative revolution: primordial sentiments and politics in the new states. In: GEERTZ, C. (ed.), *Old societies and new states: the quest for modernity in Asia and Africa*, pp. 105-119. New York: Free Press of Glencoe.

GOULD, R.A. 1969. Subsistence behavior among the Western Desert Aborigines of Australia. *Oceania* 39: 253-274.

GÜLDEMANN, T. 2008. A linguist's view: Khoe-Kwadi speakers as the earliest food-producers of southern Africa. *Southern African Humanities* 20: 93-132.

HENSHILWOOD, C.S. & C. MAREAN. 2006. Remodelling the origins of modern behaviour, in H. Soodyall (ed.) *The prehistory of Africa: tracing the lineage of modern man*: 31-46. Jeppestown: Jonathan Ball.

ICHIKAWA, M. 1983. An examination of the hunting-dependent life of the Mbuti Pygmies, eastern Zaire. *African Study Monographs* 4: 55-76.

JONES, S. 1997. *The archaeology of ethnicity: constructing identities in the past and present*. London: Routledge.

KELLY, R.L. 2013. *The lifeways of hunter gatherers: the foraging spectrum.* Cambridge: Cambridge University Press.

KIM, H.L., A. RATAN, G.H. PERRY, A. MONTENEGRO, W. MILLER & S.C. SCHUSTER. 2014. Khoisan hunter-gatherers have been the largest population throughout most of modern-human demographic history. *Nature Communications* 5.

KUPER, A. 1988. *The invention of primitive society*. London: Routledge.

LANE, P.J. 1994/95. The use and abuse of ethnography in the study of the southern African Iron Age. *Azania* 29/30: 51-64.

LEE, R.B. & I. DEVORE (ed.). 1976. *Kalahari hunter-gatherers*. Cambridge: Harvard University Press.

LOMBARD, M. & I. PARSONS. 2011. What happened to the human mind after the Howiesons Poort? *Antiquity* 85: 1433-43.

LOMBARD, M., WADLEY, L., DEACON, J., WURZ, S., PARSONS, I., MOHAPI, M., SWART, J. & MITCHELL, P.J. 2012. South African and Lesotho Stone Age sequence updates (I). *South African Archaeological Bulletin* 67: 123-140.

MCGRANAGHAN, M. 2014. 'Different people' coming together: representations of alterity in /Xam Bushman (San) narrative. *Critical Arts* 28: 670-88.

MITCHELL, P.J. 2002. *The archaeology of southern Africa*. Cambridge: Cambridge University Press.

MITCHELL, P.J. 2010. Genetics and southern African prehistory: an archaeological view. *Journal of Anthropological Science* 88: 73-92.

MONTAGU, M.F.A. 1945. *Man's most dangerous myth: the fallacy of race*. New York: Columbia University Press.

OUZMAN, S. 1997. Between margin and centre: the archaeology of southern African bored stones, in L. Wadley (ed.) *Our gendered past: archaeological studies of gender in southern Africa*: 71-106. Johannesburg: Witwatersrand University Press.

SHEA, J.J. 2011. *Homo sapiens* is as *Homo sapiens* was: behavioural variability vs. "behavioural modernity" in Palaeolithic archaeology. *Current Anthropology* 52: 1-35.

SHENNAN, S. 2009. *Pattern and process in cultural evolution*, Berkley: University of California Press.

SOLLAS, W.J. 1911. *Ancient hunters and their modern representatives*. London: Macmillan.

SOLWAY, J.S. & R.B. LEE. 1990. Foragers, genuine or spurious? Situating the Kalahari San in history. *Current Anthropology* 31: 109-46.

STRINGER, C.B. 2012. *Lone survivors: how we came to be the only humans on Earth*. New York: Henry Holt Co.

SUTTON, E.A. 2014. Digging stick weights and doughnut stones: an analysis of perforated stones from the Santa Barbara Channel region. *Journal of California and Great Basin Anthropology* 34: 17-42.

VAN REYBROUCK, D. 2012. *From primitives to primates: a history of ethnographic and primatological analogies in the study of prehistory*. Leiden: Sidestone Press.

WYLIE, A. 1989. Archaeological cables and tacking: the implications of practice for Bernstein's options beyond objectivism and relativism. *Philosophy of the Social Sciences* 19: 1-18.

Figure Caption

Figure 1: Map showing Border Cave in relation to the main geographical sources of "San" ethnography.

Tables

Table 1. Select examples of Border Cave 'San' material culture found beyond the Kalahari.

Trait	Presence beyond the Kalahari	Reference
Notched bone	Domuztepe, Turkey (Neolithic)	Carter & Campbell (2000)
Bone awls	Yámana, Argentina	Borrero & Borella (2010)
Bone points	Netsilik Inuit, Canada	Balicki (1970)
Use of poison	Mbuti, Congo-Kinshasa	Ichikawa (1983)
Digging sticks	Yiwara, Australia	Gould (1969)
Digging stick weights	Chumash, California	Sutton (2014)

Table 2. Statistical comparisons of the d'Errico *et al.* (2012) bone point morphological data.

Measurement	Comparison	P-value
Width at 5 mm	Border Cave-Mapungubwe Border Cave-San	>0.01
Thickness at 5 mm	Border Cave-Mapungubwe Border Cave-San	
Width at 10 mm	Border Cave-Mapungubwe Border Cave-San	
Thickness at 10 mm	Border Cave-Mapungubwe Border Cave-San	
Width at 30 mm	Border Cave-Mapungubwe Border Cave-San	
Thickness 30 mm	Border Cave-Mapungubwe Border Cave-San	

Table 3. Putative 'San' traits and their presence in southern Africa's major late Pleistocene technocomplexes. 0: absent,0.5: rare; 1: common. Data from Mitchell (2002), Lombard *et al.* (2012).

	Still Bay *c.* **77-70 ka**	**Howiesons Poort** *c.* **66-58 ka**	**Post-Howiesons Poort** *c.* **58-45 ka**	**Early LSA** *c.* **44-22 ka**	**Robberg** *c.* **22-12 ka**	**Oakhurst** *c.* **12-7 ka**	**Wilton** *c.* **8-4 ka**
Confirmed poisons	0	0	0	0.5	0	0	1
Bone ornaments	1	0	0.5	0	0	1	1
Wooden digging sticks	0	0	0	0.5	0	0	1
Bone points / awls	0	1	0	0.5	0.5	1	1
Bored Stones	0	0	0	0.5	0	0.5	1
Marine shell beads	1	1	0	0.5	0.5	0.5	1
Ostrich eggshell ornaments	1	1	0.5	0.5	0.5	1	1
Total	**3**	**3**	**1**	**3**	**1.5**	**4**	**7**

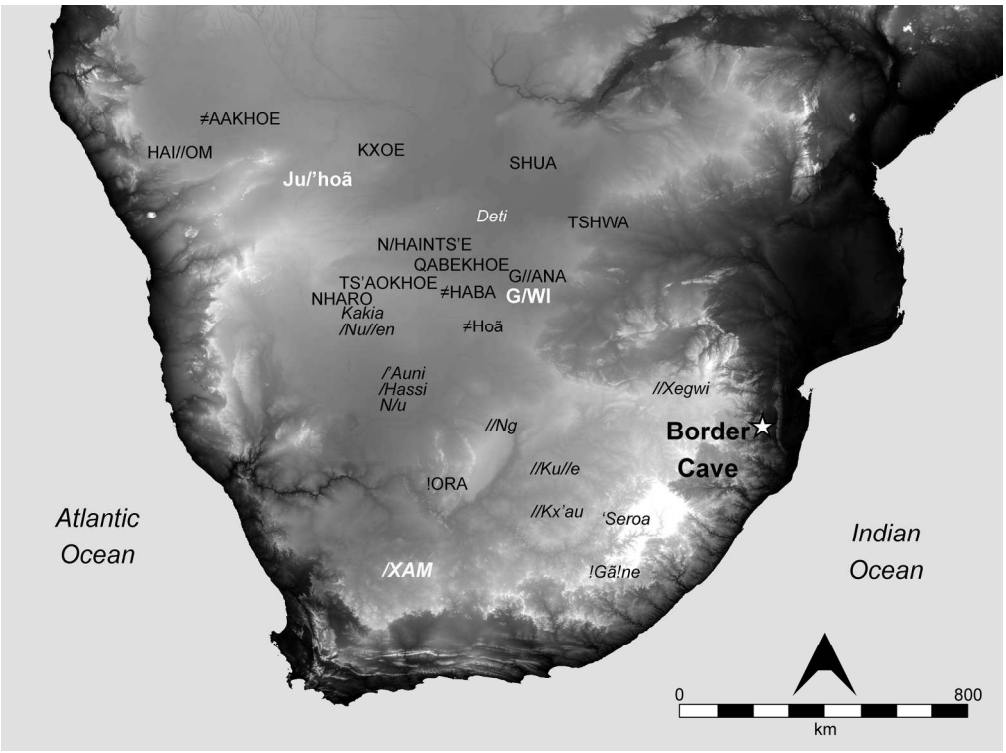

Figure 1: Map showing Border Cave in relation to the main geographical sources of "San" ethnography.
184x137mm (300 x 300 DPI)