The Zulu Ceramic Tradition in Msinga, South Africa

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ABSTRACT

This paper summarizes fieldwork conducted in 2009 with Zulu potters in the Msinga region of KwaZulu-Natal, South Africa. New data collected from this area of the Upper Thukela River Basin are used to compare and contrast production technology, the scale of production, distribution, seasonality, and labour organization with Zulu potters in the Lower Basin. The results of this study indicate that pottery production in Msinga has a distinctive character. The organisation of production in Msinga underlay the area's equally distinctive style of ceramics. This report demonstrates that the social networks potters are involved impact the visible and technical dimensions of pottery in the Thukela Basin. A better understanding of these social influences provides explanations for pottery variability because they link the social context of ceramic production with style.

KEY WORDS: Ceramics, *chaînes opératoires*, production, Msinga, Zulu, South Africa.

INTRODUCTION

Most of what we know about Zulu pottery production has been gained from potters in the Thukela River Basin of KwaZulu-Natal in South Africa. Fieldwork by artists and social scientists over the past three decades has improved upon earlier ethnological accounts (Laidler & Scot 1936; Lawton 1967; Schofield 1948). However, recent research has had different objectives and followed different data collection methods. Most accounts have reported on vessel names and functions, aspects of the manufacturing process and symbolic representations, either as the explicit objectives of research or through biographies of potters (Armstrong 1998; Armstrong & Calder 1996; Armstrong et al. 2008; Fowler 2006; Garrett 1997, 1998; Kennedy 1993; Legg 2006; Levinsohn 1984; Reusch 1996, 1998). There has yet been little commentary on the socio-economic context of production, learning, or the relationship between style and identity (Fowler 2008; Jolles 2005), and fewer still on detailed treatments of the technological aspects of production (Armstrong et al. 2008; Fowler 2008).

In the upper reaches of the Thukela River Basin, Reusch (1996, 1998) provided important data on Zulu pottery production but not at the same level of detail as reported from the Lower Basin (Fowler 2008). The latter study was based upon the wide-ranging research protocols developed principally for research in West and Central Africa. Thus, the data available on production practices in the Thukela River Basin is not directly comparable. To provide such comparative data, fieldwork of the Nguni Ceramics and Society Project (NCSP) based out of the University of Manitoba (Canada) was extended to the Msinga region in 2009. Repeated research amongst ceramic producing communities is desirable for three main reasons. First, different research agendas,

questions and expertise is brought to the study of potting practices. Second, long-term research allows us to monitor trends in production practices and factors that influence them. Lastly, examining variation in production within a particular group, such as the Zulu, better defines a particular ceramic tradition and leads us to a deeper understanding of the historical forces that have shaped it. With these considerations in mind, the aim of this paper is to describe pottery production in Msinga and highlight regional variation in the organisation of production.

MSINGA

The Thukela Basin is centrally located in the province of KwaZulu-Natal and covers an area of approximately 4,500 km^2 (Fig. 1). The basin is considered a single bioclimatic zone but differences in seasonal temperature, rainfall and vegetation cover characterise each main ecozone (mountains, plateau, slopes, valleys, and coast). Msinga lies in the Upper Basin of the Thukela catchment, about one hundred kilometres from both the Indian Ocean to the east and the Drakensberg Mountains to the west (Fig. 1). As of December 2000, Msinga was designated a local municipality covering some 2,500 km^2, but the name has long been used to denote a much larger tribal area. Currently, the municipality is one of four comprising the Umzinyathi District Municipality and it administers to six Traditional Authority areas, including Qamu, Mchunu, Bomvu, Ngome, Mabaso and Mthembu (Fig. 1).[1]

The district is distinctively arid and rocky with a wide alluvial plain that rises to the highveld north and south of the Thukela River (Fig. 2). The Thukela Valley lays some 400-650 m asl. Most of the region has slopes between 12-40% or greater. As one moves

[1] In Msinga, each tribal authority is properly prefixed by *kwa-* (of). For readability purposes, the prefix has been dropped in this paper.

away from the valley bottom, altitude quickly rises to 1200 m asl in the south and over 1600 m asl to the north. Temperature, rainfall and vegetation correspond closely with altitude. Average annual temperature in the valley is higher (20°C) than in the highland areas (14°C). On the whole, the area receives an average of 670 mm of rain per year. The driest areas in the west see only 500-550 mm while a south-west to north-east arc in the eastern portion of the region experiences 780-840 mm per year.

Soils across this landscape are non-arable, shallow reddish-brown calcareous soils of the Sunvalley-Ferry-Weenen series that overlay a lithology characterized by the shale and sandstone rich Hutton form of the Msinga Series (van der Eyk et al. 1969). The valley is dominated by thin bushveld, but at higher elevations there is a mix of moist or dry grassland, sourveld, sandveld and thornveld. Much of the region provides good grazing land. Less than 30% of the 6 800 ha of land with potential for dry cropping is under cultivation (Msinga Municipal Council 2010). Most of this land is north of the Thukela River and would require irrigation, which is financially out of scope for most landowners.

The nature of the topography is such that the high hills isolate the municipal area from those immediately surrounding it. A single tarred secondary road running north to south links the three peri-urban settlements of Tugela Ferry, Pomeroy and Keate's Drift and provides the main access to the area. Several poorly maintained tertiary gravel roads remain the only means of travel to homesteads west and east of the main highway. Although vehicles regularly travel these roads, the dominant mode of transportation is by foot (Department of Local Government and Traditional Affairs 2006). As such, Msinga is considered by many one of the more isolated tribal districts in KwaZulu-Natal.

Adamantly traditionalist, and widely acknowledged as staunch preservers of "the old Zulu ways," the people of Msinga live in a community impoverished by underemployment, underdevelopment and compromised immunity. The 2007 census indicates that 99% of the 161 894 people in the municipality live in rural Msinga (Msinga Municipal Council 2010).[2] Unlike surrounding municipalities, Msinga has a high population density of 68 people per square kilometre. Over 70% of the economically active population is unemployed and a staggering 95% of the population earn less than a living wage. As a result, many people are involved in informal and subsistence activities. Nearly 70% of the population is illiterate. Most are women or girls whom have received no education or schooling only to the elementary level. The very high HIV/Aids infection rate (32% of total population and ±65% of sexually active females) is clearly pandemic and will soon have a devastating effect on the predominantly young and economically active population (over 90% of the population is under 65 years of age).

Systemic factionalism throughout the last half of the nineteenth and throughout the twentieth century has given Msinga a reputation as violent and rife with crime (Clegg 1981; Lambert 1994; Minnaar 1991). While tensions are no longer consistently as high as they were even two decades ago (Freund 1996; Thomas 1972), there remains a strong sense of tribal identity locally in the region (between tribal authorities) and collectively relative to other tribal districts in KwaZulu-Natal (cf. Mathis 2008: 94-95).

Both the local and collective identity of peoples in the Msinga region is strongly rooted in the unique colonial and pre-colonial history of the area. With the establishment of the Colony of Natal by the British in 1856, several regional "clan chieftancies"

[2] Statistical data is taken from provincial government reports cited here in addition to the census data published by Statistics South Africa (http://www.statssa.gov.za).

emerged from the subsequent regional administration process, especially the locations formerly demarcated by Theophilus Shepstone in 1846–47 (Etherington 1989). Several of the chieftancies defined as administrative districts by the British were loosely based upon alliances established prior to permanent British settlement of the region. Msinga was one region that formed the southern frontier of Zulu political hegemony in the early 1800s. It lay adjacent to chiefdoms who had allied themselves with Shaka kwaSenzankona in the mid-1820s during the expansion of Zulu influence along and south of the Thukela River. While people in Msinga share language and many cultural practices with other Zulu-speakers in the region, the area was never incorporated into the Zulu kingdom. Under the administration of the Colony of Natal, Msinga was impeded from forming alliances with powerful chieftancies to the north and was ignored by the Boers and Natal settlers, possibly due to the region's low agricultural potential for European preferred domesticates, such as cane, wheat and barley. Thus, in recent history, Msinga has effectively formed a periphery of the Zulu state, the thirteen chiefdoms of Zululand devised by Wolseley after the Anglo-Zulu War (1879), the Boer Natalia Republic, the British Colony of Natal, and, until 1994, the *bantustan* of KwaZulu. While Msinga has certainly been influenced by outside forces, not the least of which was initially the taxes duties and fines levied against Africans in the Colony of Natal beginning in 1872 (Etherington 1989), this brief historical review attests its marginality.

Against this background, we can consider several implications for potting practices. The low rainfall and humidity mean that pottery can be made throughout the year and that most activities can occur outdoors. The lithology of the area additionally restricts the distribution and easy availability of soils with suitable clay. Thus, potters should tend to

be situated close to readily available clay sources. As a result of the high unemployment in the municipality, one may well expect that pottery making is a key source of income for women and their families. Due to the limited mobility of women out of the region, many who make pottery should tend to have less direct influence or contact with potters who sell their wares outside Msinga. Limited mobility within the region fosters infrequent contact between potters in the different tribal authorities. Consequently, we may expect direct influence by potters both within and outside Msinga to be very low.

METHODS

The primary aim of the NCSP is to document technological variation in Zulu ceramic production. This variation is accessed through a detailed study of *chaînes opératoires* (Dobres 2000; Leroi-Gourhan 1963; Pelegrin et al. 1989; Tixier 1967), or "production sequences", but the term more accurately refers to the interrelated decisions considered by people during the process of transforming the material world in technologically viable and culturally acceptable ways. Thus, the production (and reproduction) of material culture—be they stone tools, pottery, graves or gardens—all result from a mix of technical and cultural considerations (Dobres & Hoffman 1999; Lemonnier 1992; Pfaffenberger 1992).

Our work on pottery production in Msinga focused upon two tribal authorities, Mabaso in the lowlands northeast of Tugela Ferry and on the plateau of Mchunu in southern Msinga, which together cover just less than a third of the region. Data collection involved conducting extensive unstructured interviews with potters of varying age and skill levels, making trips to clay and fuel sources, and visually recording demonstrations of all production stages. Interview questions addressed to each potter were developed

from existing questionnaires (e.g., Gosselain 2002; Gosselain & Livingston Smith 1997) and focused on seven topic areas: (1) identity (e.g., age, gender, literacy), (2) socio-economic context of production, (3) vessel shape and function, (4) vocabulary, (5) manufacturing process, (6) learning, and (7) symbolic representation.

Through interviews carried out between May and June of 2009, we were able to gather information regarding 18 active potters in Msinga. All potters interviewed in Msinga were women between the ages of 28 and 73. Most of our time in Mabaso was spent with a main informant who had taught eight of the thirteen potters in the tribal authority. Indirect information on several other potters was obtained from interviews with her and her past apprentices. In contrast, there are five active potters in the Mchuno area. All but one is related through marriage. We extensively interviewed two of these potters and their apprentices who now live just outside the readjusted municipal boundary of Msinga, and one other potter that now lives Weenan. In total, our data for Msinga spans three generations and the practices of twenty-two apprentice, active and deceased potters in the region.

CONTEXT OF PRODUCTION

Several analyses of the range of ceramics produced by Zulu potters since the nineteenth century has recently been discussed (Armstrong 2008; Jolles 2005; Fowler 2006; Reusch 1998). Ethnographic sources indicate that pottery vessels were made to cook and serve meat, cereals and vegetables; brew, serve and drink sorghum beer; transport and store water; administer medicines; burn incense; and shards were used to fry slivers of cattle, sheep or goat meat as part of ceremonies aimed at venerating and communicating with the ancestors (Fowler 2006). Cooking vessels were largely replaced

by European metal containers beginning in the 1820s. Most potters today make vessels for brewing, serving and drinking sorghum beer (*utshwala*), and a series of smaller serving and eating vessels for consuming *uphuto*, a maize-based porridge, and *amasi*, a delicacy of sour milk (Fowler 2006).

It has been reported that potters in the Thukela Basin divide their current repertoire of vessels into six broad series that reflect a contraction of the ceramic repertoire during the nineteenth century (for discussions of function see Armstrong, 1998, 2008; Fowler 2006; Jolles 2005). The six series include (1) *izimbiza* for beer brewing, (2) *izinkhamba* for serving and storing water/beer and preparing medicines, (3) *iziphiso* for transporting water or beer, (4) *isingcazi* for serving, storage and transport of beer or water, (5) *izinkhamba* for cooking or serving vegetables and other dishes, and (6) *izinkhanzi* for cooking meat (see Fig. 3).[3]

Potters were provided with silhouettes of this range of vessel forms to investigate what term, or range of terms, they would provide without reference to scale or decoration.[4] The illustrations were drawn from the literature, previous fieldwork, and specifically, vessels collected by Reusch during his research in Msinga (now on display at the Natal Museum). The names senior potters gave these forms are provided in Table 1.

Msinga potters recognize and can name most vessels in the ethnographically documented repertoire. Potters from each tribal authority most clearly agreed on the names of three forms, *imbiza* (beer brewing), *umancishana*/*umgodi wenyoka* (denoted by potters as same form used, respectively, for beer drinking and offerings to ancestors;

[3] In this repertoire I do not include European-inspired forms, such as candlesticks, salt and pepper shaker, and the like. In Msinga, anyway, potters we interviewed do not make them.
[4] A companion aim was to illicit responses as to the significance of size and surface treatments in sorting and naming vessel forms through interviews with potters and buyers.

Fowler 2006), and *ingcazi* (water or beer transport) (Reusch 1998:34). Potters had heard the term *uphiso* for a necked vessel like an *ingcazi*, but they do not use it. Only potters from Mabaso identified *umcakulo* as a small beer brewing vessel.

There was less agreement on forms used for serving. While potters from Mchuno used the generic term *ukhamba* for a serving vessel, potters from Mabaso were more specific. *Maimphense* was the specific term given this serving vessel. *Mamsamo* was the term ascribed to a very small version of this form that can only be drunk from by grandparents and is often placed in *umsamo* at the back of houses to hold offerings to the ancestors. The *mamsamo* form was also named differently by a *sangoma* (traditional healer) interviewed in the area. The terms are based upon function. The sangoma explained that different *ukhamba* are used for different medicines and cannot be exchanged or used for another medicine. She termed the *mamsamo* form *umkhamba lwedlozi*, which is used for the ancestors. If she used it for making medicine, it was called *igobongo*. *Igobongo* is used for medicines that deal with respiratory problems, the illnesses she treats most often. *Umuthi wezifuba* is the general term for chest medicines (Hutchings 1996:332). Plants known to be used for chest ailments include root infusions of fish/poison bean (*Tephrosia macropoda*; Hutchings 1996: 130) and hot milk root decoctions of *Ursana tenuiloba* DC were reported by Bryant (1966) to be taken for coughs (Hutchings 1996:323).

An *ukhamba lwentelezi* was also identified as a vessel used to prepare medicines. *Intelezi* (p. *izintelezi*) is a protective charm (Dent & Nyembezi 1969: 440).[5] There is a range of medicinal plants generally referred to as *intelezi*. Decoctions of *Cotyledon orbiculata* (Pig's ears; *ipewula*; Hutchings 1996: 112) is used by Zulus as enemas for

[5] The prefix *lwe-* (for) refers to the preparation of *intelezi* and is used as a descriptive for *ukhamba* that serve medicinal purposes.

syphilis and by Xhosas for toothaches, earaches, boils, to soften warts and corns, and is also recorded as a treatment for epilepsy. The leaf sap of Barstring hemp (*Sansevieria aethiopica*; *isikholokotho*; Hutchings 1996: 45) is used for earaches and the rhizomes used as protective charms.

The *sangoma* further noted that the *ukhamba* she uses last a long time. Some she has had for nearly twenty years. While some sangomas now use plastic containers, she explained that *umuthi* must be made in an *ukhamba* but can then be moved to plastic for treating patients. When the vessels break she discards them by hiding them in the bush. No specific reason was given for this practice, but it was made clear that the vessels still hold powerful medicines and must be properly discarded to avoid any future danger of them being mistreated or mishandled.

No potters in Msinga identified illustrated silhouettes of meat, cereal, and vegetable cooking vessels using terms in the literature. It has been suggested that while vessel shapes of the *izinkamba* and *inkhaze* series may still made, they have not been used to cook meat, cereals and vegetables for at least a hundred years, perhaps longer (Fowler 2006:99; Reusch 1998:23). The terms associated with these forms have therefore fallen out of collective memory. However, in discussing the names of forms after the initial sorting, the older potters we interviewed indicated that *inkhaze* were still in use when they were young girls during the 1940s and early 1950s. Indeed, it was said they often make a similar looking shape in the early stages of roughing out *umgodi wenyoka*.

Our fieldwork thus indicates regionalism regarding ceramic terminology, classification, and use in the Thukela Basin. Differences in nomenclature appear to be based upon associations made between vessel form and vessel function. The same form

may be ascribed different functions by groups and therefore receive a different term. But each specific term is merely a variation of a shared classification scheme (e.g., *incgazi* vs. *uphisto*) or a subset (qualification) of a broader category (e.g., *ukhamba* vs. *ukhamba lwamasi*). Additionally, potters agreed that if size and decoration were included in the illustrations it may have been easier to sort them, but they explained that form is the primary, or at least initial, criterion that both potters and buyers use to distinguish types.

CERAMIC PRODUCTION IN MSINGA

In pottery making, the production sequence (or *chaîne opératoire*) is carried out in seven general stages, including (1) raw material procurement, (2) clay processing, (3) fashioning, (4) decoration, (5) drying, (6) firing, and (7) post-firing treatments, such as applying waterproofing resins, paints or other surface treatments (Gosselain 1995; Rye 1981). Not all stages are necessary for producing pottery. The choices made during production are governed by cultural norms and values as much as the range of shapes and decorative attributes of vessels, making ceramic *chaînes opératoires* full stylistic phenomena. In this section, the pottery *chaînes opératoires* practised in Msinga are presented along with a consideration of the rationale for the choices made, and those not made, during the production process.

Resource acquisition

As known elsewhere in KwaZulu-Natal, in Msinga the acquisition of natural resources in pottery making involves the selection and extraction of clay and the collection of fuel for firing. *Ubumba* is the term used for clay. There is no specific term in Zulu to distinguish clay used for pottery and that used in house construction or for other purposes. Potters instead qualify clays based upon whether they are appropriate for

potting. Typically, potters feel it is unnecessary to add tempering material if an appropriate clay is found.

However, during our research in Msinga and in the Lower Thukela Basin (Fowler 2008) we have always observed potters adding temper to clays. Temper comes in two forms: the addition of a coarser clay body to a finer one from either two different sources or from the same source. The coarseness of temper differs depending upon type of vessel being produced with a given batch of clay. Thus, there is variation in how clays are processed according to the type of vessel being produced. This potential misidentification, or at least misunderstanding, of tempering by Zulu potters is a direct result of Zulu perceptions of clay and the processing sequence. Pottery making is an additive technology, so ceramic specialists treat any addition to a clay body as "tempering material". For Zulu potters, the minerals and rocks they remove from clays during process are simply thought of as part of the clay, so when different fractions of clays are mixed, potters view them not as "added" but merely "replaced". Yet they are replaced in a different form than is found in the original clay body and we must characterise this practice as tempering.

In Msinga, potters use clays gained from dry stream beds comprised of the well-drained reddish-brown Rensburg and Katspruit calcareous soils of the Sunvalley-Ferry-Weenen series (van der Eyk et al. 1969). The fine textured non-swelling clays of this series vary across the region but tend to have a high base and nutrient status, a relatively high organic content (15-35%), and rounded fractions of the parent rock primarily comprised of quartz, feldspars, metamorphic limestones and granites, and calcite granules

(Bisnath 2000; Brink 1931; du Toit 1954; Luyt 1976). Our preliminary analysis indicates they are secondary clays (transported or sedimentary) dominated by illite and kaolinite.

Clay sources are neither owned nor controlled by any single family. Potters can generally access them freely although the clays do not occur on land owned by them. In Mabaso, thirteen potters extract clay from two sites located from 2.5 to 5.5 km from their homesteads (Table 2). Both sites are wide drainage streams less than two meters deep. At the larger of the two sites, which has 100 m of exposed bank, a coarse and a fine sandy clay from a single horizon is obtained from numerous extraction locations (Fig. 4a). For two potters, this source is the furthest away from their homesteads. One of these potters produces full-time and makes regularly weekly visits. For this potter, travel time and labour investment are major factors influencing the use of appropriate clay sources so she uses donkeys to transport the clay, but those nearer walk. The second site in Mabaso is a small drainage channel that cuts through a field that has exposed finer sandy clay. This smaller site has only 20 m of exposed bank to extract from and is the closest fine clay source to all potters. While clays from both sites can be reached by walking 30-60 minutes, much of the day is spent digging clay and transporting it home in plastic maize-meal bags. Other potters, or their older daughters, often accompany them so each potter may collect and transport twenty to forty kilograms at one time.

In Mchuno, a different situation prevails. In the plateau above the southern bank of the Thukela, potters obtain clay from four different sources (e.g., Fig 4b). All the sources have the same mineralogical composition (which is similar to those in Mabaso) but two are fine-grained and the other two are coarse-grained. As a result of a dispute with a local landowner in the early 1990s, a number of families moved several kilometres east and

built new homesteads. With access to the old clay sources cut off, potters had to find new sources. The old clay sources are about two kilometres from potter's homesteads and are located in a dry stream bed. The new sources are closer, one being only 20 m from one homestead. While the new sources are described as adequate, the older ones are preferred. Unlike Mabaso, potters in Mchuno only make pottery in July and August. Clays are obtained in December during the rainy season because potters say it is easier to dig damp clay from the streambeds.[6] Potters will collect clay together and twenty kilogram maize meal bags are used to transport the raw clay.

These data indicate that potters tend to obtain clays from sites near their homesteads, usually within three kilometres. This range falls within the typical distances to clay and temper sources exploited by potters in Africa (Gosselain 2008) and worldwide (Arnold 1985: fig. 2.5). However, sources further than three kilometres away from homesteads are used. To mitigate travel time to these sources, the only full-time potter in the area uses a donkey to transport clay.

In contrast to the ready availability of clays, the acquisition of fuel may be more difficult. Vegetation in the valley and its tributaries represents an environment exposed to excessive overutilization from herding. Disturbed areas on the river valley are dominated by the indigenous, deciduous umbrella thorn (*Acacia tortilis*) and drought-resistant *Dichrostachys cinerea* thicket, as well as invasive euphorbia species (*E. tirucalli and E. grandicornis*) that are used as a primary source of domestic fuel. Grazing lands are dominated by the pervasive *A. tortilis* and *A. merloti*. On the adjacent flat areas near the

[6] The clay is heavier when wet, of course, and during our visit in the fall they found the could transport more clay. However, the quantity of clay moved was not the main concern. Wet clay was also desired because it did not have to be rehydrated for soaking. It could just be covered or placed in a sealed plastic container until spring.

Thukela River, deciduous tamboti (*Spirostachys africana*) and acacia (*Acacia marlothi, A. robusta*) are abundant. Cattle and goat dung are the primary fuels used by potters. "Hard fuels", such as tamboti and euphorbia, are never used. Aloes are used sparingly. Potters explain that, for their purposes, aloes are abundant and easily harvested. Both the leaves and stalks are left to dry extensively before being used for firing. In contrast, cattle dung is only readily available seasonally. Herds are moved widely around the valley during the dry winter months as the summer pasturage becomes depleted. Cattle dung usually is found some distance from homesteads and requires more time and effort to collect from along the cattle paths that criss-cross the countryside. Most homesteads keep goats, so their dung is available year round. While cattle and goat dung are both used in firing, cattle dung is preferred.

Clay processing

Obtaining clay may be a communal activity, but potters prepare clay for their own vessels. Once the clay is brought to a homestead, it is stored in metal drums (Fig. 4b) or old *izimbiza* until it is needed (Fig. 5b). Elsewhere in KwaZulu-Natal, the pretreatment of clays typically involves saving clay for a week or more and processing it when needed (Fowler 2008). Zulu potters we have studied dry at least some of the clays to increase workability. Potters in Msinga follow these same practices, but use different techniques in subsequent steps of clay preparation.

In both Msinga tribal authorities, the removal of nonplastic materials is first accomplished by hand sorting. To further reduce the size of coarse particles, two techniques are used. Potters in Mabaso pound clays with a stick (Fig. 4c) whereas in Mchuno potters grind clays on a grindstone (Fig. 5c). The same stone used for grinding

grains is used for preparing clay, and the technique is identical to grain preparation: this involves a pounding and then a rolling motion. Both pounding and grinding techniques are equally effective, but a somewhat finer clay power is produced when using a grinding stone. After pounding or grinding, potters from both areas then sieve the clays using homemade sieves made of enamel containers or plastic buckets (Fig. 4d, 5d).

In the third step, potters also add temper once unwanted non-plastic materials are removed. Some observers have noted the addition of grog when manufacturing large beer-brewing pots (*izimbiza*) (Armstrong & Calder 1996:108). However, in our work we have only ever seen other processed clays used as a temper source regardless of the kind of vessel being made. All potters use this same tempering strategy in Msinga. Vessels intended for beer drinking or eating (*ukhamba*) are made using a single fine fraction clay. Beer brewing vessels (*izimbiza*) are instead made using different recipes. Potters from Mabaso and Mchuno prefer to use coarse fraction clay from a source other than the one used for other vessels types. In Mchuno, potters may modify clay from one clay sources if only that one is available. They first generate fine and coarse fractions of clay through an initial grinding. They then further grind the gritty by-products and the combine them with the finer clay to make a coarser clay body for *izimbiza* (Fig 4e, 5e). Thus, different "recipes" are used to achieve a balance between workability and plasticity depending upon the size and function of the pots to be made. When making *izimbiza* a 50:50 ratio is desired, but potters explain that a 60:40 ratio, with either fine or coarse clay being dominant, still produces serviceable vessels.

The last step, homogenizing the paste, is always done by adding water to the prepared clay and kneading it with the hands. In Mabaso potters will add water to dry clay prior to

fashioning (Fig 4f). Potters in Mchuno leave clays to sour for a month or more before potting. If the clay is new (freshly ground), however, it is left to soak for a short time (10-20 min.) after processing (Fig. 5f). Both soaking and souring alter the Ph of the clay and increase plasticity. These different homogenizing techniques may be related to the quality of clay available in the different locations, and this question is currently being addressed through petrographic and mineralogical study of the clays.

Vessel Fashioning

All of the potters interviewed in Msinga fashion vessels in a near identical manner, although the sequence of techniques is slightly different. Regardless of the vessel type being made, the potter begins by forming the bottom of the vessel out of a lump of clay. The lump is shaped into a slab disc about one-centimetre thick. The clay disc is placed either on a square of melamine board (Mabaso, Fig. 6a) or a pressed board placed on an inverted enamel basin (Mchuno). Prior to forming the disc, potters in Mchuno sprinkle dry clay on the board to act as a separating agent so the clay does not stick (Fig. 7a).

The edge of the clay disk is then drawn up slightly to produce a lip to which coils are placed on the interior (Fig 6b, 7b). Coils are rolled vertically by hand. Pots are coil-built in sections, each roughly a third to half of the total height of the final vessel, depending upon its size. For the most commonly made smaller vessels, the first section is built of a series of coils about 10–12 cm long and one to one-and-a-half centimetres in diameter. Single coils are added to the base until the lower third of the pot is reached. This interior of the section is smoothed and trimmed with a spoon head or piece of plastic while the potter holds her hand on the exterior of the form (Fig. 7c). Each subsequent section is coiled in the same manner, however, potters in Mabaso first rub the exterior vertically

with a maize cob before proceeding (Fig. 6c-d), whilst potters in Mchuno complete the entire roughed out form before using a maize cob on the exterior to join coils (Fig. 7d). Potters from both areas trim the exterior with a sharp tool (usually an old knife) (Fig. 6f, 7f) and smooth the rim with their fingers.

If a necked vessel of the *ingcazi* series is made, two of three further coils are added in the opposite direction the body was coiled to complete the roughed out form, the interior is scraped, and the maize cob is then used on the exterior (Fig. 6e, 7e). In making *izimbiza*, the exterior surface is only smoothed with a maize cob and is not burnished. All forms for drinking or eating are smoothed on the exterior to obliterate coils, level rough spots and create a working surface to be decorated. For smoothing, Mabaso potters will rub the outside of pots with a burnishing stone (Fig. 6g). Mchuno potters use a piece of plastic (Fig. 7g) and only burnish pots after they have been decorated and dried (Fig. 7j). Finished rough outs are left to dry for a very short time before decoration, usually while potters rest or perform other duties around the homestead.

Decoration tools and techniques

Msinga potters use three groups of techniques when decorating pottery. Grooving (shallow cutting into the surface) is a cutting technique, appliqué (applying clay to surface) is a joining technique, and burnishing (smoothing the surface using an implement) is a surface finishing technique (Rye 1981:89-94). Grooving is used to create geometric, curvilinear, and naturalistic (e.g. leaves) motifs. Appliqué involves attaching clay bosses. Potters we interviewed never combine grooved and applied decoration together on the same pot. Regardless of which technique is used, a light burnishing occurs after decorations are completed before firing. In the post-firing phase, beer-

serving and drinking vessels are rubbed with a cloth after they are carbonized during a second firing to blacken them (see below). This is merely to clean the pots of dust and ash and is not a decorative technique.

The types of motifs and their layouts are different in Mabaso and Mchuno. In Mabaso, leaf designs and incised triangles predominate. Potters there usually first demarcate the design field by marking a horizontal line around the pot. Motifs are then added between or below this line. Thus, cut motifs are normally arranged in horizontal zones on vessels (Fig. 6h). After decoration is completed, pots are then burnished again (Fig. 6j). Mchuno potters use no such boundaries to demarcate the fields and instead create free-form vertical and horizontal hatched lines and leaf motifs (Fig. 7h-i). Unlike Mabaso, vessels are rubbed with vegetable oil and burnished only after they have dried, and this is usually done just prior to firing (Fig. 7j).

Zulu potters working in the last twenty years have been very open to decorative innovations in general. In some cases, these involve the rearrangement and combination of traditional motifs (i.e. design layout but not the location of decoration on pots), and in others the development of new techniques and motifs. Armstrong (1998:42) reports that the development of stylized plant motifs by some potters is a recent development, and may be restricted to the twentieth century (Evers 1988; Jolles 2005). The work of some younger potters can be distinguished by a greater intricacy of design than those used by their teachers. We have observed this in the Lower Thukela (Fowler 2008) and also in Msinga. For instance, one apprentice potter in Mchunu drew several of the designs she has thought of for her future vessels, and these are far more elaborate than those used by her mother-in-law.

The meaning of certain motifs is often difficult to determine. In his interviews with potters in Mabaso, Reusch (1996: 120; see also Armstrong et al. 2008) was able to discern the possible meaning of several motifs: a flower (*imbali*) suggests peace, beauty, goodwill and regeneration; the sun (*ilanga*) suggests something which "shines", or is outstanding; a half-moon (*ifu*) suggests something with potential for further growth; and the points of two isosceles triangles facing each other (*ihawu*) represent a cattle-hide shield carried by young unmarried boys. Our inquiries elicited no such meaning for the motifs. But when prompted, potters recognized the association of certain motifs with those found on pottery and clothing. In particular, the arrangement of triangle motifs in beadwork on women's capes and the belts, necklaces, bands and loin coverings worn by both men and women are used explicitly to communicate marital status—whether men or women are married, unmarried or are eligible for marriage (see Armstrong et al. 2008). Triangles are a masculine motif, while diamonds are feminine. Shown alone, in various directions, the symbols represent unmarried status. Each symbol is doubled to signify whether a man or woman is married: a double triangle (hourglass shape) symbolizes married men and double diamonds (also oriented vertically) denote married women. However, symbolic significance is seldom attributed to motifs found on many pots post-dating the 1950s, because many are original creations or are copied from those seen on others' pots in markets. Msinga potters clearly acknowledge that they copy motifs seen on vessels in markets that were made by potters from other tribal authorities, but they do not speak to each other about them. The potters from Mchuno acknowledged that potters from Mabaso are better at decorating their pots, but they were better at firing them.

When the decorative repertoire is placed more broadly within the motifs represented on pottery made by Zulu-speakers, we can see how many decorations originated on other media and were subsequently adopted for use on ceramics. Evers (1988) identified motifs on Zulu pottery that also occurred on other kinds of material culture, such as beadwork, grasswork (mats, baskets) and woodwork (head rests, milk pails, dishes, spoons and ear disks). Jolles (2005) concluded that the decoration of twentieth-century Zulu ceramics has its origin in the last half of the nineteenth century, when baskets, not ceramics, were used as drinking vessels. Most decorations found on Zulu pottery originated on other media and were subsequently adopted for use on ceramics. However, not all decoration was borrowed from basketry, and one type of decoration, known by the term *amasumpa*, is distinctive of Zulu material culture. *Amasumpa* are found on pottery, wooden milk pails (*amaithunga*), meat plates (*izingqoko*) and head rests (*izigqiki*). This type of decoration has parallels with bodily adornment. Similar patterns of raised cicatrisation-nodules on the shoulder, upper arm, chest and thigh are documented in photographs from the early nineteenth century (Armstrong et al. 2008).

In Msinga, potters do add bosses of clay to *izinkhamba* or *izimbiza* (Fig. 6i,k; Fig. 7k). They term these *izinsumpa* (sing. *insumpa*) and were unaware of the term *amasumpa*, although they did discern its meaning. No connection was made between *izinsumpa* and bodily scarification. Rather, they were described as having a likeness to "breasts". *Izinsumpa* (sing. *insumpa*) literally means "warts." As Armstrong et al. (2008: 533) explain, *amasumpa* has incorrectly been translated as "warts" and the term *izinsumpa* can be confusingly used to refer to decorative bumps on vessels. While "potters and other informants are emphatic about the distinction" between *amasumpa* decoration on pottery

and *izinsumpa* as bosses for decoration, the distribution and significance of the "wart-style" bump is unknown (Armstrong et al. 2008: 533). Following Levinsohn's (1984) proposal, Armstrong and Calder (1996:111–112) and Jolles (2005:199-120) have suggested that *amasumpa* may be directly associated with royal households at the first oNdini, founded by Mpande in the 1850s. The southern limit of *amasumpa* appears to be the Nsuze River in the Lower Thukela Basin (Jolles 2005: 120). However, because virtually no fieldwork has been undertaken south of the Thukela River, it is difficult to be certain of this boundary. In his discussion of the Msinga style, Jolles (2005:121-122) makes no mention of the use of *amasumpa*. Thus, both the inquires by Jolles (2005) and ourselves point towards Msinga as the western boundary of *amasumpa* decoration. This decorative boundary may also have political significance, signalling the incorporation of Msinga into the Colony of Natal and not the Zulu kingdom (cf. Armstrong et al. 2008: 528). Whatever its origin, meaning or significance, decoration is clearly not limited to only incised motifs in Msinga.

While *amasumpa* may be a rather historically recent form of decoration, *izinsumpa* are reminiscent of the application of knobs and bosses that infrequently occur on vessels dating to the past millennium (Huffman 2007). Both types of decoration are symbolically associated with the body: *amasumpa* with scarification, *izinsumpa* with breasts. Taken together, both signify the female body and directly associate ceramics with women. The potential depth of this association is discussed by Armstrong et al. (2008: 542-544).

Drying, firing and post-firing treatments

Once decoration is completed and pots are dried (over a period ranging from a day to a week depending on the weather), they undergo firing. Firing actually involves three

distinct but concurrent stages in Msinga. “Pre-firing” is an extension of the drying stage that further allows the gradual evaporation of residual water by placing burning dung and/or grass in the pots prior to firing (Fig. 8a, 9a). The firing is used to bisque pottery, and, immediately following this is a post-firing smoking used to blacken all vessels except *izimbiza*.

All potters in the region use pits to fire pottery. Pits are dug into the rocky substrate to a depth of 50 to 100 cm and can be 100 to 150 cm wide. They are placed some 30 to 60 m away from the nearest dwelling in the homestead, in an area surrounded by trees and bushes that act as a windbreak.

Both dung (cattle and/or goat) and light fuels are used for firing. Cattle manure is preferred but can be difficult to obtain depending upon the season (as discussed earlier). Goat manure is a ready substitute and is more easily obtained, as most homesteads keep goats. Light fuels consist of dry grasses and the thoroughly dried leaves and stalks of aloes (*Aloe spectabilis, A. marlothii*). Hard fuels, such as euphorbia or the hardwood tamboti (*Spirostachys africanus*) are never used.

Pottery is placed upright in a nest of some combination of grass, aloes and dung before being covered with more fuel and ignited (Fig. 8b-e, 9b-d). Potters will continually add fuel to obtain temperatures below 900°C for less than an hour (our recorded times were 40 and 55 minutes). Once the fuel is nearly exhausted, dried goat dung is spread over the pit and a shovel is used to cover the pit with soil (Fig 8f, 9e). The soil acts to create a reducing atmosphere. Smoke billows out of the soil for about 15 minutes before the pots are removed with long sticks and are set to cool beside the fire or are moved indoors (Fig.

8g, 9f). Different functional types receive different surface treatments after the initial firing is complete.

As reported elsewhere for Zulu potters (e.g., Armstrong 2008; Fowler 2008; Reusch 1998), *izimbiza* are left to cool after firing and then rubbed with cattle dung (Fig. 8h).[7] All other vessel types are smoke fired.

What is intriguing about this series of stages is that they are not documented for Zulu potters elsewhere in KwaZulu-Natal or in amongst Nguni-speakers elsewhere in the region. The technique of pre-firing used in Msinga is comparable to that found in D.R. Congo (Kanimba & Bellomo 1990; Mercader et al. 2000), and the pit firing technique is only documented for non-Nguni speaking groups outside the region (De Crits 1994; Laidler & Scot 1936; Lawton 1967). Based on our present knowledge, this sequence of drying, firing and post-firing techniques in Msinga is unique in Africa.

It is also interesting that only one potter in the region has been documented using a bonfire technique to fire batches of small vessels. She uses the same fuels, arranged in the same ways as in a pit firing, but surrounds the pots with stones to stabilize the fuel.[8] To smoke the pots, she covers the pots with grass and sets it alight. The soot from the grass blackens the pots, but does not leave the same creosote patters that are typical of pit-fired vessels from Msinga. Indeed, it is this pit-firing technique that gives Msinga ceramics their distinct appearance, although decoration may be used to distinguish potters from different Tribal Authorities (Fig. 10).

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[7] For a discussion of the signifiance of this practice see Armstrong et al. (2008) and Fowler (2008).
[8] I am indebted to Raurie Alcock for the photographs (Fig.9g-h) and description of this practice. This seems only to be an innovation of one potter in Mchuno who is the daughter of one of our main informants in the area.

In an earlier report on ceramic production in the Lower Thukela Basin, I was able to discuss the organization of Zulu ceramic production based upon data collected on technology, scale, distribution, seasonality, and labour organization (Fowler 2008). Interviews with elderly potters in that region allowed a consideration of changes over three generations. We learned from the Lower Thukela Basin that (1) production technology requires no specialized tools or structures, (2) the scale of production is low, (3) there have been few but significant changes in labour organization and learning strategies, and (4) the demand for "collectors wares" has increased over the past twenty years which has stimulated at least two potting families to adopt new marketing strategies and increase the capital outlay used to distribute finished vessels (Fowler 2008:498-502). In Msinga, we collected data on the same four aspects of ceramic production, allowing us to characterise production within the Upper Thukela Basin.

Production technology

Potters in Msinga display high level of knowledge and skill in sourcing and preparing clays, fashioning vessels, and firing. The old clay sources used today have been tapped as long as potters in Msinga can remember. They are typically large and plentiful, but are not ubiquitous. Mchuno potters attest to this, as they searched for much of a year in the vicinity of their homesteads to locate appropriate sources to use. While clays are relatively easy to locate, those *preferred* by potters must meet a certain standard in terms of clay content, workability, and the kinds, quantities and size of inclusions. Potters appear more apt to seek out appropriate clays rather than alter their processing techniques. This practice interestingly contrasts much of what we know about potting

elsewhere in Africa, for potters are usually willing to alter their processing techniques and technology when faced with poorer quality clays (Gosselain 2002). However, the potters in Msinga have not had to relocate to entirely new areas, so they have not been placed in position where they must rethink entire stages of production, the gestures and tools they use, or the associated decision-making processes. Consequently, hand-building techniques are duplicated for every size and shape of vessel, tools are few, uncomplicated, and are usually refashioned or recycled from other objects.

Unlike the bonfiring techniques that prevail elsewhere in the Thukela Basin, pit firing is an entirely different technology. Pits do not necessarily allow higher firing temperatures to be achieved, but they somewhat alter the control potters have over the rate that fuels burn and, consequently, how quickly it attains the maximum temperature. They also allow the firing and post-firing stages to be run concurrently.[9] The same issues are solved using bonfire technology in the Lower Basin by the particular placement of firing areas on slopes, scheduling firings, and by using a combination of "soft" and "hard" fuels. While the pits used in Msinga and the bonfires used in the Lower Basin represent different technologies, they are technically equivalent. Both provide a suitable technology that generates low firing losses and the desired appearance of finished vessels.

Labour organization and learning

Labour organization and learning are paired aspects of ceramic production insofar as learning is governed by the number of potters willing to teach, where they live, and the

[9] A gap of some days can follow the bisque firing and post-firing smoking in the Lower Thukela (Fowler 2008).

labour and social investment required of both students (*abafunda*) and teachers (*ububani*) in the process. Labour investment is simply the time and energy spent learning pottery making. Learning also involves a social investment. Potters and their students stated that intelligence, a willingness to learn and the potential for developing a strong bond between students and teachers are required for students to learn and master the craft.

The homestead is the unit of organization in pottery making in Msinga. Each woman has control over the production of her own works, although they will work together to prospect, collect and transport clay. Potters typically work alone while fashioning and decorating vessels, and most fire their own pots when they have enough. Only two potters in Mchuno work together through the whole process. They live in homesteads adjacent to one another and were taught by the same potter.

Interviews indicate that novice potters have learned from neighbours, relatives, or their husband's mother. Most potters that have learned recently were taught by their neighbours or by relatives of their husband's patriline. Fewer potters were taught by their husband's mother after marrying into the homestead. The link between learning and the husband's patriline is an important one, as learning to make pottery can be viewed as part of the integration of a new wife into her husband's family.

While any woman my potentially learn to pot, there are observances regarding when she can begin. Potters in Msinga explain that they can only learn the craft after having given birth to their first child.[10] This observance is also found in the Lower Basin (Armstrong et al. 2008; Fowler 2008), although there it was also cited as a means to ensure that potters put their family first and not business. In Msinga, it was explained that

[10] Only one potter interviewed did not follow this tradition. Because she was having trouble conceiving, she consulted a *sangoma* and was allowed to being learning to pot, after which she had her first child.

beginning to make pottery before having a child might offend the ancestors and cause ill to happen to the family. Armstrong et al. (2008: 520) discuss how the relationship between procreation and pottery-making also restrict pregnant women from potting because it would interfere with the development of the foetus.

Scale of production

The scale of production refers to the quantity of ceramic production. Output may be calculated using a range of time intervals, from weekly to annual, to determine production rate. Potters can be rather ambiguous regarding their production rate and scale, particularly if they are small-scale producers. This situation exists in the Lower Thukela Basin, were we documented a range of 30 to 200 pots produced a month. Taken over year, production ranges from very low (<1000 pots/yr) to low (<2000 pots/yr) relative to full-time specialist potters who use throwing technology (Longacre 1999; Roux 2003: 779; Stark 1995), but fall within the range of small-scale producers who use hand-building techniques (Arnold 1985).

Msinga offers an interesting opportunity to contrast full-time versus part-time producers in the same region. The only full-time potter in the region, in Mabaso, will make up to 15 beer-drinking vessels of the *izinkhamba* series a week, slightly fewer if she also makes *izimbiza*. She rarely makes more than 60 or 70 vessels a month, but commissioned works increase around Christmas time. Other potters in Mabaso produce part-time, usually for local sale, but they may occasionally take vessels to the market in Tugela Ferry. In Mchuno, potters only produce for local clientele during July and August. Each potter rarely makes more than 50 pots in this time. This results in a dramatic difference between full-time and part-time production in the region. Full-time potters

may produce upwards of 900 vessels a year, while part-time potters a mere 5-10% of this amount. Clearly, the scale of production is related to the economic significance of potting to different individuals. For part-time potters, making pottery is a supplement to household income, and usually an unimportant one at that. For the full-time potter, being long widowed, it is the only source of income for her and her dependants. The weight of pots, the range of the repertoire produced, decoration quality and fashioning speed are the only obvious differences between the wares made by full- and part-time potters. Part-time potters in Mabaso produce slightly heavier pots than the full-time potter, and all part-time potters make three or four types of drinking vessels, have a considerably slower rate of production, and may decorate pots in a less refined fashion usually because they are decorated before pots have adequately dried. Interestingly, it is only through the relative quality of executing decoration and vessel weight that archaeologists would be able to discern differences between part- and full-time potters. Additionally, the quantity of wares would not be helpful. The number vessels made by the full-time potters would be underrepresented because many are being distributed out of the municipality.

Marketing and distribution

At least three modes of distribution are known for Zulu pottery production. Direct exchange is when potters sell directly to consumers. Buyers either come to the homestead's of potters to purchase vessels they need or potters will transport pots to another location, such as a market, road-side stand, or a pension office, in the hopes of attracting a larger clientele. Located along the highway and near Tugela Ferry, potters in Mabaso tend to sell pots out of their home or take it to the market in town. Only the full-time potter arranges to transport her pots to sell at the market in Greytown. This is done

at considerable expense, because she must hire space in a taxi to transport them, so she often charges twice as much to offset the capital outlay. Potters in Mchuno say they used to sell at the pension office along the river. It was a great distance to travel by foot only to sell a few pots so they now rely on people coming to them for the vessels they need.

Msinga potters therefore rely on a local or regional market of clientele. In Mchuno, distribution seldom extends outside the boundaries of the Traditional Authority, whereas distribution of wares made in Mabaso are far more widespread in the municipality and the district as a result of a proximity to a highly travelled roadway. Consequently, Msinga pottery has a restricted regional distribution (cf. Jolles 2005).

DISCUSSION AND CONCLUSIONS

Previous research in the Lower Thukela Basin suggested that Zulu ceramic production may general be characterized by a production technology that requires no specialized tools or structures, a low scale of production, and alterations in labour organization and learning strategies due to an increased demand for "collectors wares" outside of Zulu communities.

In Msinga, we find few parallels with the situation in the Lower Basin. While it is true that most of the production technology in Msinga requires no specialized tools, the tradition of pit firing introduces a little known kind of firing practice in the Zulu repertoire as well as in the whole of southern Africa. The scale of production can be characterized as low for full-time potters in Msinga. But most potters only produce vessels for domestic replacement and the scale of production is very low indeed. This is symptomatic of low demand for Msinga pottery outside the region, particularly as "collectors" wares. Msinga potters only produce blackened wares for beer drinking,

which are less commonly desired by non-Zulu customers (Armstrong et al. 2008: 524). The exposure provided by well known potting families in the Magwaza and Umlalazi Tribal Authorities of the Lower Thukela Basin in 1990s and the new clientele that followed, has not affected potters or their practices in Msinga. As such, there has been no stimulus to alter labour organisation or production practices to meet new demand. Full-time potters do produce more but have not altered their practices, whilst part-time potters note a clear decline in the demand for their work. Changes in learning strategies, on the other hand, have occurred but for different reasons. Some senior potters are willing to take on novices both to preserve the tradition and provide a means for women in this impoverished region to bolster their meagre household incomes. The effects of this have yet to be felt in the region simply because few potters, senior or junior, can afford the capital outlay to expand their clientele base. The Msinga tradition therefore remains a regional tradition.

Even a cursory comparison of ceramic production in the two regions we have focused on in the Thukela Basin show some striking contrasts. Table 3 outlines how clay acquisition practices, techniques for processing, drying, firing, post-firing, and terminology used for vessels forms are different between the Upper and Lower Thukela Basin. Six of the seven stages (or 86%) of ceramic production in the Thukela Basin are organized differently. Yet, the pottery produced in each region is widely acknowledged as distinctively Zulu. Clearly, the study of ceramic *chaînes opératoires* provides a different perspective on the "style zones" defined by Jolles (2005) and encourages us to think further about the homogenous nature of ceramic traditions.

These differences in Zulu ceramic production are founded in the history of various groups and the consequent social networks potters belong, because these social networks differently influence and constrain the choices they make during production (Gosselain 1998; Gosselain 2002; Livingstone Smith 2000; Livingstone Smith et al. 2005; Miller 1985; Pétrequin & Pétrequin 1999; van der Leeuw 1993). At this stage in our research we can identify how certain technical choices are influenced by the various social interaction networks potters have belonged to in Msinga over the past three generations. These influences have a different impact on three groups of techniques.

First, techniques that have an impact on the appearance of pottery (e.g. shape, texture and decoration) are more greatly influenced by (1) the level of capital outlay by potters, (2) the age of artisans, and (3) the target consumer groups. The potter in Msinga who generates higher revenue from potting regularly transport vessels and their vessels can be distinguished by the quality of decoration, but not by the kinds of techniques used or the complexity of designs. Rather, the age of potters has an impact on the kinds of decoration techniques and design concepts potters employ. In our observations, novice potters decorate within the same design fields as their seniors but use more techniques and create more complex motif combinations; thus, potters of different ages and skill levels conceptualise and execute designs differently. The third point is evidenced by the different kinds of decoration desired by local and non-local consumers, and decorations have changed with increased non-local demand. Mabaso potters are acknowledged as decorating pots better, while Mchuno potters are known to make “stronger” (i.e., better fired) pots. These observations support the hypothesis that techniques that purposefully alter the *visual and tactile characteristics* of pottery will correspond to the economic

situation of potters, their age, and the broad interaction networks through which their goods are consumed (Gosselain 2000).

Second, we have observed that only other Zulu potters influence clay preparation and firing techniques used in the study area. For example, grinding was taught in Mchuno by a potter from Mabaso some three generations ago and it corresponded with the technique already in use in Mchuno. In Mabaso today, potters only use a stick to pound clays for processing. In contrast, pit firing is executed in nearly the same way in both Tribal Authorities, denoting a shared tradition. Only other potters are concerned with these details of the production process. This observation supports a second hypothesis derived from ceramic ethnoarchaeology—that the techniques, tools (and structures) involved in *clay preparation* and *firing* are influenced by fewer people (potters and assistants) and the distribution of these techniques should reflect local or regional networks and the degree to which potters have access to them (DeBoer 1986; Dietler & Herbich 1989, 1998; Gosselain 2000; Gosselain 2002; Wahlman 1972).

Third, despite variation in the outward appearance of pots throughout Msinga and some minor variations in clay preparation and firing techniques, the techniques of fashioning vessels and the steps in which pots are fashioned are identical in the area. Elderly potters have explained that how a pot is built, even the gestures that are used in coiling, trimming, scraping and smoothing vessels, has not changed since their mothers taught them sixty or more years ago, although the tools have. It appears then that fashioning techniques have great durability over time. This is a significant observation, because ethnographers and archaeologists working in Africa and elsewhere have argued that the *fashioning* stage is the most resistant to change because potters rely on

specialized gestures, or “motor habits”, which are mastered and internalized through repetition and practice over time (Arnold 1981, 1985, 1989; Foster 1965; Gosselain 1998; Gosselain 2002; Hill 1977; Nicklin 1971). Others have further argued that these techniques should correspond to specific and durable local and regional categories of identity, such as kinship, language, gender (Gosselain 1992) and class (Miller 1981, 1985). In support of this hypothesis, we find that precisely the same techniques and the same gestures in sequence characterise fashioning throughout the Thukela Basin. This bespeaks an ancient, shared common cultural foundation for Zulu ceramic fashioning techniques. Reconstructions of fashioning techniques using archaeological ceramics from the region will permit direct comparison between modern and ancient practices and illuminate the origin of this shared tradition.

CONCLUSIONS

Our study in Msinga has attempted to build on Reusch’s work by visiting many of his main informants as well as areas he did little or no work. With this expanded view of pottery production in Msinga, we can begin to view the region in a broader context to better understand the variation in ceramic production in Zulu society. The results of this study indicate that pottery production in Msinga has a distinctive character. The organisation of production in Msinga underlay the area’s equally distinctive style of ceramics (Jolles 2005). This study demonstrates how the social networks potters are involved in impact the visible and technical dimensions of pottery in the Thukela Basin. The cultural constraints on choices made during manufacturing stages have an impact on and are materialised in the practices of Zulu potters. The results support three related hypotheses that have emerged from studies of the technical style of pottery elsewhere on

the continent: (1) the visual and tactile characteristics of pottery will correspond to the economic situation of potters, their age, and the interaction networks through which their goods are consumed; (2) clay preparation and firing techniques are influenced by local and regional networks and the degree to which potters have access to them; and (3) fashioning is more greatly influenced by specific and durable categories of identity, including kinship, language, gender. A better understanding of these social influences provides explanations for pottery variability because they link the social context of ceramic production with style.

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grinding which will be added to that from a second grinding (right) to make *izimbiza* is no other clay is available; (f) mixing a slurry of clay and water into dry batch of clay prior to kneading.

Figure 6. Fashioning and decoration of vessels in Mabaso: (a) finished slab base for the vessel; (b) coiling the bottom third of the pot; (c-d) scraping the exterior with a maize cob at subsequent steps in fashioning; (e) fashioning the rim of *ingcazi* by coiling in the opposite direction of the body; (f) scraping the exterior with a metal knife; (g) burnishing with a smooth pebble prior to (h) grooving geometric and curvilinear designs; (i) application of *izinsumpa* (bosses); (j) burnishing with smooth pebble to complete decoration; (k) finished *umancishana* with *izinsumpa*.

Figure 6. Fashioning and decoration of vessels in Mchuno: (a) sprinkling board with clay for a separating agent; (b) coiling the bottom third of the pot; smoothing the interior of the pot with a spoon head; (d) scraping the exterior with a maize cob once the rough out is complete; (e) fashioning the rim of *ingcazi* by coiling in the opposite direction of the body; (f) scraping the exterior with a metal knife; (g) smoothing the exterior with a piece of plastic prior to and during decoration; (h-i) grooving geometric designs; (j) burnishing with smooth pebble after decoration and drying are complete; (k) finished *izimbiza* with *izinsumpa*.

Figure 8. Drying, firing and post-firing treatments in Mabaso: (a) placing coals and smouldering cattle dung in a vessel during preheating; (b) layer of dung placed in the bottom of the pit; (c) nesting vessels in the pit; (d-e) adding dung and dried acacia branches during firing; (f) once the initial fuel has almost been exhausted the vessels are covered with goat dung and soil to begin smoking, the post-firing stage; (g) removing vessels from the pit at the completion of smoking; (h) rubbing rehydrated cattle dung on an *imbiza*, which are removed prior to post-firing to blacken vessels.

Figure 9. Drying, firing and post-firing treatments in Mchno: (a) placing coals to ignite cattle dung and grass in vessels during preheating; (b) layering grass over dung in the bottom of the pit; (c) vessels covered with cattle dung and sticks of acacia during firing; (d-e) vessels are covered with goat dung and soil during the post-firing stage; (f) removing vessels from the pit at the completion of smoking; (g-h) firing batches of small vessels (*omancishana*) with a bonfire using the same fuels and sequence of techniques during a pit firing (photos taken in 2005, courtesy of Rorie Alcock).

Figure 10. Despite differences in production techniques, beer drinking vessels (*omancishana*, sing. *umancishana*) from Mabaso (left) and Mchuno (right) look remarkably similar. The creosote patches from the burning grass, dung and aloe branches give Msinga pottery its unique appearance.

Table 1. Names provided for vessel silhouettes shown to Msinga potters.

No.*	Name	Function	Mabaso	Mchuno
1	ikhanzi	cooking	--	ukhamba lwamasi
2	isoco	cooking	--	--
3	isiyoco	cooking	ukhamba lwamasi	ukhamba
4	imbiza impofana	brewing beer	umcakulo	ukhamba
5	imbiza ugaga	brewing beer/storage	khamba	imbiza
6	isikhangezo/umgenqele	serving	imbiza	imbiza
7	umcakulo	serving	impofana (small imbiza)	imbiza
8	ukhamba lwamasi	serving	maimphense	ukhamba
9	ukhamba	serving/medicinal-ritual	umancishana	--
10	ukhamba	serving/medicinal-ritual	mamsamo	ukhamba lwamasi
11	ukhamba udabulibeshu	serving	imbiza ugaga	iquthu
12	ukhamba ninepence	serving	umgodi wenyoka	umgodi wenyoka
13	umancishana	serving	umgodi wenyoka	umgodi wenyoka
14	iphangela	serving/storage	umgodi wenyoka	umancishana/umgodi wenyoka
15	ingcazi	transport/serving/storage	umgodi wenyoka	umancishana/umgodi wenyoka
16	multi-spouted ingacazi	transport/serving/storage	ingcazi	ingcazi
17	uphiso	Transport	ingcazi	ingcazi
18	uphiso	Transport	ingcazi	ingcazi
19	uphiso	Transport	ingcazi	ingcazi
20	umgodi wenyoka	medicinal-ritual	--	--
21	umcengezi	medicinal-ritual	--	--
22	ukhamba lwentelezi	medicinal-ritual	ukhamba lwentelezi**	--

* See Fig. 3 for the corresponding number given to vessel shapes.

** Only identified by a *sangoma*.

Table 2. Distance to clay sources used by Msinga potters.

Tribal Authority	Clay Source	Name of Extraction Site	Utilized by	Max. Geodesic Distance (km)	Estimated Travel Time*
kwaMabaso	7	--	11 potters	5.47	65
	13	-- (*izimbiza* only)	"	2.88	37
kwaMchuno	12	eNcujane	4 potters	2.07	26
	9	eNcujane (*izimbiza only*)	"	0.8	10
	10	eMhlwaneni	"	1.8	23
	11	Not named	2 potters	0.02	3

* Based on an average walking time of 13 min / km.

Table 3. Comparison of production methods and techniques in the Thukela Basin study areas.[*]

Stage	Sub-stage and tools	Upper Basin (Msinga)		Lower Basin
		Mabaso	**Mchuno**	**Magwaza-Umlalazi**
Extraction	Extraction technique	Surface collection	Surface collection	Surface collection
	Transport	Foot, donkey	Foot	Foot
Processing	Pretreatment	Drying	Soaking (months), Drying	Drying
	Removal of nonplastics	Hand sorting, pounding with stick, sieving	Hand sorting, grinding, sieving	Hand sorting, grinding, sieving
	Addition of nonplastics	Coarse or fine clay	Coarse or fine clay	Mix coarse and fine clays
	Homogenization	Kneading	Kneading	Kneading
Shaping	Roughing out	Coiling from slab base	Coiling from slab base	Coiling from a slab base
	Preforming	Scraping and smoothing	Scraping and smoothing	Scraping and smoothing
Decoration	Decoration techniques	Grooving, appliqué, burnishing	Grooving, appliqué, burnishing	Grooving, incision excision, appliqué, burnishing
	Slip		Vegetable oil	
Drying	Period	Days	Days	Days
	Location(s)	Inside	Inside	Inside
	Preheating	Dung and straw	Dung and straw	Water sprinkling
Firing	Fuel	Cattle and goat dung, straw, dried Acacia stalks and leaves	Cattle and goat dung, straw, Acacia leaves	Euphorbia sp., dried acacia leaves
	Structure	Pit	Pit	None
	Type	Pit firing	Pit firing	Bonfiring
	Location	50+ m from homestead, sheltered	30+ m from homestead, sheltered	60+ m from homestead, open
	Duration	<50 min	<50 min.	~60 min.
Post-firing	Fuel	Goat dung	Goat dung	Euphorbia sp., tamboti, rubber, plastic
	Structure	Pit with isolation (dirt covered)	Pit with isolation (dirt covered)	Bonfire
	Location	50+ m from homestead, sheltered	30+ m from homestead, sheltered	Within yard or inside, sheltered
	Duration	~20 min	~20 min	~10 min / vessels
	Organic coating	Dung (*izimbiza*)	Dung (*izimbiza*)	Dung (*izimbiza*)
	Resin application			Shoe polish

[*] Stages, substages and techniques based upon definitions presented in Gosselain (2008) and data from the Lower Thukela Basin from Fowler (2008).

Roads (select)
Municipal boundary
Tribal Authority boundary
Potter's homestead or homestead cluster
Clay extraction site

Dundee
Rourke's Drift
Pomeroy
QAMU
Mzinyathi R.
MABASO
MTHEMBU
Thukela R.
Tugela Ferry
Thukela R.
BOMVU
Mpofana R.
Keat's Drift
Weenan
MCHUNU
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Muden
Greytown
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THE NGUNI CERAMICS & SOCIETY PROJECT

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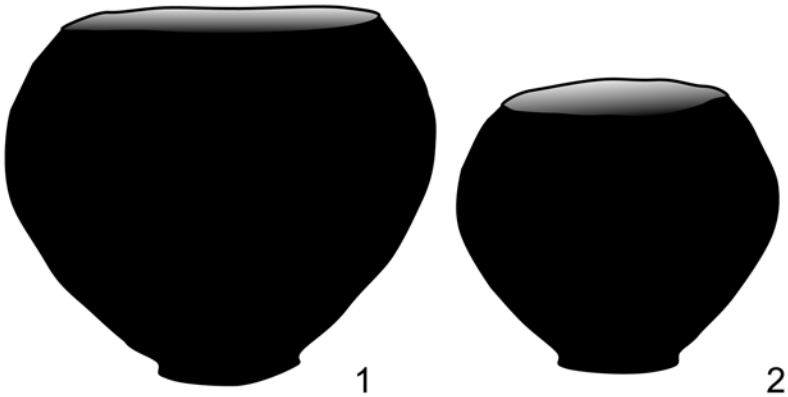
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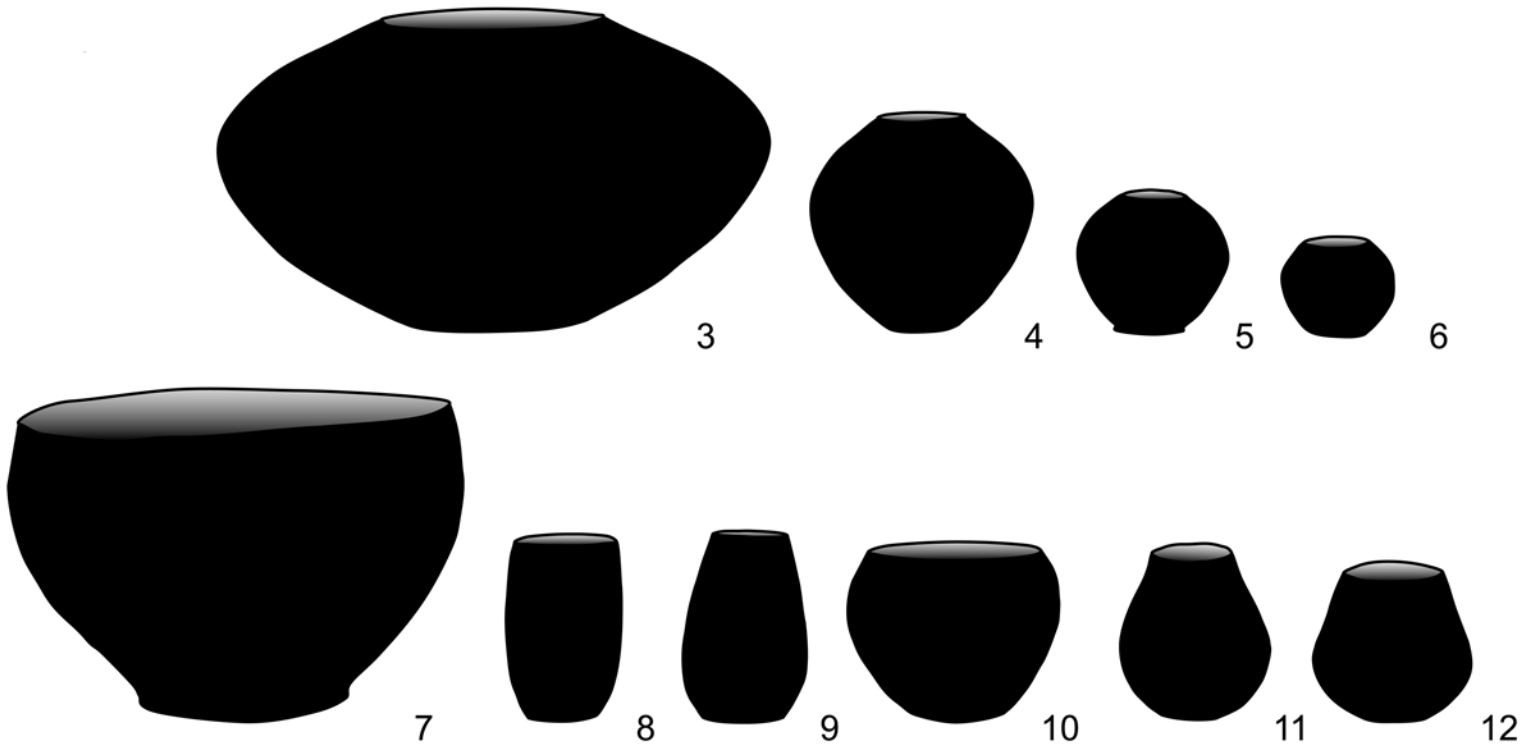
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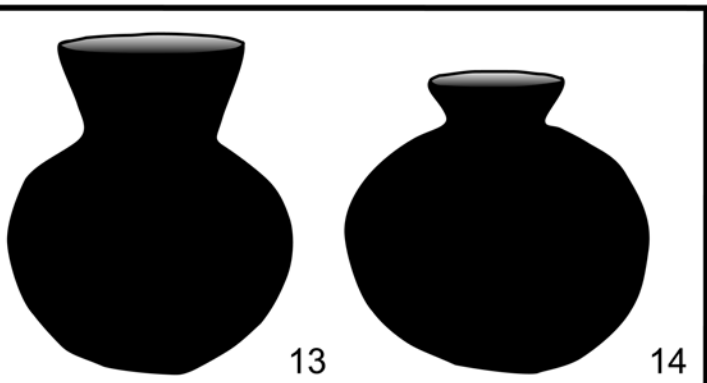
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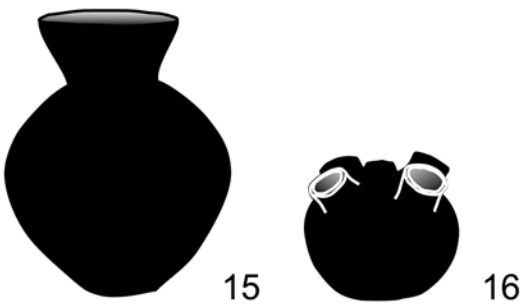
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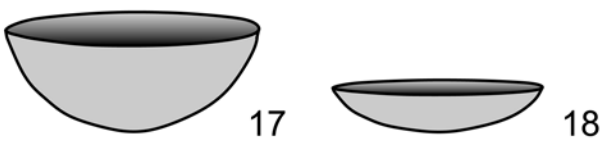
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